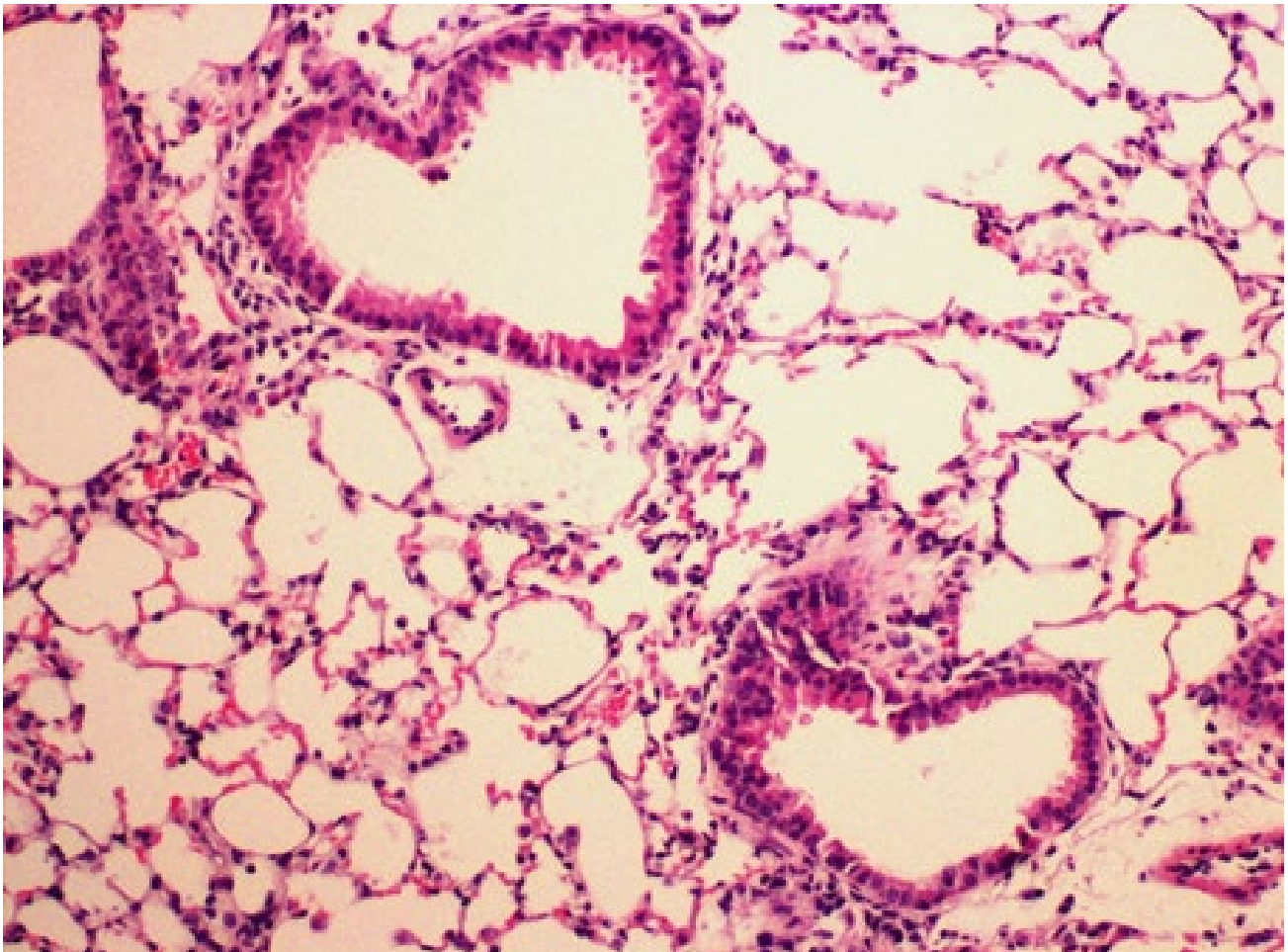


THE SCHOOL OF BIOMEDICAL SCIENCES AND PHARMACY

ANNUAL REPORT 2022



Title Page Image by: Katie Daly (PhD Candidate)
Second Place Winner of 2021 Beautiful Science Submission

Image Name: Love is in the Airways

Image Description: Cross-sectional view of mouse lungs under microscopic magnification. Staining shows the arrangement of cells and internal structure of the lungs revealing unique pair of “heart” shaped airways.

TABLE OF CONTENTS

WELCOME	4
SCHOOL EXECUTIVE 2022	6
SCHOOL SUPPORT	7
TEACHING AND LEARNING	8
RESEARCH	10
RESEARCH TRAINING	11
GRANT SUCCESS	12
PUBLICATIONS 2022	13
REPRODUCTIVE MEDICINE	14
EXERCISE AND NUTRITION	17
IMMUNOLOGY AND MICROBIOLOGY	21
CANCER	27
NEUROSCIENCE	36
PHARMACY AND PHARMACEUTICAL SCIENCE	47
ACADEMIC PROMOTIONS	51
ACADEMIC HONOURS RECEIVED BY STAFF/STUDENTS	51
AWARDS RECEIVED BY STAFF/STUDENTS	51
CONJOINT PROFESSORS	53
EDITORIAL SERVICE	54
EXPERT REVIEWS FOR INSTITUTIONS OR ORGANISATIONS	54
HDR STUDENT COMPLETIONS 2022	55
HONORARY PROFESSIONAL APPOINTMENTS	56
INVITED OR PLENARY SPEAKER	57
OUTREACH TO COMMUNITY AND/OR MEDIA	62
REVIEW NATIONAL / INTERNATIONAL GRANTS	63
PUBLICATIONS	64

WELCOME

Welcome to the School of Biomedical Sciences and Pharmacy (SBSP) at The University of Newcastle. SBSP is a world-leading medical science hub. We generate, transfer, and apply the foundational scientific knowledge that underpins careers in medical research, laboratory science and the health professions.

SBSP is one of UoN's most research-intensive schools, with research themes covering the priority areas of cancer, neuroscience, immunology, reproductive medicine, exercise & nutrition, pharmacy and pharmaceutical science. The high profile of the School has enabled ongoing external grant funding success and the recruitment of stellar researchers who draw on a sophisticated array of tools and techniques to address global health challenges.

SBSP delivers high quality teaching in the key disciplines of anatomy, physiology, biochemistry, pharmacology, and pharmacy. The School has primary responsibility for the Bachelor of Biomedical Science, the Biomedical Science (Honours) programme and the Bachelor of Pharmacy (Honours) programme. These programmes attract high quality students with median ATAR >85. We efficiently manage a complex student load, with over 10,000 student enrolments in HUBS courses per year, as part of our own undergraduate programmes, as well as multiple accredited health professional programmes across the Faculty of Health and Medicine and the wider University.

We were delighted to on-board 6 new Level B academic staff in 2022, across each of our discipline areas. These incredibly talented staff will underpin the success of the School into the future. In 2022 our School included 92.25 full-time equivalent research and academic staff, 18.6 full-time equivalent professional staff (non-research), 52.64 full time equivalent professional staff (research-based), 102 Research Higher Degree students enrolled Semester 1 and 25 Honours Students distributed across the Newcastle (Callaghan) and Central Coast (Ourimbah) campuses and the Hunter Medical Research Institute (HMRI). We are also proud to have 16 Conjoint appointed staff, 24 Honorary appointed staff, 17 Adjunct appointed staff, 11 Emeritus Professors and 2 Laureate Professors.

2022 was a very productive year, however it is important to acknowledge the ongoing effects of the COVID-19 pandemic, which continued to disrupt the activities of the School, in both research and teaching. I am incredibly grateful for the flexibility and adaptability of our staff and students, which has allowed us to continue to deliver on our commitments. The School is driven by a central vision of excellence and we are excited about the future.

Thank you for your interest in the School of Biomedical Science and Pharmacy.

Professor Lisa Wood

Head of School

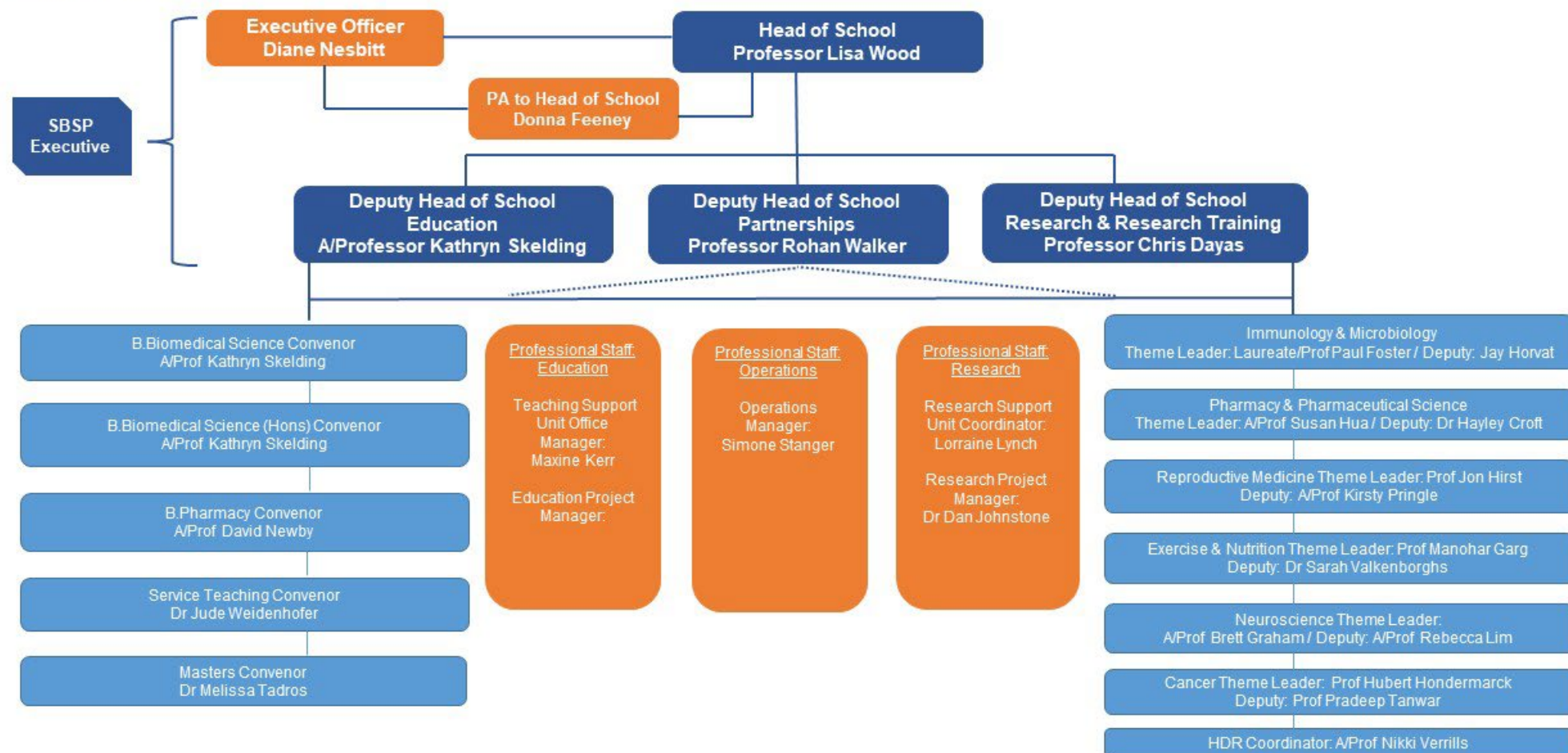
Biomedical Sciences and Pharmacy

Faculty of Health and Medicine

University of Newcastle



School Organisational Chart



SCHOOL EXECUTIVE 2022



Professor Lisa Wood
Head of School



Mrs Diane Nesbitt
Executive Officer



Professor Chris Dayas
Deputy Head of School
Research & Research
Training



Professor Rohan Walker
Deputy Head of School
Partnerships



Associate Professor Kathryn Skelding
Deputy Head of School
Education

SCHOOL SUPPORT

Research Support Unit: In 2022 the Research Support Unit (RSU) comprised 3.5 staff. The unit's primary directive is to provide support to School Researchers and Research Higher Degree Students, based at the various campuses, Callaghan, Ourimbah, HMRI and the Mater Hospital.

The RSU provides a central point of contact including administrative assistance and guidance in relation to purchasing (research consumables and equipment), travel arrangements, staffing/personnel enquiries, and new staff recruitment assistance. The primary responsibility of the RSU Manager (School Research Coordinator) is to provide research grant financial assistance, advice, and guidance, and support the Head of School and Research Committee Chair.

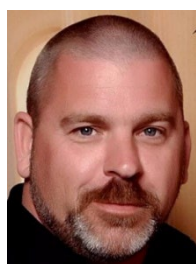


Research Support Unit 2022
Lorraine Lynch, Linda Anslow,
Not pictured: Susan Edwards, Teri Roberts

Teaching Support Unit: In 2022 the School Teaching Support Unit (TSU) comprised 4.5 administrative staff and 7.8 Technical Officers. Our staff support the teaching activities across four teaching terms through the year, two semesters and two trimesters, and three campuses, Callaghan, Ourimbah, Central Coast Research Institute and Manning Base Hospital. In 2022, 8553 students were enrolled in HUBS and PHAR courses that the Teaching Support Unit provided administrative support for.



Teaching Support Unit 2022
Cathy Morrow, Donna Feeney, Maxine Kerr, Maxine Squires
Not pictured: Linda Anslow



Technical Officers 2022
Jason Harris, Erin Smith, Alison Hooper,
Sam Faulkner,
Chrissy Miller, Yvonne Rego, Carolyn Clark,
Ashlee Cambourn
Not pictured: Elizabeth Pearsall, Josephine Jokinen



TEACHING AND LEARNING

The School of Biomedical Sciences and Pharmacy (SBSP) provides world-class preparation for a career in medical research, laboratory science, pharmacy, and the health professions, addressing relevant local and global health concerns and priorities. Our School delivers quality undergraduate and postgraduate teaching and has primary responsibility for the Bachelor of Biomedical Science and Biomedical Science Honours programs, and the Bachelor of Pharmacy program. Our teaching also forms the foundation that underpins a variety of health professions including Medicine, Pharmacy, Nursing, Midwifery, Physiotherapy, Medical Radiation Sciences, Nutrition and Dietetics, Podiatry, Occupational Therapy, Oral Health Therapy and Speech Pathology.

During 2022, School staff taught into over 78 courses, delivered to 1148.7 full-time equivalent students enrolled in 20 different programs of study. Gross income from the School's undergraduate teaching in 2022 was \$30.6M. In 2022, 119 students graduated with a Bachelor of Biomedical Science and a Bachelor of Pharmacy (Honours).

PHARMACY PROGRAM

During 2022 the BPharm (Hons) cohort grew to 296. Our Pharmacy students participate actively in placements, and travel as far afield as Alice Springs, Northern Territory and Karratha, Western Australia, and experience local cultures and pharmacy practice. Our School is grateful to the specialists who generously provide opportunities for learning experiences, reinforcing our links with local pharmacy communities, hospitals, and networks. Our pharmacy graduates are highly employable, with 100% of 2020 graduates gaining full-time employment within four months.

BIOMEDICAL SCIENCE PROGRAM

Our Biomedical Science degree is a pathway into a career as a medical researcher, and/or a laboratory scientist and for some students it provides the foundational knowledge for a health professional degree. The School teaching covers a diverse range of disciplines at both undergraduate and postgraduate levels including anatomy, biochemistry, physiology, pharmacology, microbiology, immunology, and pharmacy, across all health professions in the faculty. Our School offers a great range of study possibilities that are recognised nationally and internationally.

Our graduates have an active and broad impact on the delivery of healthcare solutions and outcomes around the world and contribute to the global advancement of medical research and health care practice and policy.

INDIGENOUS STUDENT ENGAGEMENT COMMITTEE

In 2022 this committee was founded by Dr Guy Cameron and Dr Lizzie Manning. Guy is a proud Aboriginal man, whose mob are the Wailwan people. Guy also has strong family connections with the Wongaibon and Dainggatti people. He is a School Alumnus and is currently an Indigenous Imaging Fellow and medical student. Lizzie is a new Lecturer in the School with a passion for social justice and equity, diversity, and inclusion. The purpose of the committee is to drive new activities to enhance engagement of Aboriginal and Torres Strait Islander students in the School and discipline more broadly, through development of new teaching, research, recruitment/engagement, and cultural safety initiatives. The committee formed soon after School staff undertook cultural capability training, and it became clear that staff across the School wanted to contribute to positive change in this space.

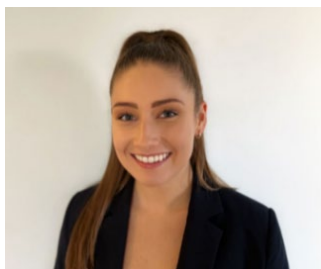
2022 largely focussed on developing committee goals and strategies for achieving them. The committee launched and begun promotions for an Indigenous research fellowship program (the first of its kind in health and medical research in Australia), facilitated inclusion of an Aboriginal perspective on a panel on genetics in the real world for HUBS1202, and contributed to the first of many Wollotuka Institute high school engagement events, i.e., a camp at Point Wolstoncroft. In late 2022 Associate Professor Karen Mate and Dr Saije Endacott joined the committee, to help develop the growing activities of the committee into 2023.

DUNKLEY MEDAL AWARD

The Dunkley Medal is awarded for "Excellence in Biomedical Research" by a student graduating with a Bachelor of Biomedical Science (Honours) degree at The University of Newcastle. It is a distinguished award, not necessarily presented every year, but rather on occasions of outstanding criteria-based achievement. In the 2021 Academic year, the Dunkley Medal was awarded to Chrissy Miller for Excellence in Research 2021, Bachelor of Biomedical Science (Honours) Program. Chrissy scored the highest mark in the overall assessment of the Honours component of her program.

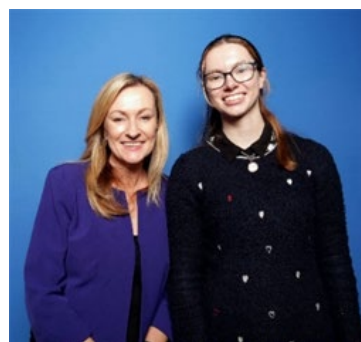


STUDENT AWARDS



Bachelor of Pharmacy (Honours) student, Chloe Woodward, was named NSW Pharmacy Student of the Year 2022! Chloe was thrilled with her achievement, explaining "the competition gifted me the opportunity to refine my clinical knowledge and counselling skills that I will carry into my future career of Pharmacy. It is the quality of teaching and overwhelming support from the staff of the Pharmacy discipline that have guided me to this achievement, as well as my fellow student peers and pharmacists."

Danielle Adams achieved competition finalist in the Three Minute Thesis 2022 for her presentation "Individual treatments for individual patients."



COMMUNITY ENGAGEMENT



During June 2022, Children's University Newcastle welcomed 1,070 children, 234 parents and 78 teachers from 35 partner schools back onto campus for its CU On Campus Discovery Days. Events were held at Ourimbah, Callaghan, NUSpace and Manning Education Centre, Taree. On campus days are designed to showcase the diversity of learning that occurs on a university campus to give children and their families a glimpse of what a day in the life of a university student may look like. Participating children, aged between 7 and 14 years, are

encouraged to discover new learning experiences outside of the classroom in their local and regional community and on campus. School Pharmacy staff who contributed to showcasing UON were Associate Professor David Newby and Alison Hooper.

On Sunday 21 August, researchers from the Gastrointestinal Research Group put on a free event for the Newcastle Science Festival at the Newcastle Museum, as part of National Science Week. The Poo Palace experience included a journey through the digestive track where groups of 40+ were able to learn about the digestive process and make some poo! The day was a huge success with well over 700 people coming through the poo palace. Team poo included: Simon Keely, Bridie Goggins, Huw McCarthy, Cheenie Nieva, Sophie Fowler, Jasmine Wark, Jennifer Pryor, Laura Dowling, Joanne Soh and Isaac Moore.



RESEARCH

The School of Biomedical Sciences and Pharmacy is one of The University of Newcastle's most research-intensive schools, currently ranked in the top three in terms of external research funding. Our researchers apply cutting-edge technology and use relevant disease models to address important questions and accelerate knowledge transfer and translation in areas of health and disease.

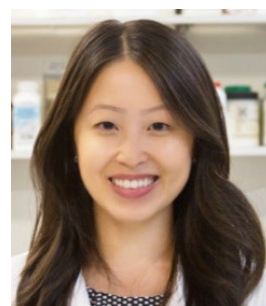
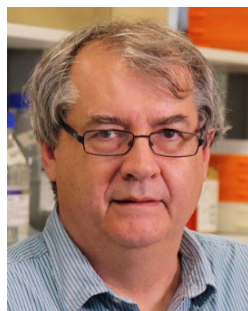
The School Research Themes are:

- Cancer
- Immunology and Microbiology
- Pharmacy and Pharmaceutical Science
- Exercise and Nutrition
- Neuroscience
- Reproductive Medicine

The School's investigators collaborate locally with clinical researchers at both the John Hunter and Calvary Mater Hospitals and are key members of the Hunter Medical Research Institute. The researchers also have many national and international collaborators.

2022 Research Committee Members

Top Row: (L-R) Dr Sarah Valkenborghs, Professor Jon Hirst, Laureate Professor Paul Foster, Associate Professor Susan Hua
Middle Row: (L-R) Professor Hubert Hondermarck, Associate Professor Brett Graham, Professor Chris Dayas, Associate Professor Kathryn Skelding
Bottom Row: (L-R) Associate Professor Nikki Verrills, Mrs Lorraine Lynch-Wilks (Secretary), Dr Dan Johnstone, Dr Evangeline Jackson (HDR Representative)



Mark Hughes Foundation, Centre for Brain Cancer Research

was established in 2022 and is committed to finding a cure and improving the lives of those affected by brain cancer. This transformative research brings together experts working at the forefront of their fields with an aim to advance brain cancer research and achieve the greatest impact for brain cancer patients and their families.



Professor Pradeep Tanwar and Dr Muhammad Fairuz Jamaluddin

established the Global Centre for Gynaecological Diseases and secured an initial investment of \$7 million from an industry partner. Professor Tanwar is the Director and Professor Hondermarck is the Deputy Director. The Centre is a world-leading translational research centre focused on improving the gynaecological health of women.

RESEARCH TRAINING

Work Integrated Learning course (HUBS3412) 3rd Year Projects in Biomedical Science.

In 2022, 42 students were enrolled in HUBS3412 and were placed in the different School laboratories at Callaghan, at the Hunter Medical Research Institute and Ourimbah Campus where they received a professional experience in a research laboratory.

Summer Research Scholarships

In 2022 the School ran a vibrant summer Research Scholarship program – where 10 paid Scholarships were offered by the School for outstanding and motivated students to strengthen their skills and interests, prior to embarking on Honours level projects.

Biomedical Science (Honours) Students

The Honours year gives students the opportunity to make creative use of their knowledge and skills acquired during their 3 years of undergraduate study. Our students highly value the experience, as it provides them with a strong start to their research careers or facilitates the development of important skills that allow them to transition into industry or other health-related professions. During 2022, there were a total of 25 Honours students who completed research projects that encompassed the major research themes and strengths of the School. An additional student commenced their honours studies in the 2021-2022 mid-year intake.

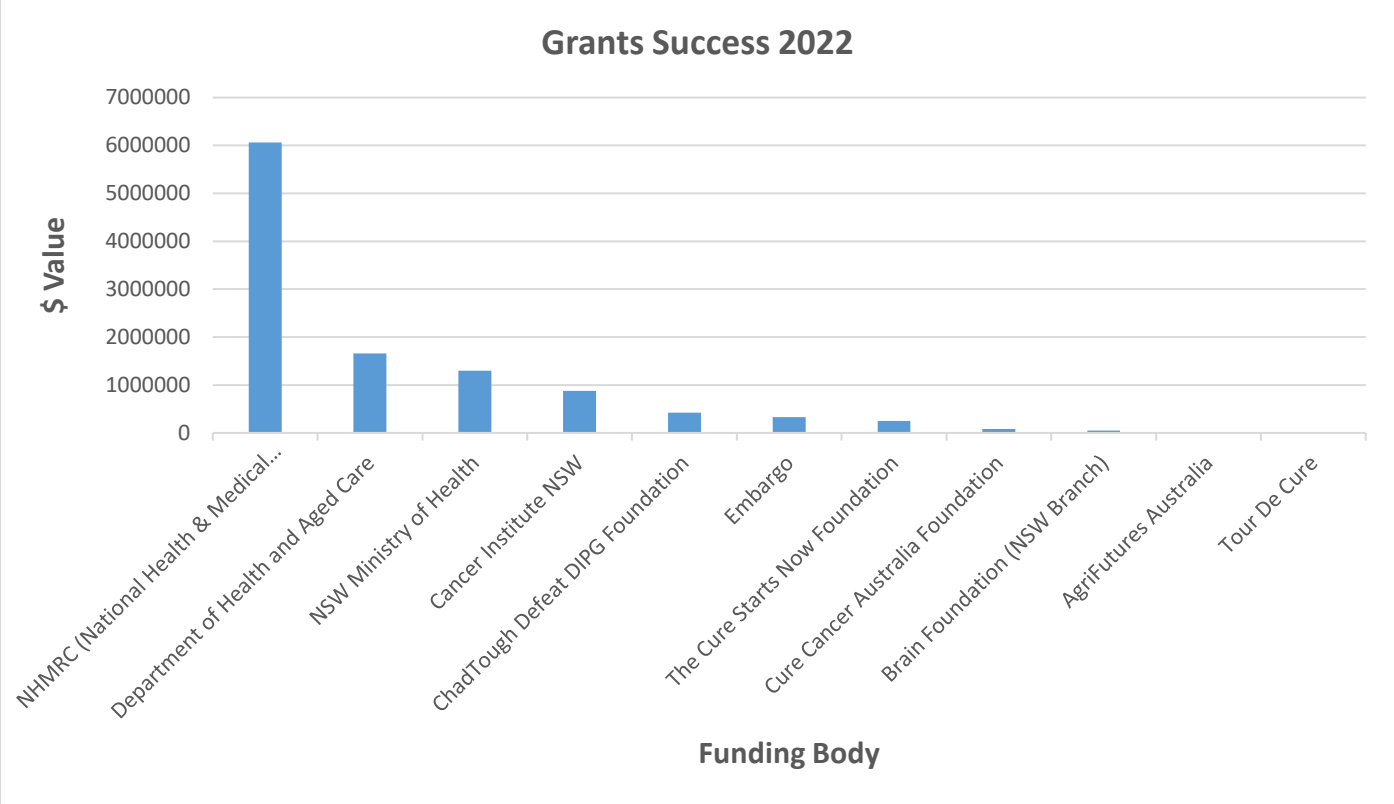
Higher Degree Research

During 2022 a total of 30 HDR students successfully completed their PhD.

SBSP Early Career Researcher Association (ECRA Committee)

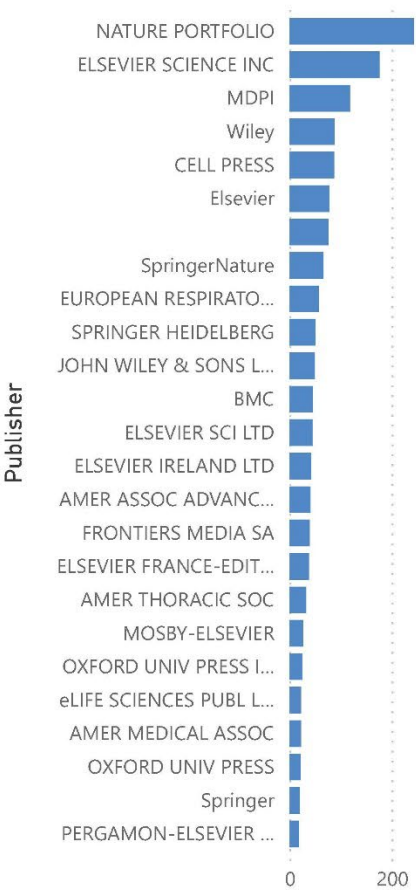
The School of Biomedical Sciences and Pharmacy Early Career Researcher Association (ECRA) was established with the overall goal of creating a community to enrich the SBSP early career researcher (ECR) experience through social events, career development and mentoring. Committee members: Rebecca Hood (Chair), Alex Peters, Daniel Beard, Emma Ford, Evan Williams, Evangeline Jackson, Hayley Croft, Lizzie Manning, Matthijs Bekkers and Sarah Valkenborghs. The ECRA was launched in May 2021 with a Mental Health Afternoon focusing on healthy habits and self-care for ECRs. In June 2022 the School ECR Research Showcase was held at NuSpace and was an outstanding success. The ECRA committee will continue working with HMRI, Research Advantage, Graduate Research, KEE, the Wollotuka Institute and many other groups to continue advocating for SBSP ECRs (incl. HDRs) in 2023 and beyond.

GRANT SUCCESS

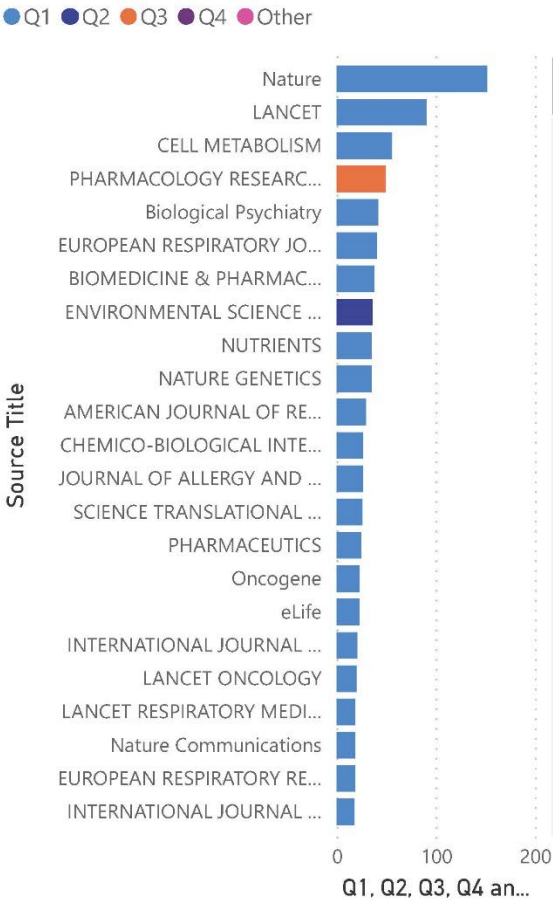


PUBLICATIONS 2022

Citations by Publisher



Citations by Source Title



Biomedical Sciences and Pharmacy Selected Citations

UoN Citations

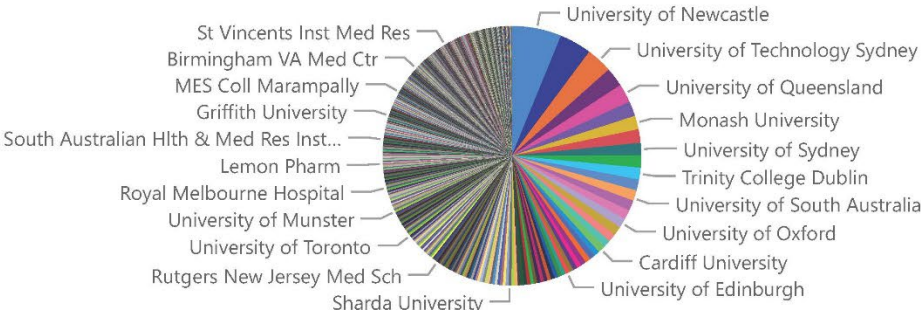
Biomedical Sciences and Pharmacy Citations Portion of UoN

1.80K

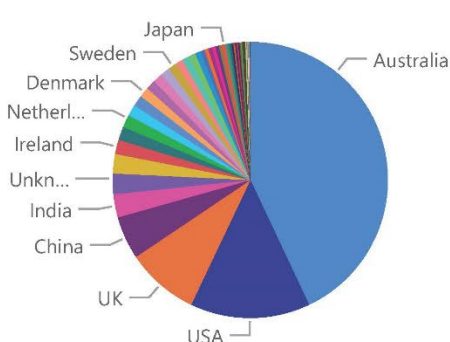
21.07K

8.5%

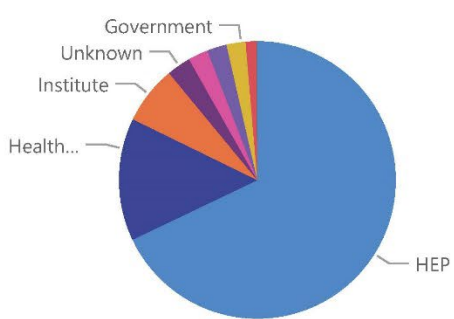
Citations by Collaborating Organisation



Citations by Collaborating Country



Citations by Org. Type





Associate Professor
Mark Baker

Male Infertility Research

Infertility has been recognised by the World Health Organisation as a global issue, particularly in developed nations which are experiencing reduced fertility rates. Rising rates of infertility now affected 1 in 6 couples, and in the case of male-factor, around 1 in 20 men worldwide. To overcome this condition, couples often resort to using assisted conception procedures including in vitro fertilisation or intracellular sperm injection. Despite the exorbitant costs, the live poor rate for assisted conception has remained around 18%. Whilst much has been done to improve egg and embryo quality, by comparison little work has looked at the impact of improving semen quality in men. Testicular heat stress is a major driver of male-factor infertility, and clinical trials demonstrate the application of scrotal cooling not only significantly improves semen quality, but also nature fertility rates in men who had been trying to conceive 3-6 years prior. The Baker group investigates the impact of testicular heat stress, trying to understand “why the testis must run 3-6°C below core body temperature. To achieve this, Mark has taken the skills he developed in cancer research, under the direction of Dr. Alfons Lawen, Monash University and now applies this to reproduction. He established the proteomics platform at the University of Newcastle and has since been successful in obtaining 11 HERDC1 grants as chief investigator. He was recently announced in the top1% of researchers within the field of reproduction and is currently running a clinical trial to investigate the impact of scrotal cooling on men.

Grants

National Health & Medical Research Council Senior Research Fellow, Level A: Biomarkers for the diagnosis and understanding of male infertility. Baker MA (2017-21)

Australian Research Council: Proteomic and genetic analysis of subfertile bull spermatozoa. Baker MA (2019-21)

AgriFutures Australia: Developing a novel diagnostic test for early pregnancy in the mare. Swegen A, Gibb Z, Baker MA, Aitken J (2019-22)

National Health & Medical Research Council: Heat shock induced alternative splicing and its role in oligoasthenoteratozoospermia. Baker MA, Ikawa M, Sutovsky P, Hime G (2020-23)

Hunter Medical Research Institute MRSP: Pregnancy and Reproduction Program. Baker MA et al (2021-23)

Binnie Beef Capital & Management P/L: Identification at the genetic level of heat-sensitive & heat-tolerant bulls. Baker MA (2022)

AgriFutures: Identification at the genetic level of heat-sensitive and heat-tolerant bulls. Baker MA (2022)

AgriFutures: Reducing the effects of heat stress and ageing on sperm DNA damage in thoroughbred stallions. Gibb Z, Baker MA, De Iuliis G, Griffin R, Swegen A (2022-24)

Advanced Centre for Reproductive Medicine: Overcoming male infertility. Baker MA (2022-25)

Top 5 Publications

Aitken RJ, Whiting S, De Iuliis GN, McClymont S, Mitchell LA, **Baker MA**. (2012) Electrophilic aldehydes generated by sperm metabolism activate mitochondrial reactive oxygen species generation and apoptosis by targeting succinate dehydrogenase. *Journal of Biological Chemistry*, 287: 33048-33060. **Citations 249**

Baker MA, Hetherington L and Aitken RJ. (2006) Identification of SRC as a key PKA-stimulated tyrosine kinase involved in the capacitation-associated hyperactivation of murine spermatozoa. *Journal of Cell Science*, 119, 3182-3192. **Citations 207**

Baker MA, Reeves G, Hetherington L, Muller J, Baum I and Aitken RJ. (2007) Identification of gene products present in Triton X-100 soluble and insoluble fractions of human spermatozoa lysates using LC-MS/MS analysis. *Proteomics, Clinical Applications*, 1, 524-532. **Citations 201**

Baker MA, Lane DJ, Ly JD, De Pinto V, Lawen A. (2004) VDAC1 is a transplasma membrane NADH-ferricyanide reductase. *Journal of Biological Chemistry*, 279:4811-4819. **Citations 1166**

Robinson BR, Netherton JK, Ogle RA, **Baker MA**. (2022) Testicular heat stress, a historical perspective and two postulates for why male germ cells are heat sensitive. *Biological Reviews*, doi: 10.1111/brv.12921. **Citations 3**

<https://www.newcastle.edu.au/profile/mark-baker>



Professor Jonathan Hirst

Research Associate
Dr Hannah Palliser

Postdoctoral Fellow
Dr Julia Shaw

Research Assistant
Richard Karl

HDR Students
Gabriella Crombie
Sandeep Ajgaonkar
Roisin Molony
Carlton Pavy
Bethany Hanley
Lars Byg

Mothers and Babies Research

This research focuses on problems in pregnancy and how these problems may influence immediate and long-term outcomes for the offspring. The group are most interested in childhood health outcomes following preterm birth, pregnancies affected by fetal growth problems and stresses during late pregnancy. Growth restriction is the failure of the fetus to grow to its full potential and is a major contributor to adult diseases. These pregnancy compromises are associated with an increased incidence of behavioural disorders including anxiety and ADHD behaviours in childhood, adolescence, and adulthood. The group particularly examines the deficiencies in the steroid hormone environment of the developing brain that may cause these disorders. The placenta has a key role in controlling growth promoting steroid levels in the fetal brain and so problems with normal development and function lead to marked deficits in steroid supply to the brain. They also examine replacement therapies used shortly after preterm birth to improve outcomes and lessen the likelihood of behavioural problems for those born prematurely or small for gestational age. Neurosteroid hormones form a key modulatory system that has a major role in regulating the levels of excitation. Inadequate levels of these hormones have been shown to contribute to major hyperactivity and anxiety disorders. The objective of recent work is to determine if prenatal stress or stress in the neonatal period causes reductions in neurosteroid signalling leading to suboptimal brain development. The group examines treatments with a synthetic neurosteroid or a drug that raises neurosteroid production for improving these conditions.

Grants

National Health and Medical Research Council - Project: Replacement therapies for improving outcome following preterm birth. Hirst JJ, Walker D, Palliser HK (2019-22)

National Health and Medical Research Council - Ideas: Neonatal therapy for improving myelination and long-term outcome following preterm birth. Hirst JJ, Palliser HK, Shaw JC (2021-23)

Publications

Crombie GK, Palliser HK, Shaw JC, Hodgson DM, Walker DW, **Hirst JJ.** (2022) Evaluating changes in GABAergic and glutamatergic pathways in early life following prenatal stress and postnatal neurosteroid supplementation. *Psychoneuroendocrinology*, 139:105705
Miller SL, Bennet L, Sutherland AE, ...**Hirst JJ**,...et al. (2022) Ganaxolone versus Phenobarbital for Neonatal Seizure Management. *Annals of Neurology*, doi: 10.1002/ana.26493

Crombie GK, Palliser HK, Shaw JC, Hodgson DM, Walker DW, **Hirst JJ.** (2022) Effects of prenatal stress on behavioural and neurodevelopmental outcomes are altered by maternal separation in the neonatal period. *Psychoneuroendocrinology*, 124:105060
Crombie GK, Palliser HK, Shaw JC, Hodgson DM, Walker DW, **Hirst JJ.** (2022) Neurosteroid-based intervention using Ganaxolone and Emapunil for improving stress-induced myelination deficits and neurobehavioural disorders. *Psychoneuroendocrinology*, 13324:105060

Shaw JC, Dyson RM, Palliser HK, Gray C, Berry MJ, **Hirst JJ.** (2019) Neurosteroid replacement therapy using the allopregnanolone-analogue ganaxolone following preterm birth in male guinea pigs. *Pediatric Research*, 85(1):86-96

11;9:1802; doi:10.3389/fphys.2018.01802

www.newcastle.edu.au/profile/jon-hirst



Dr Jessie Sutherland

Post-doctoral researcher

Dr Emmalee Ford

HDR Students

Alexandra Peters
Emily Frost

Reproductive Science Research

The vision of this research program is to eliminate preventable infertility on a global scale. This is achieved through incorporating the dissection of the molecular pathways responsible for egg and sperm development in the context of improving the diagnosis of human infertility. Dr Sutherland is positioned within the Hunter Medical Research Institute Mothers and Babies Program and her background is in reproduction and fertility, with expertise spanning across in the areas of ovary and testis biology, reproductive toxicology, sexual health, and developmental biology. The group's current research has three focus areas:

- The investigation of factors responsible for decreasing egg quality with ageing.
- The improvement of public fertility and reproductive health knowledge.
- Determining the regulation of ovary development using single cell sequencing technologies.

As such, this laboratory's research is strategically placed to span the full gamut from fundamental discovery science through clinically impactful research to significant educational outcomes, with the capacity to benefit end users across the entire translational cycle.

Grants

Australian Research Council: Determining the regulation of ovary development with single cell sequencing. Sutherland JM (2022-24)

Hunter Medical Research Institute: improving fertility awareness and knowledge in young people. Sutherland JM, Chojenta C, Delforce S, Ford E, Sweeney S (2021-22)

Publications

Ford EA, Peters AE, Roman SD, McLaughlin EA, Beckett EL, **Sutherland JM**. (2022) Studies of Fertility Smartphone Apps Reveal a Lack of Insight and Scientific Information. *Fertility & Reproduction*, 04 183-183

Ford EA, Peters AE, Roman SD, McLaughlin EA, Beckett EL, **Sutherland JM**. (2022) A scoping review of the information provided by fertility smartphone applications. *Human Fertility*, 25 625-639

Siddall NA, Casagrande F, Johanson TM, Dominado N, Heaney J, **Sutherland JM**, et al. (2022) MiMIC analysis reveals an isoform specific role for *Drosophila* Musashi in follicle stem cell maintenance and escort cell function. *Cell Death Discovery*, 8

Frost ER, Ford EA, Peters AE, Lovell-Badge R, Taylor G, McLaughlin EA, **Sutherland JM**. (2022) A New Understanding, Guided by Single-Cell Sequencing, of the Establishment and Maintenance of the Ovarian Reserve in Mammals. *Sexual Development*, doi: 10.1159/000526426

Ford EA, Frost ER, Beckett EL, Roman SD, McLaughlin EA, **Sutherland JM**. (2022) Transcriptomic profiling of neonatal mouse granulosa cells reveals new insights into primordial follicle activation. *Biology of Reproduction*, 106 503-514

<https://www.newcastle.edu.au/profile/jessie-sutherland>



**Associate Professor
Kirsty Pringle**



**Emerita Scientia
Professor Eugenie
Lumbers AM FAA**

Pregnancy and Placental Biology Research

This research program encompasses both discovery-based and translational research across several innovative projects related to pregnancy and female reproductive health. The group are particularly interested in the role of the intrauterine, circulating, and intrarenal renin angiotensin systems (RASs), which have been implicated in pregnancy complications such as preterm birth and preeclampsia as well as in disease states such as endometrial cancer, diabetes, kidney disease and hypertension. A/Professor Pringle also leads the Gomeroi Gaaynggal Study (<https://www.gomeroibabies.org.au/>) which aims to improve health outcomes for Indigenous women and their children. Current areas of research interest include:

- Investigation of the role of the prorenin receptor and soluble prorenin receptor in the pathogenesis of preeclampsia.
- The use of markers of the circulating and intrarenal RASs to identify Indigenous women with underlying kidney disease and who are potentially at risk of preeclampsia.
- The roles of the endometrial RAS in endometrial cancer and the potential use of RAS blocking drugs as therapeutic agents.
- Novel biomarkers for detection of endometrial cancer.
- The balance between angiotensin peptides and pathways in pregnant women with COVID-19.

HDR Students: Alyssa Lochrin, Oyepeju Onifade, Lachlan Schofield

Research Fellows: Dr Sarah Delforce, Dr Saije Endacott

Grants

John Hunter Charitable Trust: The role of the placental renin-angiotensin system in the pathogenesis of gestational diabetes. Pringle KG, Park F (2022)

Publications

Martin JH, Mohammed R, Delforce SJ, Skerrett-Byrne DA, de Meaultsart CC, Almazi JG, et al. (2022) Role of the prorenin receptor in endometrial cancer cell growth. *Oncotarget*, 13 587-599

Lumbers ER, Head R, Smith GR, Delforce SJ, Jarrott B, Martin JH, **Pringle KG**. (2022) The interacting physiology of COVID-19 and the renin-angiotensin-aldosterone system: Key agents for treatment. *Pharmacology Research & Perspectives*, 10 Tamanna S, Morosin SK, Delforce SJ, van Helden DF, **Lumbers ER**, **Pringle KG**. (2022) Renin-angiotensin system (RAS) enzymes and placental trophoblast syncytialisation. *Molecular and Cellular Endocrinology*, 547

Mah BL, Brown A, Eades S, **Pringle KG**, Rae KM. (2022) Psychological Distress, Stressful Life Events and Social Disadvantage in Pregnant Indigenous Australian Women Residing in Rural and Remote NSW: a Longitudinal Cohort Study. *Journal of Racial and Ethnic Health Disparities*, 9 2197-2207

<http://www.newcastle.edu.au/profile/kirsty-pringle>



**Professor
Doan Ngo**

**Research
Assistants/Fellows**

Dr Lohis
Balachandran
Dr Angeline Leong
Dr Trent Williams
Dr Tatt Jhong Haw
Ms Sue Lightfoot

HDR Students

Rossana Untaru
Dongqing Chen
Dawn McIvor
Amanda Croft
Conagh Kelly
Joyce Lim
Joshua Bennetts

Honours Students

Ms Claire Locker

Newcastle Centre of Excellence in Cardio-Oncology, Cardiometabolic and Heart Failure Research

Professor Ngo is a cardiovascular researcher. She co-leads one of the largest and the only fully bench-to-bedside Cardio-Oncology program in Australia. Her team is multidisciplinary and includes clinicians and basic scientists from cardiovascular and cancer fields, at all career stages, supported by consumers, industry, and international professional societies. The program incorporates basic mechanistic discovery studies looking at mechanisms of cardiotoxicity, drug discovery studies, translational human research, clinical research and clinical inpatient and outpatient service delivery. Doan's Cardio-Oncology program is recognised as a Gold Tier Centre of Excellence by the International Cardio-Oncology Society (ICOS), demonstrating excellence in research, publications, clinical service, national and international level of education programs, quality improvements, program and capacity building, and international committee involvements. Other research interests are in Cardiometabolic and Heart Failure research where the laboratory's focus has been on understanding the mechanisms underlying heart failure due to obesity and metabolic stress, as well as better ways to improve delivery of heart failure services to her community and understanding the clinical gaps, especially for the regional/rural communities.

Specific research interest directions are:

- Mechanisms underlying development of heart failure, especially heart failure due to obesity and diabetes
- Role of angiogenesis, mitochondria, and redox stress in cardiometabolic disorders with focus on obesity and diabetes
- Mechanisms of development of cancer therapy-mediated cardiotoxicity
- Developing therapeutic options for cardio-protection in setting of cancer treatment
- Development and evaluation of cardio-oncology clinical and translational program
- Evaluation of new treatment options for patients with obesity, heart failure and chemotherapy-induced cardiotoxicity

Grants

Medical Research Future Fund – Cardiovascular Mission: Cardiovascular disease and cancer: identifying shared disease pathways and pharmacological management. Sverdlov A, Ngo DTM, Cairns M, Lee H, Verrills N, Gedye C, Haw TJ, Attia J et al. (2022-25)

National Heart Foundation Future Leader Fellowship: Strategies to prevent and reduce cardiovascular burden in cancer survivors. Ngo DTM (2021-25)

NSW Ministry of Health Fellowship: Implementation of strategies for early detection and prevention of chemo-therapy-induced cardiotoxicity in cancer patients: a multidisciplinary approach. Ngo DTM (2018-21)

RACE Oncology: Absence of Bisantrone Cardiotoxicity: Molecular Studies. Sverdlov AL, Ngo DTM (2021-23)

National Heart Foundation Strategic Cardio-Oncology Grant: Improving cardiovascular health for Aboriginal and Torres Strait Islander people with cancer. Garvey G, Brown A, Sverdlov AL, Diaz A, Habibian M, Ngo DTM, Walpole E, Cunningham J, Nicholls S, Segelov E (2021-24)

NSW Health/NSW Cardiovascular Research Capacity Program: Can we treat cancer without breaking the heart? From cardiotoxicity to cardioprotection-reversing the impact of cancer therapies on cardiovascular health for cancer patients. Sverdlov A, Proietto A, Walley T, Attia J, Wiggers J, Ngo DTM, Scott R et al. (2021-24)

Publications

Nolan MT, Creati L, Koczwara B, Kritharides L, Lynam J, Lyon AR, Negishi K, **Ngo DTM**, Thomas L, Vardy J, Sverdlov AL. (2022) First European Society of Cardiology Cardio-Oncology Guidelines: A Big Leap Forward for an Emerging Speciality. *Heart, Lung and Circulation*, Dec;31(12):1563-1567. doi: 10.1016/j.hlc.2022.11.003

Deng Y, **Ngo DTM**, Holien JK, Lees JG, Lim SY. (2022) Mitochondrial Dynamin-Related Protein Drp1: a New Player in Cardio-oncology. *Current Oncology Reports*, 24,1751-1763. doi: 10.1007/s11912-22-01333-w. [3 citations]

White J, Byles J, Williams T, Untaru R, **Ngo DTM**, Sverdlov AL. (2022) Early access to a cardio-oncology clinic in an Australian context: a qualitative exploration of patient experiences. *Cardio-Oncology*, 8, 14. doi: 10.1186/s40959-022-00140-3. [1 citation]

Al-Omary MS, Majeed T, Al-Khalil H, Sugito S, Clapham M, **Ngo DTM**, Attia JR, Boyle AJ, Sverdlov AL. (2022) Patient characteristics, short-term and long-term outcomes after incident heart failure admissions in a regional Australian setting. *BMJ Journals*, 9, 1. doi: 10.1136/openhrt-2021-001897. [3 citations]

Nolan MT, Creati L, Koczwara B, Kritharides L, Lynam J, Lyon AR, Negishi K, **Ngo DTM**, Thomas L, Vardy J, Sverdlov AL. (2022) First ESC Cardio-Oncology Guidelines: A Big Leap Forward for an Emerging Specialty. *Heart and Lung Circulation*, 31 1563-1567. doi: 10.1016/j.hlc.2022.11.003

<https://www.newcastle.edu.au/profile/doan-ngo>



Dr Dean Sculley

HDR Students

Sonia Butler
Sergio Alvares
Maha Moudh A
Anazi

Integrated Digital Health use in Managing and Treating Chronic Diseases Research

This research centres on an integrated approach to chronic disease care. Recent studies have focussed on the emerging use of mHealth technology such as smart phones, smart watches, and associated peripherals to increase the effectiveness of the management and treatment of chronic diseases such as Type 2 diabetes and juvenile idiopathic arthritis. As a founding member of the Chronic Disease eHealth Research Group, Dr Sculley has been involved in the development and use of mobile technology in conjunction with a dedicated mobile App – Interactive Clinics - and website - interactiveclinics.com - that will greatly increase the monitoring, management, and treatment of chronic diseases. This international team have developed an integrated system utilising Smart Technology in multiple ways including:

- Blood glucose concentration monitoring via Bluetooth smartphone connection
- Pain assessment monitoring via our eVAS App module
- Physical activity duration and intensity via smart device exercise trackers and accelerometers
- Medication adherence via mobile messaging and App responses

The data is available to the healthcare team and researchers immediately once uploaded from smart devices. App modules are designed to improve the comprehension of tasks for children and adults for whom spoken and written English may be a challenge. Dr Sculley is responsible for delivering the Human Bioscience Prep Course, enabling new students to begin their degree programmes with confidence and increasing student retention rates. New research endeavours link teaching and learning with law. This involves international collaborations studying the potential legal ramifications of grade inflation and failure of students to attain adequate knowledge before graduation and practice.

Grants

Central Coast Research Scheme: Usability of eHealth and mHealth interventions by young people living with juvenile idiopathic arthritis. Sculley DV, Coda A, Butler S (2020)

The University of Newcastle: Purpose-built diabetes educational service to upskill and implement GP's behaviour towards insulin management in Type 2 diabetes. Coda A, Alvarez SD, Sculley DV, Santos D, Bridge P, Gironès X (2020-21)

Lower Hunter Medical: Digital health advancement to support patients with type 2 diabetes, and their clinicians. Coda A, Diez Alvarez S, Acharya S, Sculley D, Fellas A, Girones X, Santos D (2020-21)

Abbott Australasia P/L: Purpose-built diabetes educational service to upskill and implement GP's behaviours towards insulin management in Type 2 diabetes. Coda A, Sculley D, Alvarez SD, Santos D, Girones X, Chapple L (2021-22)

Publications

Diez Alvarez S, Fellas A, Santos D, **Sculley DV**, Wynne K, Acharya S, Navathe P, Girones X, Coda A. (2023) The Clinical Impact of Flash Glucose Monitoring—a Digital Health App and Smartwatch Technology in Patients with Type 2 Diabetes: Scoping Review. *JMIR Diabetes*, 8:e42389. URL: <https://diabetes.jmir.org/2023/1/e42389>. doi: 10.2196/42389

Butler S, **Sculley DV**, Santos DS, Fellas A, Gironès X, Singh-Grewal D, Coda A. (2022) Effectiveness of eHealth and mHealth Interventions Supporting Children and Young People Living with Juvenile Idiopathic Arthritis: Systematic Review and Meta-analysis. *Journal of Medical Internet Research*, 24

Butler S, **Sculley DV**, Santos DS, Fellas A, Gironès X, Singh-Grewal D, Coda A. (2020) Usability of eHealth and mobile health interventions by young people living with juvenile idiopathic arthritis: Systematic review. *JMIR Pediatrics and Parenting*, 3 1-15

Coda A, **Sculley DV**, Santos D, Gironès X, Acharya S. (2018) Exploring the Effectiveness of Smart Technologies in the Management of Type 2 Diabetes Mellitus. *Journal of Diabetes Science and Technology*, 1(3) 01

Sculley DV, Lucock M. (2017) Maternal Undernutrition and Type 2 Diabetes in Australian Aboriginal and Torres Strait Islander People: History and Future Direction. *Exploratory Research and Hypothesis in Medicine*, 2(4):117-121

<http://www.newcastle.edu.au/profile/dean-sculley>



**Dr Sarah
Valkenborghs**

Research Assistants

Dr Ashlee Cambourn
Dr Oun Al-Iedani
Paige Dent

**Master's Students
(co-supervised)**

Brenten James
(Exercise and Sports
Science)

**Honours Students
(co-supervised)**

Paige Dent
(Psychology)

Michelle Yu
(Physiotherapy)

Megan Purkiss
(Physiotherapy)

Exercise-induced Neuroplasticity Research

This group investigates the physiological mechanisms through which exercise, fitness and physical activity impact brain structure, function and metabolism, and the subsequent downstream effects on cognitive and mental health. Dr Sarah Valkenborghs is a physiologist who uses tools such as multi-modal magnetic resonance imaging to elucidate the effects of physical activity on the human brain in both healthy and clinical populations (e.g., adolescents, stroke, multiple sclerosis, men with depression, pregnant women, and developing fetuses).

Grants

Hunter Medical Research Institute: Exploring the benefits of physical activity during pregnancy on mothers' stress and baby's subsequent brain development. Valkenborghs S, Crombie G, Al-Iedani O, Fisher J, Smith J, Stillman C (2022-23)

The University of Newcastle, Cross College Support Scheme: Feasibility and Preliminary Efficacy of Walk-and-Talk Psychotherapy for Australian Men with Depression: A Pilot Study. Young M, Smith J, Halpin S, Kay-Lambkin F, Morgan P, Valkenborghs SR, Drew R, McMullen S (2022)

Hunter Children's Research Foundation: The IMPACT study: The Intergenerational effects of Maternal Physical Activity on Child Development. Valkenborghs SR, Freeman E, Campbell L, Grace T, Hoskins S (2023-24)

Medical Research Future Fund (MRFF), Department of Health and Aged Care: Personalising the management of obesity-associated asthma using medical nutrition therapy and physical activity prescription: The IDEAL Study. Scott H, Wood LG, Valkenborghs SR, Dixon A, Horvat J, Weaver N, Yoong S, Berthon B, Williams E, Brown A (2023-26)

The University of Newcastle, School of Health Sciences Research Support Grant round & Cross College Support Scheme: Neural mechanisms underpinning the effects of cognitive load on postural stability with ageing. Snodgrass S, Marquez J, Karayanidis F, Johnson S, Blyton S, Afkhami R, Weerasekara I, Valkenborghs SR, Smith M, Mickle K, Stanwell P (2022-23)

Publications

Valkenborghs SR, Dent PC, Stillman CM. (2022) The intergenerational effects of parental physical activity on offspring brain and neurocognition in humans: a scoping review. *Neuroscience and Biobehavioral Reviews*, 104953

<https://doi.org/10.1016/j.neubiorev.2022.104953> (Q1, IF = 9.1)

Valkenborghs SR, Hillman CH, Al-Iedani O, Nilsson M, Smith JJ, Leahy AA, ... & Lubans DR. (2022) Effect of high-intensity interval training on hippocampal metabolism in older adolescents. *Psychophysiology*, e14090. <https://doi.org/10.1111/psyp.14090> (Q1, IF = 4.0)

Lubans DR, Leahy AA, Mavilidi MF, **Valkenborghs SR.** (2022) Physical Activity, Fitness and Executive Functions in Youth: Effects, Moderators and Mechanisms. In: Andersen, S. (Ed) *Sensitive periods of brain development and preventive interventions – Current Topics in Behavioural Neurosciences*. Germany: Springer. (In Press) https://doi.org/10.1007/7854_2021_271

Valkenborghs SR, Anderson SL, Scott HA, Callister R. (2022) Exercise Training Programs Improve Cardiorespiratory and Functional Fitness in Adults with Asthma: a systematic review and meta-analysis. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 10-1097. <https://doi.org/10.1097/HCR.0000000000000698> (Q1, IF = 3.6)

<https://www.newcastle.edu.au/profile/sarah-valkenborghs>





Professor Lisa Wood

Research Fellows

Dr Bronwyn Berthon
Dr Hayley Scott
Dr Evan Williams

HDR Students

Isobel Stoodley
Lily Williams
Chris Hayes
Laura Dowling

Nutrition Research Group, Asthma and Respiratory Diseases Research

This group investigates nutritional approaches to managing chronic inflammatory diseases and conditions. In recent years they have had a focus on respiratory diseases, obesity, and aging, which all have an underlying inflammatory pathology. In 2022, the four main themes were:

- **The gut-Lung axis and COPD:** COPD studies examined the anti-inflammatory potential of gut metabolites.
- **Obesity:** Adipose tissue collected from patients during bariatric surgery is used to examine the activity of adipose tissue-derived macrophages and to test interventions aimed at reducing inflammation in obesity.
- **Aging:** A randomised controlled trial has been designed and tested in older people at risk of sarcopenia. The intervention combines a high protein supplement with resistance training to reduce systemic inflammation, stimulate muscle accretion pathways and improve body composition.
- **Sex hormones in Asthma:** Ex-vivo cell culture studies exploring the role of female sex hormones and obesity on inflammatory and immunometabolic pathways.

Grants

National Health and Medical Research Council Synergy: Defining the role and therapeutic manipulation of the gut-lung axis in respiratory disease. Hansbro P, El-Omar E, Wood LG, Jardine M, Faiz M, Scott HA, Liu G, Vaughan A, Jiang X, Budden K (2022-26)

Department of Industry, Innovation and Science/ Freedom Food Group Nutritionals: Lactoferrin supplementation, immune function, and respiratory virus infection. Wood LG (2021-22)

Lifecykel Labs Pty Ltd and Department of Industry Innovation and Science Entrepreneurs' Programme: Effects of medicinal mushroom extracts on immune responses. Wood LG (2021-22)

John Hunter Hospital Charitable Trust: Investigating the role of female sex hormones in women with asthma: a clinical trial. Scott HA, Brown A, Wood LG, Tyler G (2022)

Publications

Williams EJ, Guilleminault L, Berthon BS, Eslick S, Wright T, Karihaloo C, Gately M, Baines KJ, **Wood LG**. (2022) Sulforaphane Reduces Pro-Inflammatory Response To Palmitic Acid In Monocytes And Adipose Tissue Macrophages. *Journal of Nutritional Biochemistry*, Mar 7;104:108978. doi: 10.1016/j.jnutbio.2022.108978.

Berthon BS, Williams LM, Williams EJ, **Wood LG**. (2022) Effect of lactoferrin supplementation on inflammation, immune function, and prevention of respiratory tract infections in humans: a systematic review and meta-analysis. *Advances in Nutrition*, 13(5):1799-1819. doi: 10.1093/advances/nmac047.

Thompson D, **Wood LG**, Williams EJ, McLoughlin RF, Rastogi D. (2022) Endotyping pediatric obesity-related asthma: contribution of anthropometrics, metabolism, nutrients, and CD4+ lymphocytes to pulmonary function. *Journal of Allergy and Clinical Immunology*, 50(4): 861-871. doi: 10.1016/j.jaci.2022.04.033.

Scott HA, **Wood LG**, Williams EJ, Weaver N, Upham JW. (2022) Comparing the effect of acute moderate and vigorous exercise on inflammation in adults with asthma: a randomised controlled trial. *Annals of American Thoracic Society*, 19; 1848-1855.

Liu L, Liu Y, Zhang X, Liu D, Wang G, **Wood LG**. (2022) Dyslipidemia is associated with worse asthma clinical outcomes. *Journal of Allergy and Clinical Immunology in Practice*, <https://doi.org/10.1016/j.jaip.2022.11.037>

<http://www.newcastle.edu.au/profile/lisa-wood>



Professor Nathan Bartlett

Research Associates (ECR)

Dr Jason Girkin
Dr Camille Esneau

Part-time Research Staff

Steven Maltby
Dr Su-Ling Loo

HDR Students:

Amama Kanwal
Ryan Mati
Thomas Adams
Nathan Bryant
Bilal Malik
Lily Williams
Ida (Lan Wei)

Viral Immunology and Respiratory Disease Research

Professor Bartlett and his team continued to focus on the following areas in 2022: developing pre-clinical models (human and mice) of virus infection and respiratory disease, development (with industry partners) of therapeutics to prevent/treat respiratory viral infections and exacerbation of chronic airway diseases and innovative approaches of vaccine development and anti-viral drug delivery. In previous years they have collaborated with ENA Respiratory (MRCF-funded company) to develop an innate immune stimulant (INNA-051) to protect lungs against respiratory viral infections. In 2022, INNA-051 entered a Phase IIa influenza challenge clinical trial. Off the back of COVID, the group continued to use the coronavirus infection models developed to help local industries that are focusing their business to produce disinfectants, sanitisers, and virus inactivating materials. This led to new grants focused on face masks and specialised coatings for pathogen inactivation. In 2022, they also defined a new immune-regulatory role for IL-25 that directly inhibits virus induced airway epithelial cell innate anti-viral immunity. Collaborations with Lanier Biotherapeutics are ongoing to develop an antibody to therapeutically target IL-25 for neutrophilic asthma and lung fibrosis.

Grants

Exintech Pty Ltd: Antiviral Efficacy of Exintech Face Masks for Pathogen Mitigation. Bartlett NW (2022)

Dulux Group (Australia) Pty Ltd: Testing the antiviral efficacy of Dulux coatings for pathogen mitigation. Bartlett NW (2022)

Lanier Biotherapeutics, Inc: LNR125 anti-IL-25 blocking rhinovirus induced airway neutrophilic inflammation during allergic airways disease exacerbation. Bartlett NW (2022)

Publications

Williams TC, Loo SL, Nichol KS, Reid AT, Veerati PC, Esneau C,.. **Bartlett NW.** (2022) IL-25 blockade augments antiviral immunity during respiratory virus infection. *Communications Biology*, 5(1). doi:10.1038/s42003-022-03367-z

George PM, Reed A, Desai SR, Devaraj A, Faiez TS, Lavery S,..**Bartlett NW**,... Singanayagam A. (2022) A persistent neutrophil-associated immune signature characterizes post-COVID-19 pulmonary sequelae. *Science Translational Medicine*, 14(671). doi:10.1126/scitranslmed.abo5795

Girkin JLN, Maltby S, **Bartlett NW.** (2022) Toll-like receptor-agonist-based therapies for respiratory viral diseases: thinking outside the cell. *European Respiratory Review*, 31(164). doi:10.1183/16000617.0274-2021

Aggarwal A, Stella AO, Walker G, Akerman A, Esneau C, Milogiannakis V,..**Bartlett NW**,...Turville SG. (2022) Platform for isolation and characterization of SARS-CoV-2 variants enables rapid characterization of Omicron in Australia. *Nature Microbiology*, 7(6), 896-908. doi:10.1038/s41564-022-01135-7

Kan S, Grainge C, Nichol K, Reid A, Knight D, Sun Y,..**Bartlett NW**,... Liang M. (2022) TLR7 agonist loaded airway epithelial targeting nanoparticles stimulate innate immunity and suppress viral replication in human bronchial epithelial cells. *International Journal of Pharmaceutics*, 617. doi:10.1016/j.ijpharm.2022.121586

<https://www.newcastle.edu.au/profile/nathan-bartlett>



Professor Jay Horvat

Research Team

Dr Jemma Mayall
Dr Alexandra Brown
Dr Henry Gomez
Dr Kurtis Budden
Ms Tegan Hunter

HDR Students

Nia Lopez
Swaroop Vanka
Olivia Carroll
Katie Daly
Huw McCarthy
Charlotte Alemao
Amber Pillar

Inflammation and Infection-Induced Diseases Research

This research aims to inform novel targets for the development of improved therapeutic strategies for respiratory and reproductive tract diseases and neurodegenerative diseases such as multiple sclerosis.

- **Role of iron and respiratory disease:** The group has recently begun investigating the interplay between iron, infection, and immunity in the context of lung disease and have several exciting papers and grants that are in preparation for submission in 2019.
- **Severe asthma:** The group are developing an understanding of the immunological and patho-physiological mechanisms of severe forms of asthma in order to inform effective therapeutic targets. More recently, they have commenced investigations into the role that hormones and obesity play in asthma.
- **Workplace and environmental dust:** The group has secured funding to establish a research program in collaboration with engineers (materials scientists) and workplace health and safety researchers to characterise the effects of inhalation of particulate matter in the occupational setting and how different dusts might cause diseases such as black lung and silicosis.
- **Infection and reproductive tract disease:** The group are investigating the immunobiology of *Chlamydia* infection and its role in the pathogenesis of *Chlamydia* reproductive tract and brain disease. This has been extended further by investigating the association between infection with several other diseases including multiple sclerosis.

Grants

National Health and Medical Research Council: Development of a novel effective therapy for asthma and COPD. Hansbro PM, Wark PAB, Horvat JC (2020-22)

Medical Research Future Fund: Bushfire Impact on Vulnerable Groups: the respiratory burden and effective community solution. Gibson P, Jensen M, McDonald V, Horvat JC, et al. (2020-22)

RUN DIPG: Neoantigen immunopeptidomics for the development of immunotherapies for the treatment of diffuse intrinsic pontine glioma (DIPG). Dun MD, Horvat JC, Larsen M, Hesson L, Cowley M (2021-24)

National Health and Medical Research Council: ER stress-Unfolded Protein Response a critical metabolic pathway for airway remodelling in asthma. Wark PAB, Horvat JC, Pathinayake P, Hansbro PM, Oliver B, Hsu A, Brown A, Kaiko GE, Baines K (2021-23)

Hunter New England Local Health District: Targeting the NLRP3 inflammasome to improve the immune response of obese individuals to influenza A virus. Williams E, Arnold D, Berthon B, Horvat JC, Williams L (2022)

Protagonist Therapeutics Inc: Treatment with a hepcidin mimetic to regulate iron levels in respiratory diseases such as asthma, COPD. Horvat JC, Brown A (2022)

National Heart Foundation of Australia: Investigating the cardiopulmonary impacts of prolonged exposure to bushfire smoke particulate matter and other environmental hazards in Regional Australia. Haw TJ, Gomez H, Horvat JC, Ngo D (2022)

The University of Newcastle Research Associates Ltd (TUNRA): Development of an accurate biological test for the monitoring and assessment of occupational dust inhalation in high dust industries. Horvat JC, Fleming A, Ilic D, Jayasundara P, Mayall J (2022-25)

Publications

Runtsch MC, Angiari S, Hooftman A, Wadhwa R,**Horvat JC**, Hansbro PM, et al. (2022) Itaconate and itaconate derivatives target JAK1 to suppress alternative activation of macrophages. *Cell Metabolism*, 34(3):487-501

Pinkerton JW, Kim RY, Brown AC, Wood LG, Hansbro PM, **Horvat JC**, et al. (2022) Relationship between type 2 cytokine and inflammasome responses in obesity-associated asthma. *The Journal of Allergy and Clinical Immunology*, 149(4):1270-1280.

Donovan C, Kim RY, Galvao I, Jarnicki AG, Brown AC, Jones-Freeman B, Gomez HM,**Horvat JC**, Hansbro PM, et al. (2022) Aim2 suppresses cigarette smoke-induced neutrophil recruitment, neutrophil caspase-1 activation and anti-Ly6G-mediated neutrophil depletion. *Immunology & Cell Biology*, doi: 10.1111/imcb.12537

Beyene T, Murphy VE, Gibson PG, McDonald VM, van Buskirk J,**Horvat JC**, Zosky G, et al. (2022) The impact of prolonged landscape fire smoke exposure on women with asthma in Australia. *BMC Pregnancy and Childbirth*, doi: 10.1186/s12884-022-05231-8

Vanka KS, Shukla S, Gomes HM, James C, Palanisami T, Williams K, Chambers DC, Britton WJ, Ilic D, Hansbro PM, **Horvat JC**. (2022) Understanding the pathogenesis of occupational coal and silica dust-associated lung disease. *European Respiratory Review*, 31:210250

<http://www.newcastle.edu.au/profile/jav-horvat>



Laureate Professor Paul Foster
DSc (ANU), FAHMS,
ATSF, FERS, FThorSoc

Research/ Postdoctoral Fellows

Dr Hock Tay
Dr Kelly Asquith
Daniel Tan
Pedro Garcia-Sobrinho

Senior Research Support
Fiona Evers

HDR Students:

Jessica Barnes
Gabriela Araujo-Hoefel
Keilah Garcia
Lorena Rodrigues-Sabino
Grace Burns
Panisar Meechan
Xiaoming Liu
Jessica Barnes
Jessica Bruce
Svenja Loering
Amber Pillar

Asthma, Allergy and Inflammation Research

Current research of this laboratory primarily aims at defining the key cellular and molecular processes that underlie the development of pathogen and allergen (e.g., viral, thunderstorm asthma and fungal) induced exacerbation of asthma and the impact of infection on the development of chronic inflammatory diseases of the airways. The group is particularly interested in the molecular events that predispose to remodelling of the airways in chronic disease and the subsequent impact on lung function through life. Projects are also focusing on the biology of CD4+ T-helper cells, and particularly the molecular and functional characterisation of Th22 cells. The aim is to develop new anti-inflammatories for the treatment of chronic diseases of the airways.

Grants

National Health and Medical Research Council Project Grant: Modelling the role of innate immune cells in exacerbation of asthma. Foster PS, Tay H, Yang M (2019-23)

National Health and Medical Research Council Investigator Grant: Using advanced technologies to investigate the impact of PFAAS on the human mucosal barrier and interaction with pre-existing medical conditions. Kaiko G, Foster PS, Naidu R, Lee H (2020-24)

Hunter Medical Research Institute Research Grant: Development of prognostic tool to identify T cell responses in COVID-19 patients. Wark P, Foster PS, Tay H, Kaiko G, Oliver B, Kwan B, Riveros C (2022)

Publications

Bardin PG, **Foster PS.** (2021) Clinical translation of basic science in asthma. *New England Journal of Medicine*, 385(18):1714-1717. doi: 10.1056/NEJMe2114472. PMID: 34706176 Editorial. *IF 91.25*

Wang L, Netto KG, Zhou L, Liu X, Wang M, Zhang G, **Foster PS**, Li F, Yang M. (2021) Single-cell transcriptomic analysis reveals the immune landscape of lung in steroid-resistant asthma exacerbation. *Proceedings of the National Academy of Sciences of the United States of America*, 118(2). <https://doi.org/10.1073/pnas.2005590118>. PMID: 33397719. *IF 11.2 Cited 33 FWCI 3.5*

Plank MW, Kaiko GE, Maltby S, Weaver J, Tay HL, Shen W, Wilson MS, Durum SK, **Foster PS.** (2017) Th22 cells form a distinct Th lineage from Th17 cells in vitro with unique transcriptional properties and Tbet-dependent Th1 plasticity. *Journal of Immunology*, 198(5):2182-2190. *IF 5.4 Cited 130, FWCI 2.52 First description of factors required for differentiation of Th22 cells and identification that they are a specific lineage of CD4+ T-helper lymphocytes*

Mattes J, Collison A, Plank M, Phipps S, **Foster PS.** (2009) Antagonism of microRNA-126 suppresses the effector function of TH2 cells and the development of allergic airways disease. *Proceedings of the National Academy of Sciences of the United States of America*, 106(44):18704-18709. *IF 11.2 cited 501 FWCI 3.63 First demonstration of the therapeutic potential for targeting microRNA for treatment of inflammation and asthma.*

Collison A, Hatchwell L, Verrills N, Wark PA, de Siqueira AP, Tooze M, Carpenter H, Don AS, Morris JC, Zimmermann N, Bartlett NW, Rothenberg ME, Johnston SL, **Foster PS**, Mattes J. (2013) The E3 ubiquitin ligase midline 1 promotes allergen and rhinovirus-induced asthma by inhibiting protein phosphatase 2A activity. *Nature Medicine*, 19(12):232-237. *IF 53.4 Cited 126 FWCI 4.74 Identification of a novel role of midline 1 in regulating inflammation.* <http://www.newcastle.edu.au/profile/paul-foster>



Dr Gerard Kaiko

**Postdoctoral
Researchers**

Dr Ayesha Ali
Dr Bojan Stojkovic
Dr Gabriela Araujo
Hoefel

Research Assistant
Amber Pillar

HDR Students
Matthijs Bekkers
Tan Hui Ying
Harvey Kok
Brent Gilbert

Stem Cells and Organoids in Mucosal Diseases Research

This group works with novel 3D technology to generate adult epithelial stem cells from all regions of the gastrointestinal and respiratory systems and utilise iPSCs to study diseases of the lung and gut. This has led to the establishment of several biobanks of patient organoids at UON/HMRI. Only a tiny patient biopsy is required to grow these stem cells in the laboratory. The group uses this technology for drug discovery, which has generated several pieces of IP including some being commercialised. They have developed a drug-response prediction test for personalised medicine in cystic fibrosis, which has led to Australia's first organoid guided clinical trial (Organoid Guided N-of-1: ORIGIN-1) in an example of translation of bench research to clinic. They also use this technology for toxicology screening, and better understanding of biological mechanisms in intestinal and lung diseases including an informatic pipeline developed in collaboration with the School of Engineering to identify new drug targets in the microbiome.

Current research focus of the group:

- Mucosal organoids (generated from the lung and gastrointestinal tract) as tools for drug discovery in IBD, cystic fibrosis, and colon and lung cancers.
- The role of epithelial stem cells in tissue regeneration and repair in the lung and gastrointestinal tract.
- Developing organoid assays for precision medicine using the patient adult stem cell technology translating into the clinic.

Grants

Medical Research Future Fund clinical trial for rare diseases grant: A precision medicine clinical trial platform to BEAT CF.

Wark P Jaffe A, Kaiko GE, McGree J, Schultz A, Snelling T, Waters S (2022-25)

Publications

Jamaluddin MFB, Ghosh A, Ingle A, Mohammed R, Ali A, Bahrami M, **Kaiko GE**, Gibb Z, Filipe EC, Cox TR, Boulton A, O'Sullivan R, Ius Y, Karakoti A, Vinu A, Nahar P, Jaaback K, Bansal V, Tanwar PS. (2022) Bovine and human endometrium-derived hydrogels support organoid culture from healthy and cancerous tissues. *PNAS*, doi: 10.1073/pnas.2208040119 [C1]

Dowling LR, Strazzari MR, Keely S, **Kaiko GE**. (2022) Enteric nervous system and intestinal epithelial regulation of the gut-brain axis. *The Journal of Allergy and Clinical Immunology*, doi: 10.1016/j.jaci.2022.07.015 [C1]

Bruce JK, Burns GL, Soh WS, Nair PM, Sherwin S,..... **Kaiko GE**, et al. (2022) Defects in NLRP6, autophagy and goblet cell homeostasis are associated with reduced duodenal CRH receptor 2 expression in patients with functional dyspepsia. *Brain, Behavior and Immunity*, 101, 335-345. doi: 10.1016/j.bbi.2022.01.019 [C1]

Bekkers M, Stojkovic B, **Kaiko GE**. (2021) Mining the Microbiome and Microbiota-Derived Molecules in Inflammatory Bowel Disease. *International Journal of Molecular Sciences*, 22(20), 11243; doi: 10.3390/ijms222011243 [C1]

Wark PAB, Pathinayake PS, **Kaiko GE**, Nichol K, Ali A, Chen L, et al. (2021) ACE2 expression is elevated in airway epithelial cells from older and male healthy individuals but reduced in asthma. *Respirology*, doi: 10.1111/resp.14003 [C1]

<https://www.newcastle.edu.au/profile/gerard-kaiko>



Professor Simon Keely

**Postdoctoral
Researchers**

Dr Grace Burns
Dr Emily Hoedt
Dr Huw McCarthy
Dr Bridie Goggins

Research Assistants

Simonne Sherwin
Kyra Minahan
Joanne Wai Sinn Soh
Mia Gottstein
Shandelle Caban
Kirsten Swan

HDR Students

Jessica Bruce
Ke Ning Fan
Veral Vishnoi
Samwel Makenyengo
Georgia Carroll
Jennifer Pryor
Cheenie Nieva
Annalisa Cuskelly
Joanne Wai Sinn Soh
Tharindu Senanayake
Kaylani Almeida
Raquel Cameron
Mudar Zand Irani
Laura Dowling
Sophie Fowler

Gastrointestinal Research

This research examines molecular mechanisms of disease in the gastrointestinal (GI) tract, including inflammatory bowel disease (IBD), food allergy, colorectal cancer, and functional GI diseases (FGIDs). Through clinical and industry collaboration, the laboratory has a strong focus on translating fundamental understanding of disease into rationally designed, therapeutic and surgical interventions. As part of the HMRI Immune Health Research Program and the NHMRC Centre for Research Excellence in Digestive Health, the group explores how the balance, or homeostasis between mucosal tissues and the commensal microbiota are altered in gastrointestinal diseases. In particular, the group are interested in how intestinal tissues function and repair with the reduced oxygen availability that is characteristic of inflammation and surgery. The research goal is to understand how these processes may be pharmacologically manipulated with novel compounds for therapeutic benefit, and to identify potential biomarkers of cellular processes which will allow for better diagnosis of GI disease.

Honours Students: Jasmine Ward, Christie Catley, Isaac Moore, Lani Goodman

Grants

Department of Defence: Optimising the Warfighter cognobiome. Talley N, Keely S, Hoedt E, Burns G, Eidels A, Duncanson K, Brown S, Tyson G, Morrison M, Holtmann G, Speight R, Kenna T, Krause L, Lipp O, Toh Y, O Cuiv P (2021-24)

National Health and Medical Research Council: Centre for Research Excellence in Digestive Health. Talley N, Chan S, Keely S, Walker M, Holtmann G, Jones M, Morrison M, Gibson P, Tack J, Coombes J (2019-24)

National Health and Medical Research Council: Wheat proteins, the duodenal microbiome and immune activation in the aetiopathogenesis of non-coeliac gluten sensitivity and functional dyspepsia. Keely S, Duncanson K, Potter M, Koloski N, Hoedt E, Nieva C (2021-23)

Hunter Medical Research Institute: Peri-operative factors affecting Natural Killer Cell function and their role in colorectal cancer re-occurrence and metastasis. Keely S, Smith S, Soh W (2021-24)

Hunter Medical Research Institute: The developing microbiome as predictor of autism spectrum disorders - NEW1000 HMRI. Keely S, Cuskelly A, Eslick G, Hoedt E, Pennell C, Talley N (2021-22)

Hunter Medical Research Institute: Assessing the impact of a local anaesthetic drug, Lignocaine, on natural killer cell function in the peri- and postoperative period in colorectal cancer. Burns G, Senanayake T, Smith S, Keely S (2022-23)

Publications

Shanahan ER, Kang S, Staudacher H, Shah A, Do A, Burns G, Chachay VS, Koloski NA, **Keely S**, Walker MM, Talley NJ, Morrison M, Holtmann GJ. (2022) Alterations to the duodenal microbiota are linked to gastric emptying and symptoms in functional dyspepsia. *Gut*, Sep 27:gutjnl-2021-326158. doi: 10.1136/gutjnl-2021-326158. Epub ahead of print. PMID: 36167662

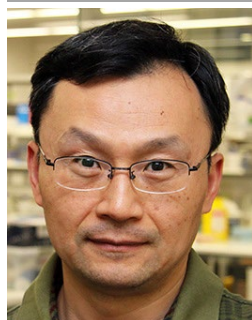
Cuskelly A, Hoedt EC, Harms L, Talley NJ, Tadros MA, **Keely S**, Hodgson DM. (2022) Neonatal immune challenge influences the microbiota and behaviour in a sexually dimorphic manner. *Brain Behaviour and Immunology*, Jul;103:232-242. doi: 10.1016/j.bbi.2022.04.023. Epub 2022 Apr 28. PMID: 35491004

Burns GL, Talley NJ, **Keely S**. (2022) Immune responses in the irritable bowel syndromes: time to consider the small intestine. *BMC Medicine*, Mar 31;20(1):115. doi: 10.1186/s12916-022-02301-8. PMID: 35354471; PMCID: PMC8969236

Bruce JK, Burns GL, Sinn Soh W, Nair PM, Sherwin S, Fan K, Dowling LR, Goggins BJ, Koloski N, Potter M, Bollipo S, Foster R, Gan LT, Veysey M, Philpott DJ, Girardin SE, Holtmann G, Kaiko GE, Walker MM, Talley NJ, **Keely S**. (2022) Defects in NLRP6, autophagy and goblet cell homeostasis are associated with reduced duodenal CRH receptor 2 expression in patients with functional dyspepsia. *Brain Behaviour and Immunology*, Mar;101:335-345. doi: 10.1016/j.bbi.2022.01.019. Epub 2022 Jan 31. PMID: 35093492

Hu MD, Golovchenko NB, Burns GL, Nair PM, Kelly TJ 4th, Agos J, Irani MZ, Soh WS, Zeglinski MR, Lemenze A, Bonder EM, Sandrock I, Prinz I, Granville DJ, **Keely S**, Watson AJM, Edelblum KL. (2022) $\gamma\delta$ Intraepithelial Lymphocytes Facilitate Pathological Epithelial Cell Shedding Via CD103-Mediated Granzyme Release. *Gastroenterology*, Mar;162(3):877-889.e7. doi: 10.1053/j.gastro.2021.11.028. Epub 2021 Dec 1. PMID: 34861219; PMCID: PMC8881348

[Professor Simon Keely - University of Newcastle Profile](#)
[Simon Keely - NCBI Bibliography](#)



**Associate Professor
Ming Yang**

Research Fellows

Dr Thi Hiep Nguyen
Dr Leon Sokulsky

Research Assistants

Fiona Eysers
Alyssa Lochrin

HDR Students

Keilah Garcia Netto
Xiaoming Liu

Innate Immunity and Lung Diseases Research

This research primarily aims at defining the key cellular and molecular processes that underlie the development of allergic disease (lung, skin, and gastrointestinal tract) and of viral (RSV and influenza) and bacterial induced pulmonary inflammation. The group received international recognition through publication in leading biomedical science journals and has contributed to more than 70 refereed manuscripts in high impact journals (*J Exp Med*, *J Clin Invest*, *Gastroenterology*, *J Allergy Clin Immunology*, *PNAS*, *J Immunology*) with more than 3600 combined citations. Associate Professor Yang has been successful in obtaining research grants both independently and in collaboration with other investigators (over \$6.7M). Recently he has initiated investigations into the mechanisms that regulate steroid resistant inflammatory pathways in the lung, to help understand how steroid resistance may develop in asthma. Understanding the mechanisms that regulate steroid-resistant inflammation is important and developing novel non-steroidal therapeutic approaches for the treatment of chronic inflammatory diseases of the lung will be highly beneficial, as these patients suffer greater morbidity and mortality. Currently, there is no effective treatment and very limited functional evidence of the way in which the inflammatory pathways are activated in these patients. Building on clinical studies, the group have recently demonstrated, for the first time, that macrophages are crucial in regulating steroid-resistant inflammatory signals. Two papers have been published in the *Journal of Immunology* and their significance has been recognised by the American Academy of Asthma Allergy and Immunology (symposium invitation, 2010) and the invitation to write two reviews for *Current Drug Targets* and *Journal of Leukocyte Biology*.

Grants

National Health and Medical Research Council: Modelling the role of innate immune cells in exacerbation of asthma. Foster PS, Tay H, Yang M (2019-23)

Publications

Yuan L, Liu HJ, Du XZ, Yao Y, Qin L, Xia ZK, Zhou K, Wu XY, Yuan YC, Qing B, Xiang Y, Qu XP, Qin XQ, **Yang M**, Liu C. (2022) Airway epithelial ITGB4 deficiency induces airway remodeling in a mouse model. *Journal of Allergy and Clinical Immunology*, doi: 10.1016/j.jaci.2022.09.032

Zhang HL, Liu SQ, Li YN, Li JR, Ni C, **Yang M**, Dong J, Wang ZQ, Qin ZH. (2022) Dysfunction of S100A4(+) effector memory CD8(+) T cells aggravates asthma. *European Journal of Immunology*, 52:978-993 doi: 10.1002/eji.202149572

Du XZ, Yuan L, Yao Y, Yang Y, Zhou K, Wu XY, Wang LY, Qin L, Li WK, Xiang Y, Qu XP, Liu HJ, Qin XQ, **Yang M**, Liu C. (2022) ITGB4 Deficiency in Airway Epithelium Aggravates RSV Infection and Increases HDM Sensitivity. *Frontiers in Immunology*, doi: 10.3389/fimmu.2022.912095

Liu XM, Li X, Chen L, Hsu ACY, Asquith KL, Liu C, Laurie K, Barr I, Foster PS, ****Yang, M**. (2022) Proteomic Analysis Reveals a Novel Therapeutic Strategy Using Fludarabine for Steroid-Resistant Asthma Exacerbation. *Frontiers in Immunology*, doi: 10.3389/fimmu.2022.805558

Wang L, Netto KG, Zhou L, Liu X, Wang M, Zhang G, Foster PS, Li F. ****Yang M**. (2021) Single-cell transcriptomic analysis reveals the immune landscape of lung in steroid-resistant asthma exacerbation. *Proceedings of the National Academy of Sciences USA*, 118(2) doi: 10.1073/pnas.2005590118

Li H, Wang H, Sokulsky LA, Liu S, Yang R, Liu X, Zhou L, Li J, Huang, C, Li F, Lei X, Jia H, Cheng J, Li F, ****Yang M**, Zhang G. (2020) Single-cell transcriptomic analysis reveals key immune cell phenotypes in the lungs of patients with asthma exacerbation. *Journal of Allergy and Clinical Immunology*, doi: 10.1016/j.jaci.2020.09.032

Sokulsky LA, Goggins B, Sherwin S, Eysers F, Kaiko GE, Board PG, Keely S, ****Yang M**, Foster PS. (2020) GSTO1-1 is an upstream suppressor of M2 macrophage skewing and HIF-1 alpha-induced eosinophilic airway inflammation. *Clinical and Experimental Allergy*, 50 609-624

Hadjigol S, Netto KG, Maltby S, Tay HL, Nguyen TH, Hansbro NG, Eysers F, Hansbro PM, ****Yang M**, Foster PS. (2019) Lipopolysaccharide induces steroid-resistant exacerbations in a mouse model of allergic airway disease collectively through IL-13 and pulmonary macrophage activation. *Clinical & Experimental Allergy*, 50 82-94 <http://www.newcastle.edu.au/profile/ming-yang>



Dr Michelle Brown

HDR Student

Bayley Matthews

Research Assistant

Samara Bray

DNA Repair - Ovarian Cancer Research

This research explores the homologous recombination (HR) DNA repair pathway following chemotherapy. Resistance to further chemotherapy—caused by HR deficiency—is common in patients who experience a resurgence of ovarian cancer following surgery and initial chemotherapy. Through research on alternative treatments, the group is working to restore hope to this vast cohort. Following graduation, Dr Brown commenced work with the Molecular Genetics diagnostic laboratory, within NSW Health Pathology and conducted genetic tests for BRCA genes—genes that, when mutated, can increase predisposition to breast cancer. Expertise in sequencing led to the appointment of Dr Wong as a member of the Advisory Committee of the Royal College of Pathologists Quality Assurance Program (RCPAQAP) Sanger DNA Sequencing module in 2015. Dr Wong took up her current role with the DNA Repair Group, in HMRI, in 2018. This research is contributing to a growing body of knowledge about how women with ovarian cancer respond to chemotherapy. Specifically, looking at why some women respond poorly—or not at all—and how alternative treatments present an opportunity to improve survival rates. Out of all cancers, ovarian cancer has one of the poorest prognoses, especially when diagnosed late. The 5-year survival rate is just over 44%. Many women with ovarian cancer will undergo surgery, potentially followed by chemotherapy. However, recurrence typically occurs in up to 75% of patients who can then develop chemotherapy resistance. There is growing evidence showing that women with ovarian cancer often display a deficiency in their DNA's ability to repair itself following chemotherapy. Known as homologous recombination (HR) deficiency, this can make women resistant to chemotherapy and hinder their chances of survival.

Grants

Maitland Cancer Appeal Committee Incorporated: Drug Repurposing for Ovarian Cancer. Bowden N, Page A, Brown MW (2022)

University of Newcastle – Research and Innovation Division: Women in Research Fellowship. Brown MW (2021-22)

Cancer Institute NSW: Sartorius Incucyte SX5 Live-Cell Analysis Instrument for high throughput screening of drugs for repurposing as chemotherapy in the treatment of cancer. Brown MW, Bowden N, Briscoe K, Ngo DTM, Reimann F, Sverdllov A (2022)

Publications

Wong-Brown MW, McPhillips M, Gleeson M, Spigelman AD, Meldrum CJ, Dooley S, Scott RJ. (2022) When is a mutation not a mutation: the case of the c.594-2A>C splice variant in a woman harbouring another BRCA1 mutation in trans. *Hereditary Cancer in Clinical Practice*, doi: 10.1186/s13053-022-00228-y

Wong-Brown MW, van der Westhuizen A, Bowden NA (2022) Sequential azacytidine and carboplatin induces immune activation I platinum-resistant high-grade serous ovarian cancer cell lines and primes for checkpoint inhibitor immunotherapy. *BMC Cancer*, doi: 10.1186/s12885-022-09197-w

Li N, Lim B, Thompson E, McInerney S, Zethoven M, Cheasley D, Rowley S, **Wong-Brown MW**, Devereux L, Gorringer K, Sloan E, Trainer A, Scott R, James P, Campbell I. (2021) Investigation of Monogenic Causes of Familial Breast Cancer: Data from the BEACON Case-Control Study. *NPJ Breast Cancer*, 7(1): 76

Matthews BG., Bowden NA, **Wong-Brown MW**. (2021) Epigenetic Mechanisms and Therapeutic Targets in Chemoresistant High-Grade Serous Ovarian Cancer. *Cancers*, 13(23): 5993

<https://www.newcastle.edu.au/profile/michelle-wong-brown>



**Associate Professor
Matt Dun**

**Postdoctoral
Researchers**

Dr Ryan Duchatel
Dr Abdul Mannan

Research Manager
Ms Alicia Douglas

Research Assistant
Paddy Kearney
Holly McEwen
Tyrone Beitaki

HDR Students
Zacary Germon
Dr Jon Sillar
Dilana Staudt
Farjana Afrin
Tabitha McLachlan
Evangelina Jackson
Mika Persson
Izac Findlay

Cancer Signalling Research (CSRG)

The research of CSRG, led by Associate Professor Matt Dun, is focused on improving outcomes for children and families facing aggressive cancers of the blood or brain e.g., acute myeloid leukaemia (AML), acute lymphoblastic leukaemia (ALL) or diffuse midline glioma (DMG) such as diffuse intrinsic pontine glioma (DIPG). Established by Associate Professor Dun in 2014, the group utilise cell and molecular biology techniques, coupled with a program of high-resolution phospho-proteomics, attempting to characterise the cellular signalling pathways dysregulated by the genetic individualities of a patient's cancer. This profiling strategy identifies/develops novel treatment targets and drug combination approaches to improve patient survival.

Grants

National Health and Medical Research Council Investigator Grant: Mechanistic and translational studies to improve the outcomes of high-risk paediatric cancers. Dun MD (2020-24)

National Health and Medical Research Council Targeted call for research: Utilising male fertility as a biomarker of health to understand the biological effects of PFAS. Nixon B, Turner B, Iulius G, Clarke B, Roman S, Dun MD, Eamans A, Green M, Calvert L (2020-23)

AptaBio Therapeutics Inc: in vitro and in vivo assessment of Aptabio-19 against acute high-risk leukaemias including patient-derived xenograft modelling. Dun MD, Mannan A, De Iulius G. (2022-23)

RUN DIPG: The Wish Lab. Dun MD, Duchatel R. (2022-24)

The Kids' Cancer Project / RUN DIPG: Pharmaco-phospho-proteo-genomics of paediatric high-grade glioma. Dun MD, Alvaro F, Hansen M (2022-25)

Little Legs Foundation Alegria's Army more data thesis: Harnessing the power from within: Neoantigen immunopeptidomics for the development of immunotherapies for the treatment of diffuse intrinsic pontine glioma (DIPG). Dun MD, Cowley M, Hesson L (2020-22)

Kazia Therapeutics Research Grant: In vivo evaluation of paxalisib for the treatment of diffuse midline glioma. Dun MD (2021-22)

Publications

Findlay IJ, ...***Dun MD**. (2022) Pharmaco-proteogenomic profiling of pediatric diffuse midline glioma to inform future treatment strategies. *Oncogene*, 41 461-475 *Corresponding. IF9.9

Przystal JM, ... **Dun MD** ... Bonner ER, et al. (2022) Imipridones affect tumor bioenergetics and promote cell lineage differentiation in diffuse midline gliomas. *Neuro-Oncology*, 24 1438-1451, IF:13.0

Liu I, ... **Dun MD**...Hack OA, et al. (2022) The landscape of tumor cell states and spatial organization in H3-K27M mutant diffuse midline glioma across age and location. *Nature Genetics*, 54 1881-1894. IF 41.4

Persson ML, Douglas AM,...**Dun MD**. (2022) The intrinsic and microenvironmental features of diffuse midline glioma: Implications for the development of effective immunotherapeutic treatment strategies. *Neuro-Oncology*, 24 1408-1422.

*Corresponding. IF13.0

Staudt DE,... **Dun MD**. (2022) Phospho-heavy-labeled-spiketide FAIMS stepped-CV DDA (pHASED) provides real-time phosphoproteomics data to aid in cancer drug selection. *Clinical Proteomics*, *Corresponding. IF5.0

<https://www.newcastle.edu.au/profile/matt-dun>



Dr Heather Lee

Post-doctoral Scientist

Dr Danielle Bond
Dr Sean Burnard

HDR Students

Kooper Hunt
Sam Humphries

Cancer Epigenetics Research

Cancers are heterogeneous, comprised of many cells with different characteristics and capabilities which is a major challenge for clinicians as certain cells can resist therapy and cause relapse. This laboratory's work is describing cancer heterogeneity with a focus on epigenetic mechanisms, which control how genetic information is read in each cell. The group primarily study acute myeloid leukaemia (AML), a devastating blood cancer with very poor prognosis. In AML epigenetic mechanisms are frequently disabled by mistakes in the genetic sequence, and epigenetic therapies can also be used to treat AML. The group use experimental techniques that allow them to study the inner workings of individual cancer cells. In each cell the group can profile epigenetic mechanisms and assess how the genetic sequence is being read. Currently, they use these powerful "single-cell multi-omic sequencing" methods to investigate the heterogeneous response of AML cells to epigenetic therapies. This analysis will reveal how these drugs work and identify opportunities to enhance their efficacy. Ultimately, this research may identify potential biomarkers to help clinicians monitor cancer progression and provide patients with optimal care.

Grants

National Health and Medical Research Council: Probing Epigenetic Clonal Evolution in Acute Myeloid Leukaemia. Lee HJ, Riveros C (2020-22)

Australian Research Council: Empirical and computational solutions for multi-omics single-cell assays. Lê Cao K-A, Lee HJ, Ritchie M, Bougeard S (2020-23)

National Health and Medical Research Council: Using advanced technologies to investigate the impact of PFAS exposure on the human mucosal barrier and interaction with pre-existing medical conditions. Kaiko G, Foster P, Naidu R, Lee HJ (2020-24)

College of Health, Medicine and Wellbeing: Can statins stop cancer cells evading therapy? Lee HJ, Bond D, Burnard S (2022)

Publications

Hunt KV, Burnard SM, Roper EA, Bond DR, Dun MD, Verrills NM, Enjeti AK, **Lee HJ**. (2022) scTEM-seq: Single-cell analysis of transposable element methylation to link global epigenetic heterogeneity with transcriptional programs. *Scientific Reports*, 12:5776
Wanigasuriya I, Kinkel SA, Beck T, Roper EA, Breslin K, **Lee HJ**, Keniry A, Ritchie ME, Blewitt ME, Gouil Q. (2022) Maternal SMCHD1 controls both imprinted Xist expression and imprinted X chromosome inactivation. *Epigenetics and Chromatin*, 15:26
Pearson HCL, Hunt KV, Trahair TN, Lock RB, **Lee HJ**, de Bock CE. (2022) The promise of single-cell technology in providing new insights into the molecular heterogeneity and management of acute lymphoblastic leukemia. *HemaSphere*, 6:e734
O'Neill H, **Lee HJ**, Gupta I, Rodger EJ, Chatterjee A. (2022) Single-Cell DNA Methylation Analysis in Cancer. *Cancers*, 14:6171

<https://www.newcastle.edu.au/profile/heather-lee>



Associate Professor Kelly Kiejda

Postdoctoral Researcher

Dr Kira Groen

HDR Students

Khairunnisa Md Yusof
Luiza Steffens Reinhardt

Honours Students

Cheryl Newton
Genevieve Greer

International PhD Intern

Carolina Siqueira

Breast Cancer Research

The central theme of this research is to understand the molecular mechanisms of breast cancer progression and treatment resistance. Breast cancer is the leading cause of cancer-related deaths in women worldwide. Two major challenges in the treatment of this disease are 1) resistance to therapy and 2) the development of secondary cancers (the leading cause of death from breast cancer). The vast majority breast cancer-related deaths are due to the development of cancer at distant sites other than the primary cancer site – this is called metastasis. Once a patient has developed a metastasis, they are incurable. The molecular changes that lead to metastasis are not fully understood and research aimed at discovering new biomarkers that mediate these events is urgently required, so that predictive biomarkers of therapy response and targeted therapies to inhibit breast cancer metastasis can be developed. Using powerful genomic techniques, this laboratory's research has led to discovery and development of two classes of novel biomarkers in cancer- p53 isoforms and epigenetic modifiers of gene expression (miRNAs and methylation).

Grants

Cancer Institute NSW: Career Development Fellowship- Development of a predictive test for p53 and its isoforms to aid the clinical treatment of breast cancer. Avery-Kiejda KA (2018-22)

NSW Health Pathology – Pathology North: Hunter Cancer Biobank. Walker M, Scott RJ, Ackland S, Goode S, Tanwar P, Verrills N, Hondermarck H, King S, Vilain R, Bowden N, Avery-Kiejda KA, Keely S, Rowe S (2018-22)

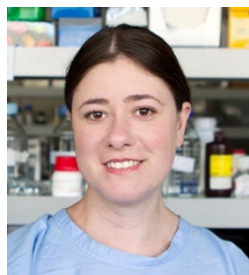
Majlis Kanser Nasional (MAKNA): Proteomic Profiling and Functional Analysis of Blood Serum from Breast Cancer Survivors for Lymphangiogenesis Biomarkers. Rosli R, Avery-Kiejda KA, Mahmud R, Abdullah M, Yusof KM (2022)

Hunter Medical Research Institute-Mark Hughes Foundation: MHF Brain Cancer GARD: Mark Hughes Foundation Brain Cancer Collaborative Genomics pipeline for Advancing Research into biomarker Discovery. Scott R, Kiejda KA (2021-23)

Publications

Groen K, Yusof KM, **Avery-Kiejda KA**. (2022) Chapter 6: Function of microRNAs in the cytoplasm. In J Xiao (Ed), *MicroRNA: From Bench to Beside*. London, UK. Elsevier Science, (pp: 91-107)
Steffens Reinhardt L, Zhang X, Groen K, Morten BC, De Iuliis GN, Braithwaite AW, Bourdon JC, **Avery-Kiejda KA**. (2022) Alterations in the p53 isoform ratio govern breast cancer cell fate in response to DNA damage. *Cell Death and Disease*, 13(10):907
Yusof KM, Groen K, Rosli R, Abdullah M, Mahmud R, **Avery-Kiejda KA**. (2022) Evaluation of Circulating MicroRNAs and Adipokines in Breast Cancer Survivors with Arm Lymphedema. *International Journal of Molecular Science*, 23(19), 11359
Steffens Reinhardt L, Groen K, Morten BC, Bourdon JC, **Avery-Kiejda KA**. (2022) Cytoplasmic p53 β isoforms are associated with worse disease-free survival in breast cancer. *International Journal of Molecular Science*, 23, 6670
Pariyar M, Thorne RF, Scott RJ, **Avery-Kiejda KA**. (2022) Verification and validation of a four-gene panel as a prognostic indicator in triple negative breast cancer. *Frontiers in Oncology*, 21;12:821334

<http://www.newcastle.edu.au/profile/kelly-kiejda>



**Associate Professor
Kathryn Skelding**

Placement Students

Jagatjit Singh Baghiana
Bridget Beverley
Jordan Duggan
Allira Ewin
Andrew Kelty
Ashley Kite
Shaun Nichols
Georgia Sulis
Miriam Temperley
Rebecca Turner

Research Assistant

Daniel Berry

Research Student

Danielle Theron

Cancer Cell Biology Research

This group investigates novel signal transduction pathways that control how breast cancer, glioblastoma and leukaemia cells proliferate, metastasise, and develop resistance to chemotherapeutics, with a view to developing new anti-cancer therapies that target these pathways that are less toxic than existing treatments. Recently, they have made several significant discoveries and identified a novel target and therapeutic inhibitor that is effective in a range of cancer types (whilst leaving normal cells untouched), including acute myeloid leukaemia and childhood acute lymphoblastic leukaemia, breast cancer, and glioblastoma. They have shown that this inhibitor significantly reduces tumour burden and increases survival times in mouse models of acute leukaemias and glioblastomas, outperforming existing gold standard treatments for these cancers. This inhibitor is currently being commercialised by Newcastle Innovation. The overarching aim is to improve patient quality of life, the group focus on developing novel methods of determining prognosis and ways of stratifying patient outcome following administration of existing treatments, so that a more personalised approach for cancer treatment can be developed. In addition to their drug discovery interests, the group use a variety of proteomic and molecular techniques to identify novel biomarkers that can be used for the improved treatment of leukaemias, glioblastoma multiforme, breast and prostate cancers.

Grants

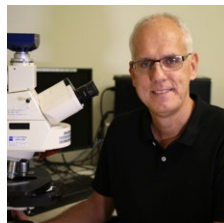
Margaret Mitchell Research Grant: A potential circulating biomarker for leukaemia and pre-leukaemia. Lincz LF, Skelding KA, Enjeti AK (2022-23)

College of Health Medicine and Wellbeing Strategic Cross-College Grant: In vitro studies to support clinical trials of a novel treatment for acute myeloid leukaemia. Skelding K, Lincz L, Enjeti A, Sakoff J (2022)

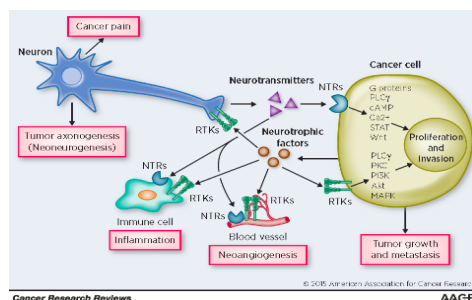
Publications

Skelding KA, Barry DL, Theron DZ, Lincz LF. (2022) Targeting the two-pore channel 2 in cancer progression and metastasis. *Exploration of Targeted Anti-tumor Therapy*, 3: 62-89. Invited submission

Skelding KA, Barry DL, Theron DZ, Lincz LF. (2022) Bone marrow microenvironment as a source of new drug targets for the treatment of acute myeloid leukaemia. *International Journal of Molecular Science*, 24: 563. Invited submission
Birgersson M, Chi M, Miller C, Brzozowski JS, Brown J, Schofield L, Taylor OG, Pearsall EA, Hewitt J, Gedye C, Lincz LF, **Skelding KA**. (2021) A Novel Role for Brain and Acute Leukemia Cytoplasmic (BAALC) in Human Breast Cancer Metastasis. *Frontiers in Oncology*, Vol 11. doi: 10.3389/fonc.2021.656120
<http://www.newcastle.edu.au/profile/kathryn-skelding>



Cancer Neuroscience Research



This team works on the crosstalk between nerves and cancer cells, and the impact on tumour progression. Recent evidence, including from this group, has shown that nerves promote tumour growth and metastasis. Their research objective is to identify the molecular mediators of the crosstalk between nerves and cancer cells because they may constitute new and innovative biomarkers and therapeutic targets in oncology. This may also be a way to address the issue of cancer pain. The methodologies used in the group include molecular analysis of human tumour samples and in particular proteomics. The work is conducted in collaboration with neurobiologists, pathologists, clinicians, and private companies to translate the results into clinical outcomes.

Professor Hubert Hondermarck

Postdoctoral

Research Fellows

Dr Chen Chen Jiang
Dr Sam Faulkner

HDR Students

Brayden March
Mark Marsland
Amiee Dowdell

Research Assistant

Siobhann McCuskley

Grants

NSW Health Pathology – Pathology North: Hunter Cancer Biobank. Walker M, Scott RJ, Ackland S, Goode S, Tanwar P, Verrills N, Hondermarck H, King S, Vilain R, Bowden N, Kiejda K, Keely S, Rowe S (2018-22)

Ovarian Cancer Research Foundation: Discovery and validation of a blood-based protein biomarker for the early detection of ovarian cancer. Tanwar P, Hondermarck H, Jaaback K, Karakoti A, Oldmeadow C, Vinu A (2021-23)

Hunter Medical Research Institute: A new treatment for HER2+ breast cancer resistant to current therapies. Hondermarck H & Jiang CC (2022)

Maitland Cancer Appeal Committee: New therapeutic targets in pancreatic cancer. Hondermarck H, Jiang CC, Jobling P (2022)

Mark Hughes Foundation (MHF): An effective targeted therapy for glioblastoma. Hondermarck H, Jiang CC, Faulkner S, Jobling P, Lynam J, Gedye C, Marsland M, Dowdell A (2022)

Publications

Jiang CC, Marsland M, Wang Y, Dowdell A, Eden E, Gao F, Faulkner S, Jobling P, Li X, Liu L, He Z, **Hondermarck H.** (2022) Tumor innervation is triggered by endoplasmic reticulum stress. *Oncogene*, Jan;41(4):586-599

Marsland M, Dowdell A, Jiang CC, Wilmott JS, Scolyer RA, Zhang XD, **Hondermarck H**, Faulkner S. (2022) Expression of NGF/proNGF and Their Receptors TrkA, p75^{NTR} and Sortilin in Melanoma. *International Journal Molecular Science*, Apr 12;23(8):4260

Delahunt B, Steigler A, Atkinson C, Christie D, Duchesne G, Egevad L, Joseph D, Kenwright DN, Matthews J, Murray JD, Oldmeadow C, Samarasingha H, Spry NA, Thunders MC, **Hondermarck H**, Denham JW. (2022) Percentage grade 4 tumour predicts outcome for prostate adenocarcinoma in needle biopsies from patients with advanced disease: 10-year data from the TROG 03.04 RADAR trial. *Pathology*, Feb;54(1):49-54

Ferdoushi A, Jamaluddin MFB, Li X, Pundavela J, Faulkner S, **Hondermarck H.** (2022) Secretome analysis of human schwann cells derived from malignant peripheral nerve sheath tumor. *Proteomics*, Jan;22(1-2):e2100063

Li X, Liu H, Dun MD, Faulkner S, Liu X, Jiang CC, **Hondermarck H.** (2022) Proteome and secretome analysis of pancreatic cancer cells. *Proteomics*, Jul;22(13-14):e2100320

<https://www.newcastle.edu.au/profile/hubert-hondermarck>



Professor Pradeep Tanwar

Research Fellows

Dr Fairuz Jamaluddin
Dr Shafiq Syed
Dr Arnab Ghosh
Dr M. Riazuddin
Dr Mamta Pariyar
Dr Keilah Garcia-Netto
Dr Riazuddin
Mohammed
Dr Nikita Panicker
Dr Hruda Malik

Lab Manager

Research Assistants

Poonam Rani
Florence Tomasetic
Victoria Blanch
Alecia Sheridan
Emily Williamson

Global Centre for Gynaecology Diseases

The major focus of this research is to develop new diagnostic tests and therapeutics for gynaecological diseases (endometriosis and fibroids) and cancers (ovarian and uterine cancers). The group uses patient-derived xenograft models, organoids, and primary human tissue samples to define the molecular and cellular events involved in pathogenesis and then use this knowledge to develop targeted strategies to improve clinical outcomes in patients. Current research focus:

- Role of stem cells in regeneration and cancer
- Wnt-P13K-mTOR signalling axis in ovarian and uterine cancers
- Drug resistance in ovarian and uterine cancers
- Early detection test for endometriosis and ovarian cancer
- Role of extracellular matrix in fibroids and ovarian cancer

HDR Students: Isabella Moore, Fatemeh Hashemi, Varshini Venkata, Prathima Nagendra, Yazmin Brown, Ruchit Patel and Yohannes Emiru

Grants

NSW Health Pathology – Pathology North: Hunter Cancer Biobank. Walker M, Scott RJ, Ackland S, Goode S, Tanwar P, Verrills N, Hondermarck H, King S, Vilain R, Bowden N, Kiejda K, Keely S, Rowe S (2018-22)

Cancer Australia: Obesity epidemic fuelling the surge of endometrial cancers: Elucidating the role and targeting of molecular signals involved in fat and endometrial cancer crosstalk. Tanwar PS, Hondermarck H (2020-22)

Ovarian Cancer Research Foundation: Discovery and validation of a blood-based protein biomarker for the early detection of ovarian cancer. Tanwar PS, Hondermarck H, Jaaback K, Karakoti A, Oldmeadow C, Vinu A (2021-24)

Hunter Medical Research Institute ECR Fellowship: Endometriosis supported by Haggarty Foundation. Tanwar PS (2022-26)

Early Detection of Ovarian Cancer. CIA Tanwar PS (2022-26)

Early Detection of Ovarian Cancer. CIA Tanwar PS (2022)

Publications

Jamaluddin MFB, Ghosh A, Ingle A, Mohammed R, Ali A, Bahrami M, Kaiko G, Gibb Z, Filipe EC, Cox TR, Boulton A, O'Sullivan R, Ius Y, Karakoti A, Vinu A, Nahar P, Jaaback K, Bansal V, **Tanwar PS.** (2022) Bovine and human endometrium-derived hydrogels support organoid culture from healthy and cancerous tissues. *Proceedings of the National Academy of Sciences USA*, 119(44) e2208040116. doi: 10.1073/pnas.2208040119

Jamaluddin MFB, Ko YA, Ghosh A, Syed SM, Ius Y, O'Sullivan R, Netherton JK, Baker MA, Nahar P, Jaaback K, **Tanwar PS.** (2022) Proteomic and functional characterization of intra-tumor heterogeneity in human endometrial cancer. *Cell Reports Medicine*, 20;3(9):100738 doi: 10.1016/j.xcrm.2022.100738

Venkata VD, Jamaluddin MFB, Goad J, Drury HR, Tadros MA, Lim R, Karakoti A, O'Sullivan R, Ius Y, Jaaback K, Nahar P, **Tanwar PS.** Development and characterization of human fetal female reproductive tract organoids to understand Müllerian duct anomalies. *Proceedings of the National Academy of Sciences USA*, 119(30)e2118054119. doi: 10.1073/pnas.2118054119

<http://www.newcastle.edu.au/profile/pradeep-tanwar>



**Associate Professor
Nikki Verrills**

**Postdoctoral
Researcher**

Dr Heather Murray
Dr Severine Roselli

Research Assistants

Dr Joshua Brzozowski
Charley Lawlor

HDR Students

Nikita Panicker
Yanfang Cheng

Molecular Oncology Research

This group is part of The HMRI Cancer Research Program and The Hunter Cancer Research Alliance and the Hunter Leukaemia Research Program. Their research focuses on the molecular basis of cancer development, progression, and therapy resistance through the development of sophisticated *in vitro* and *in vivo* cancer model systems and world leading technologies. The research utilises both targeted (e.g., molecular knockdown and knockout strategies in cellular and animal models; targeted drug development) and non-targeted (unbiased comparative and quantitative proteomics) approaches to understand cancer and use this knowledge to develop new approaches for therapy. The group work closely with oncologists and haematologists and employ high resolution techniques to complement these approaches such as multiplexed targeted proteomics (parallel reaction monitoring {PRM}), targeted next generation sequencing (NGS), and drug development pipelines incorporating advanced proteo-genomic technologies. They have developed a phospho-proteomics and ex-vivo drug screening program that is being evaluated for its ability to predict patient response to therapy and direct targeted therapy. Associate Professor Verrills has also developed novel laboratory models that are shedding light on the role of key signalling proteins in mammalian development.

Grants

National Health and Medical Research Council: Targeting DNA-PK for Acute Myeloid Leukaemia. Verrills NM, Enjeti A (2020-22)

Hunter Medical Research Institute: HMRI Transition Funding HCRA Scott R, Paul C, Verrills N (2021-22)

National Health and Medical Research Council: A dual approach to activate a tumour suppressor for breast cancer therapy. Verrills NM, Roselli Dayas S (2022-24)

Department of Health and Aged Care: Cardiovascular disease and cancer: identifying shared disease pathways and pharmacological management. Sverdlov A, Ngo D, Cairns M, Lee H, Verrills NM, Gedye C, Haw TJ, Attia J, Kelso M, Tillett D, Lynam J, Enjeti A, Dent S, Doyle K, Kelso M (2022-25)

Industry grants

RACE Oncology Ltd: Preclinical evaluation of bisantrene in breast cancer. Verrills NM (2020-22)

RACE Oncology Ltd: Preclinical evaluation of bisantrene in acute myeloid leukaemia. Verrills NM (2021-22)

RACE Oncology Ltd: Preclinical evaluation of bisantrene in renal cell carcinoma. Verrills NM (2021-22)

Publications

Hunt K, Burnard SM, Roper EA, Bond DR, Dun MD, **Verrills NM, et al.** (2022) scTEM-seq: Single-cell analysis of transposable element methylation to link global epigenetic heterogeneity with transcriptional programs. *Scientific Reports*, 12 [C1]

Martin JH, Mohammed R, Delforce SJ, Skerrett-Byrne DA, de Meaultsart CC, Almazi JG, Stephens AN, **Verrills NM, et al.** (2022)

Role of the prorenin receptor in endometrial cancer cell growth. *Oncotarget*, 13:587-599

Staudt DE, Murray HC, Skerrett-Byrne DA, Smith ND, Jamaluddin MFB, Kahl RGS et al. (2022) Phospho-heavy-labeled-spikeptide FAIMS stepped-CV DDA (pHASED) provides real-time phosphoproteomics data to aid in cancer drug selection. *Clinical Proteomics*, 19:48

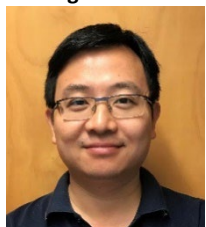
<http://www.newcastle.edu.au/profile/nikki-verrills>

<https://www.newcastle.edu.au/profile/heather-murray>

<https://www.newcastle.edu.au/profile/severine-roselli>



Professor Xu Dong Zhang



**Senior Lecturer
NHMRC EL2 Fellow
A/Prof Lei Jin**

Laboratory Manager
Dr Yuanyuan Zhang

Pathology Technician
Xu Guang Yan

Research Assistants
Georgia Tennant
Xiahong Zhao

HDR Students
Liang Xu
Ran Xu
Rayne Norris

The Noncoding Cancer Biomarkers and Therapeutics Research

Curative treatment of cancer remains an unmet medical need. This is closely related to aberrant activation of molecules that drives cancer cell survival and growth. To address this problem, the group has been working on translational cancer research with a focused theme of “overcoming resistance of late-stage cancer to treatment.” Recently, they have developed a strong research program that investigates the roles of long noncoding RNAs in the adaptation of cancer cells to cellular stress, particularly in metabolic reprogramming of cancer cells. The laboratory is well funded by competitive grants from major funding bodies including the National Health and Medical Research Council (NHMRC), Cancer Council New South Wales (CCNSW) and Cancer Institute NSW (CINSW). The laboratory is highly productive as evidenced primarily by sustained publication records in highly ranked journals. The long-term objective is to translate products of laboratory research into clinical management of cancer patients.

Postdoctoral researchers: Dr Yuanyuan Zhang, Dr Yuchen Feng

Grants

Cancer Council NSW: Breaking a vicious link for cancer treatment. Zhang XD (2020-22)

NHMRC/Investigator Grant: Insight of the regulatory roles of pan-cancer deregulated lncRNAs in cancer cell adaptation to cellular stress. Jin L (2020-24)

Cancer Council NSW: Exploring a metabolic vulnerability for cancer treatment. Zhang XD (2021-23)

RACE Oncology: Preclinical investigation of the FTO inhibitor Bisantrene in the treatment of melanoma. Zhang XD (2021-22)

Cancer Institute NSW ECF: Exploring lncRNAs vulnerabilities of metabolism for cancer treatment. Feng YC (2022-24)

Publications

Wang PL, Teng L, et al., **Zhang XD***. (2022) The N-Myc-responsive lncRNA MILIP promotes DNA double-strand break repair through non-homologous end joining. *Proceedings of the National Academy of Sciences of the USA*, 119:e2208904119. PMID: 36445966

Zhu Y, Jin L, et al., **Zhang XD***, Wu M. (2022) The long noncoding RNA glycoLINC assembles a lower glycolytic metabolon to promote glycolysis. *Molecular Cell*, 82:542-554.e6. PMID: 35081364

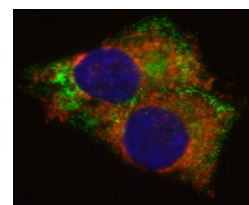
Wang Y, Feng YC, et al., **Zhang XD***, et al. (2022) lncRNA MILIP links YBX1 to translational activation of Snai1 and promotes metastasis in clear cell renal cell carcinoma. *Journal of Experimental Clinical Cancer Research*, 26;41(1):260. PMID: 36028903

Chen Q, et al., **Zhang XD***, Zhang L, Liu T. (2022) Histone acetyltransferases CBP/p300 in tumorigenesis and CBP/P300 inhibitors as promising novel anticancer agents. *Theranostics*, 21;12:4935-4948. PMID: 35836809

Yang Y, et al., **Zhang XD**, et al., Wu M, Chen S. (2022) TRIM27 cooperates with STK38L to inhibit ULK1-mediated autophagy and promote tumorigenesis. *The EMBO Journal*, Jun 7:e109777. PMID: 35670107

Gao H, et al., **Zhang XD**, et al., Liang M, Li H, Yang D. (2022) Development of in silico methodology for siRNA lipid nanoparticle formulations. *Chemical Engineering Journal*, 442: 136310

<https://www.newcastle.edu.au/profile/xu-zhang>





**Laureate Professor
Rodney J. Scott,
Director: Centre for
Cancer Detection and
Therapy**

**Director of the
Division of Molecular
Medicine, NSW Health
Pathology, Newcastle**

Laboratory Manager
Trish Collinson

Research Fellows
A/Prof Kelly Kiejda
Dr Heather Lee
Dr Vicki Maltby
Dr Alex Xavier
Dr Xiajie Zhang
Dr Nadine Berry
Dr Kira Groen

HDR Students
Joel Petit
Toni Connor
David Murray

Cancer and Common Disease Genomics Research

Inherited forms of cancer have been Laureate Professor Scott's main interest for around 25 years. His research initially focused on the identification of genetic susceptibilities to inherited forms of colorectal and breast cancer. This research proved to be extremely successful and established the group's current understanding of the genetic basis of malignancy. This research has been translated into clinical practice such that the laboratory of Molecular Medicine at NSW Health Pathology is one of the leading cancer genetic centres in Australia. In tandem with inherited predispositions to cancer a growing recognition of the role of epigenetics in cancer risk is becoming a major theme of Laureate Professor Scott's research activity. As the ability to undertake larger genetic studies became available there has been an increasing interest in complex genetic diseases that include common cancers, schizophrenia, stroke, multiple sclerosis, and paediatric malignancies to name a few. Current research focus on determining circulating tumour DNA, a new and potentially major paradigm shift in the management of patients diagnosed with a solid tumour. This exciting research relies on exquisitely sensitive methods of DNA detection that can reveal the presence of minute levels of tumour DNA from a single blood sample.

Awards Honorary Doctorate (International Hereditary Cancer Centre, Szczecin, Poland), Fellow of the Royal Society of NSW Grants

National Institutes of Health: Genomics of childhood acute lymphoblastic leukemia in the Childhood Cancer and Leukemia International Consortium. Scott RJ, Spector L, Basu S, Weimals J, Bonaventure A (2022-27)

Medical Research Future Fund: The Neurofibromatosis type 1 (NF1) Cutaneous Neurofibroma Consortium: Identifying Genetic Modifiers of disease burden to inform treatment pathways. Dudding T, Cairns M, Attia J, Evans DG, Scott RJ, Lovell B, Lim A, Drummond K, Dow E, Poplawski N, Kamien B, Berman Y, McCloughan N (2021-24)

Mark Hughes Foundation: MHF Brain cancer GARD: Mark Hughes Foundation brain cancer collaborative genomics pipeline for advancing research into biomarker discovery. Scott RJ, Kiejda K (2018-23)

Publications

International Mismatch Repair Consortium. (2021) Variation in the risk of colorectal cancer in families with Lynch syndrome: a retrospective cohort study. *Lancet Oncology*, Jun 7: S1470-2045(21)00189-3. doi: 10.1016/S1470-2045(21)00189-3

Li N, Zethoven M, McInerney S, Healey E, DeSilva D, Devereux L, **Scott RJ**, James PA, Campbell IG. (2022) Contribution of large genomic rearrangements in PALB2 to familial breast cancer: implications for genetic testing. *Journal of Medical Genetics*, 60 (2), 112-118

Ip E, McNeil C, Grimison P, Scheinberg T, Tudini E, Ho G, **Scott RJ**, Brown C, Sandroussi C, Guitera P, Spurdle AB, Goodwin A. (2021) Catastrophic chemotherapy toxicity leading to diagnosis of Fanconi anaemia due to FANCD1/BRCA2 during adulthood: description of an emerging phenotype. *Journal of Medical Genetics*, 59 (9), 912-915

Lim BWX, Li N, Mahale S, McInerney S, Zethoven M, Rowley SM, Huynh J, Wang T, Lee JEA, Friedman M, Devereux L, **Scott RJ**, Sloan EK, James PA, Campbell IG. (2022) Somatic Inactivation of Breast Cancer Predisposition Genes in Tumours Associated with Pathogenic Germline Variants. *Journal of the National Cancer Institute*, Oct 31:djac196. doi: 10.1093/jnci/djac196.

Pariyar M, Johns A, Thorne RF, **Scott RJ**, Avery-Kiejda KA (2021) Copy number variation in triple negative breast cancer samples associated with lymph node metastasis. *Neoplasia*, Jul 2;23(8):743-753. doi: 10.1016/j.neo.2021.05.016

Xavier A, **Scott RJ**, Talseth-Palmer B (2021) Exome sequencing of FAP-like individuals identifies both known and novel causative genes. *Clinical Genetics*, Jul 14. doi: 10.1111/cge.14029

<http://www.newcastle.edu.au/profile/rodney-scott>



Dr Daniel Beard

**HDR Students
(Primary Supervisor)**
Magdalena Litman

**HDR Students
(Co-Supervisor)**
Daniel Omileke
Anna Schneider

**Undergraduate
Students**
Annie Simpson
Alex Chan

Affiliated: Stroke
Research Lab of
Professor Neil Spratt

Neurovascular Research

This research focuses on the important role the cerebrovascular/neurovascular unit plays in neurological diseases such as stroke. Specifically, the group aim to develop therapies that can improve/sustain cerebral blood flow, reduce damage to the neurovascular unit and ultimately improve neuronal survival and stroke outcome. Once such therapeutic approach is to selectively enhance blood flow to the brain through collateral vessels to preserve the brain and improve outcomes following stroke. This research program has rapidly evolved from a breakthrough discovery Dr Beard made during his post-doctoral studies at Oxford (UK). Specially, he demonstrated that during stroke, collateral vessels experience shear-stress (a frictional force) that is higher than in vessels anywhere else in the body. With collaborators at Harvard (USA), he is now exploring whether specialised patented shear-activated nanoparticles that contain a vasodilator (nitroglycerin) can be administered to increase blood flow through collateral vessels without causing harmful side-effects elsewhere in the body. The group also has interests' that extend beyond the stroke itself and are beginning to explore therapeutic strategies to improve blood flow to the microvasculature after stroke, by preventing/reversing pericyte constriction and subsequent capillary obstruction, as well as repurposing of existing drugs with neurovascular protective effects. The group is also interested in developing novel tools to bridge the gap between animal and human neurovascular research. To do this they have established a cross-college collaboration with researchers in the School of Engineering to develop a 3D computer model of human cerebral vessels to model blood flow in the brain during stroke and in response to novel treatments.

Grants

Brain Foundation Research Grant: Assessment of the safety and efficacy of shear-activated nanotherapeutics to selectively enhance leptomeningeal collateral blood flow in stroke. Beard DJ, Spratt NJ, Ingber D, Muni N (2022)

College of Health, Medicine, and Wellbeing Strategic Pilot Grant: Do statins increase cerebral collaterals angiogenesis? Coupland, K, Beard DJ, Spratt NJ (2022)

NSW Cardiovascular Research Network Victor Chang Cardiac Research Institute, Innovation Grant: Investigating the role of pericytes in leptomeningeal collateral vessel function. Beard DJ, Spratt NJ, Sutherland B (2022-23)

National Health and Medical Research Council: Shear-activated nanotherapeutics to selectively enhance cerebral collateral blood flow in ischaemic stroke. Beard DJ, Spratt NJ, Ingber DE (2020-22)

Einstein Foundation (consortium grant): Einstein Centre for Alternative Methods in Biomedical Research (2021-26)

Selected Publications 2022:

Zhu W, Neuhaus A, **Beard, DJ**, Sutherland BA, De Luca GC. (2022) Neurovascular coupling mechanisms in health and neurovascular uncoupling in Alzheimer's disease. *Brain*, 2022;145(7):2276-2292. doi: 10.1093/brain/awac174

Beard DJ,* Sanchez-Bezanilla S*, Hood RJ*, Aberg ND, Crock P, Walker FR, Nilsson M, Isgaard J*, Ong LK*. (2022) Growth hormone increases BDNF and mTOR expression in specific brain regions after photothrombotic stroke in mice. *Neural Plasticity*, doi: 10.1155/2022/9983042

<https://www.newcastle.edu.au/profile/daniel-j-beard>



Dr Melissa Tadros

HDR Students
Kateleen Hedley

Developmental Neurobiology Research

Dr Tadros and her group research sensory pathways, specifically what happens when these pathways are disrupted. This research seeks to understand how the signals from the environment are passed onto the brain and how the brain tells our bodies what to do in response to this information. They use highly advanced neurological techniques to examine what happens to these signals during early development or when they are damaged by infection or stress. Dr Tadros has teamed up with Professor Jay Horvat (Respiratory Immunology Research Group, HMRI) and Emeritus Professor Deborah Hodgson (Director of The University of Newcastle's Laboratory of Neuroimmunology) and these collaborative studies aim to better understand the long-term implications of neonatal infections.

The University of Newcastle Fellowship awarded: 2018 Women in Research Fellowship (2019)

Grants

Priority Research Centre: CBMHR Research Consumables Support

University of Newcastle: Early Career Researcher HDR Scholarship

Priority Research Centre: CBMHR Equipment Support

University of Newcastle, Faculty of Health and Medicine: Travel Support

School of Biomedical Sciences and Pharmacy: Equipment Grant Call

Publications

Quinn RK, Drury HR, Lim R, Callister RJ, **Tadros MA**. (2021) Differentiation of sensory neuron lineage during the late first and early second trimesters of human foetal development. *Neuroscience*, 467:28-38. doi: 10.1016/j.neuroscience.2021.05.018

Karshikoff B, **Tadros MA**, Mackey S, Zouikr I. (2019) Neuroimmune modulation of pain across the developmental spectrum. *Current Opinions in Behavioural Sciences*, 28:85-92. doi:10.1016/j.cobeha.2019.01.010

Tadros MA, Zouikr I, Hodgson DM, Callister RJ. (2018) Excitability of rat superficial dorsal horn neurons following a neonatal immune challenge. Accepted 17/8/2018; *Frontiers in Neurology*, doi: 10.3389/fneuro.2018.00743

Tadros MA, Fuglevand AJ, Brichta AM, Callister RJ. (2016). Intrinsic excitability differs between murine hypoglossal and spinal motoneurons. *Journal Neurophysiology*, 115;5:2672. doi: 10.1152/jn.01114.2015

Tadros MA, Lim R, Hughes DI, Brichta AM, Callister RJ. (2015) Electrical maturation of spinal neurons in the human fetus: a comparison of ventral and dorsal horn. *Journal of Neurophysiology*, 114;5:2661. doi: 10.1152/jn.00682.2015

<https://www.newcastle.edu.au/profile/melissa-tadros>



**Professor
Murray Cairns**

Research Fellow

Dylan Kiltschewskij
William Reay
Chantel
Fitzsimmons
Behnaz Khavari

Research Assistants

Adam Graham
Tess Geraghty

HDR Students

Michelle Barnett
Shahin Masserrat
Laura Greco
Sahar El Shair
Danielle Adams
Md Mamun Or
Rashid

Complex Disease Genomics Research

Most common chronic health problems are complex disorders involving multiple risk factors that vary significantly from one individual to another, which means current treatments are often not very specific or effective. During 2022, the group advanced their framework for precision medicine using personalised common variant systems biology. In this approach, genome-wide association data for complex trait disorders is used as a scaffold for the pharmacological annotation of individual variant profiles captured by polygenic risk. The research provided an opportunity for involvement in several global collaborations in complex disease genomics, including the genetics working group of the ENIGMA consortium for brain imaging; the Medical Genome Reference Bank, the CHARGE (Cohorts for Heart and Aging Research in Genomic Epidemiology) consortium and the schizophrenia and PTSD working groups of the Psychiatric Genomic Consortium. This has led to several high-profile publications in *Nature*, *Science*, *Cell*, *Nature Genetics*, *Nature Reviews Genetics*, *Nature Communications*, *Science Advances*, *Molecular Psychiatry*, and *Neuropsychopharmacology*.

Grants

NSW Ministry of Health: Exploration of genetically informed precision medicine for schizophrenia using human cerebral organoids. Cairns MJ, Wolvetang E, Reay WR (2022-25)

Medical Research Future Fund: Cardiovascular disease and cancer: identifying shared disease pathways and pharmacological management. Sverdllov A, Ngo D, Cairns MJ, et al (2022-25)

Medical Research Future Fund: The Neurofibromatosis type 1 (NF1) Cutaneous Neurofibroma Consortium: Identifying Genetic modifiers of disease burden to inform treatment pathways. Dudding T, Cairns MJ, Attia J, Evans G, Scott R, Lovell B (2021-23)

National Health and Medical Research Council: Complete genomics for mechanistic insight and precision treatments of schizophrenia. Cairns MJ, Green MJ, Carr V (2018-22)

National Health and Medical Research Council Project Grant: Network biomarkers of traumatic stress resilience and sensitivity. Cairns MJ, Glatt S (2018-22)

National Health and Medical Research Council Ideas Grant: Dysregulation of the RNA regulatory matrix in schizophrenia. Cairns MJ, Glatt S (2020-22)

Publications

Blokland K, et al. (2022) Sex-Dependent Shared and Nonshared Genetic Architecture Across Mood and Psychotic Disorders. *Biological Psychiatry*, 91(1):102-117

Pardiñas AF, et al. (2022) Interaction Testing and Polygenic Risk Scoring to Estimate the Association of Common Genetic Variants with Treatment Resistance in Schizophrenia. *JAMA Psychiatry*, 79(3):260-269

Di Biase MA, et al. (2022) Cell type-specific manifestations of cortical thickness heterogeneity in schizophrenia. *Molecular Psychiatry*, 27:2052-2060

Reay WR, et al. (2022) Genetic estimates of correlation and causality between blood-based biomarkers and psychiatric disorders. *Scientific Advances*, 8(14):eabj8969

Trubetskoy V, et al. (2022) Mapping genomic loci implicates genes and synaptic biology in schizophrenia. *Nature*, 604:502-508.

Pertile R, et al. (2022) Developmental vitamin D-deficiency increases the expression of microRNAs involved in dopamine neuron development. *Brain Research*, 1789:147953

Reay WR, Geaghan MP; 23andMe Research Team; Cairns MJ. (2022) The genetic architecture of pneumonia susceptibility implicates mucin biology and a relationship with psychiatric illness. *Nature Communication*, Jun 29;13(1):3756

Reay WR, et al. (2022) Genetics-informed precision treatment formulation in schizophrenia and bipolar disorder. *The American Journal of Human Genetics*, 109(9):1620-1637

<http://www.newcastle.edu.au/profile/murray-cairns>



**Associate Professor
Brett Graham**

**Research Assistant
Amy Pearl**

**HDR Students
Jessica Madden
Tyler Browne
Jacqueline Iredale**

Spinal Cord Connections Research

The spinal cord is much like a telephone exchange, receiving information from a multitude of channels, which must be preserved and processed before they can be directed to appropriate destinations. In spinal cord injury those lines of communication are severed, halting the transmission of vital information, and causing a loss of sensation and movement below the injury site. In chronic pain, these communication lines can become crossed, and information is redirected to inappropriate destinations with the potential to make a gentle touch cause excruciating pain. Similarly, many movement disorders can be likened to a situation where communication lines are either crossed or broken with the consequence being a loss of smooth, efficient, coordinated movement. Their goal is to understand and treat this range of spinally based conditions, by studying how information from the outside world is relayed to our brains through connections in the spinal cord. This is a task that has long been considered too immense given the sheer number of different nerve cell types interconnected in spinal cord networks and the lack of anatomical organisation – i.e., unlike a telephone exchange where wires and cables are organised in an ordered manner, the connections of the spinal cord are intermingled in a chaotic and disorganised mosaic. Fortunately, several recent scientific breakthroughs have now provided tools to understand how spinal networks are connected and disconnected by disease and injury. The group has been using a number of these technologies to study specific populations of spinal cord nerve cells. They use transgenic mice where various nerve cells have been labelled to specifically identify certain populations, or that allow optogenetic stimulation of nerve cells where nerve cell activity can be controlled by light stimulation, allowing us to study how nerve cells are connected into spinal pain circuits. The optogenetic animals also allow the group to stimulate specific nerve cells in awake behaving animals and determine how they contribute to sensory experiences including pain. Additionally, the group are using calcium imaging and microelectrode array recording techniques to investigate how nerve cells behave as a group at a circuit level, helping bridge the gap in our understanding of how single nerve cell activity relates to resulting behavioural activity.

Grants

CannaPacific P/L: Microelectrode array screening of cannabinoid compounds in spinal pain circuits. **Graham BA** (2020-22)

National Health and Medical Research Council: Projection neuron axon collaterals in the dorsal horn: the missing link in spinal pain processing? **Graham BA**, Callister R, Hughes D (2020-22)

Australian Research Council: Hunger flexibly modifies hypothalamic neural circuits responding to threat. Dayas C, Andrews Z, Graham B, Manning L (2022-25)

Hunter Medical Research Institute: Optogenetic research to advance chronic pain treatments. Graham B (2022-25)

Publications

Gradwell MA, Boyle KA, Browne TJ, Bell AM, Leonardo J, Reyes P et al. (2022) Diversity of inhibitory and excitatory parvalbumin interneuron circuits in the dorsal horn. *Pain*, 163(3):432-452 [C1]

Iredale JA, Stoddard JG, Drury HR, Brown TJ, Elton A, Madden JF, Callister RJ, Welsh JS, **Graham BA**. (2022) Recording Network Activity in Spinal nociceptive Circuits Using Microelectrode Arrays. *Jove*, doi: 10.3791/62920 [C1]

Browne TJ, Smith KM, Gradwell MA, Iredale JA, Dayas DV, Callister RJ, Hughes DI, **Graham BA**. (2022) Spinoparabrachial projection neurons form distinct classes in the mouse dorsal horn. *Pain*, 162(7):1977-1994 [C1]

Brown TJ, Hughes DI, Dayas CV, Callister RJ, **Graham BA**. (2020) Projection Neuron Axon Collaterals in the Dorsal Horn: Placing a New Player in Spinal Cord Pain Processing. *Frontiers in Physiology*, 11 [C1]

Mayhew JA, Cummins MJ, Cresswell ET, Callister RJ, Smith DW, **Graham BA**. (2020) Age-related gene expression changes in lumbar spinal cord: Implications for neuropathic pain. *Molecular Pain*. 16 [C1]

<http://www.newcastle.edu.au/profile/brett-graham>

<https://uonblogs.newcastle.edu.au/pnr/group-leaders/spinal-cord-research-group/>



Professor Chris Dayas

**Postdoctoral
Researchers**

Dr Lizzie Manning
Dr Erin Campbell

Research Assistants

Amy Pearl
Victoria Parr
Hannah Drury

HDR Students

Leila Akbari
Max Katz-Barber
Isabel Chew Huey Sien
Laura Greco
Nicholas Burton

Neurobiology of Motivation Emotion Research

This team focuses on the brain pathways that are involved in motivated behaviours and emotion. Leading-edge neuroscience techniques are used including opto- and chemo-genetics together with in vivo Ca²⁺ imaging, fibre photometry and Inscopix miniature microscopes. These techniques are deployed to study the basic wiring of circuits controlling the activity of specific cell types in the hypothalamus, amygdala, and striatum. The aim is to dissect the maladaptive rewiring in these circuits that can manifest as addictions, obesity, and mood disorders e.g., anxiety and depression.

Research projects centre around two major themes:

- Understanding the hypothalamic circuit remodelling that occurs in response to physical, chemical, or emotional challenges.
- Determining the cellular and molecular basis for compulsive behaviours expressed in neuropsychiatric conditions such as addiction, OCD, schizophrenia, and depression.

Grants

University of NSW: BioSHeM: A High-Resolution Imaging and Spectroscopic Helium Atom Microscope. Dastoor P, Smith R, Brichta A, Dayas CV, Grainge I, et al. (2022)

Flinders University: BioSHeM: A High-Resolution Imaging and Spectroscopic Helium Atom Microscope. Dastoor P, Smith R, Brichta A, Dayas CV, Grainge I, et al. (2022)

Australian Research Council: Hunger flexibly modifies hypothalamic neural circuits responding to threat. Dayas CV, Andrews Z, Graham B, Manning EE. (2022-25)

Australian Research Council: BioSHeM: A High-Resolution Imaging and Spectroscopic Helium Atom Microscope. Dastoor P, Smith R, Brichta A, Dayas CV, Grainge I, et al. (2022)

Hunter New England Local Health District: Research Funding for Treatment of alcohol dependence with an mTOR inhibitor (TAMI) Study. Dunlop A, Brown A, Dayas C, Hinwood M, Martin J (2020-23)

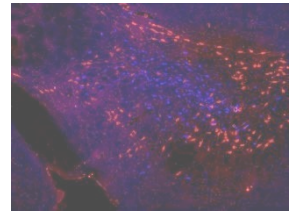
Publications

Reichenbach A, Clarke RE, Stark R, Lockie SH, Mequinion M, Dempsey H, Rawlinson S, Reed F, Sepehrizadeh, DeVeer M, Munder AC, Nunez-Iglesias J, Spanswick DC, Mynatt R, Kravitz AV, **Dayas CV**, Brown R, Andrews ZB. (2022) Metabolic sensing in AgRP neurons integrates homeostatic state with dopamine signalling in the striatum. *eLife*, Jan 12;11:e72668
Brown RM, **Dayas CV**, James MH, Smith RJ. (2022) New directions in modelling dysregulated reward seeking for food and drugs. *Neuroscience and Biobehavioral Reviews*, Jan;132:1037-1048. Epub 2021 Nov 2

Gradwell MA, Boyle KA, Browne TJ, Bell AM, Leonardo J, Peralta Reyes FS, Dickie AC, Smith KM, Callister RJ, **Dayas CV**, Hughes DI, Graham BA. (2022) Diversity of inhibitory and excitatory parvalbumin interneuron circuits in the dorsal horn. *Pain*, Mar 1;163(3):e432-e452

Yeoh JW, James MH, Adams CD, Bains JS, Sakurai T, Aston-Jones G, Graham BA, **Dayas CV**. (2019) Activation of lateral hypothalamic group III metabotropic glutamate receptors suppresses cocaine-seeking following abstinence and normalises drug-associated increases in excitatory drive to orexin/hypocretin cells. *Neuropharmacology*, Aug;154:22-33

<https://www.newcastle.edu.au/profile/christopher-dayas>



Neurons in the lateral hypothalamus expressing onexi h (blue) and CART (red)



Professor Alan Brichta
Associate Professor
Rebecca Lim

Research Assistant
Hannah Drury

HDR Students
Connor Sherwood
Adelle Liebenberg
Rafael Crovador
David Lorincz

Vestibular Research

This group study how the inner ear vestibular organs generate the basic neural signals that provide us with a sense of balance. Attempts to study balance in humans has been hampered by the lack of suitable mammalian models for direct investigation. They use a combination of experimental studies of vestibular activity in humans and animals to understand basic balance function. In addition, previous studies have emphasised the properties of *individual* components, (e.g., receptor cells *or* vestibular nerve fibres) but not how these components *interact* with each other to function as a sensory unit. This wide gap in the group's knowledge is being addressed in a new series of experiments in the laboratory aimed at understanding the intrinsic function of human and non-human vestibular organs. The current research and focus of recent funding is the feedback pathway that goes from the central nervous system back to the inner ear balance organs. This feedback circuit or **Efferent Vestibular System (EVS)** is thought to modulate the output of balance organs, but it is not known how the EVS works. The team have assembled an international group of scientists (London, UK, Rochester, Salt Lake City and Chicago, USA) to study the EVS and determine how it might be used as therapeutic target in cases of disabling dizziness and vertigo, because of disease, trauma, or ageing. The team, with researchers from the Centre for Organic Electronics, are also involved in developing materials to be used in neural prosthetic devices. These materials are made from organic semiconductors which have excellent biocompatibility, are tissue compliant, and can be stimulated without the need for external power sources. These materials are being developed for use as a retinal prosthesis but also have the capacity to be integrated with existing prosthetic devices, such as the cochlea implant and vestibular prostheses to improve connectivity between device and nerve cells.

Grants

National Health and Medical Research Council: The Efferent Vestibular System as a new target to treat balance disorders and motion sickness. Brichta AM, Nalivaiko E, Lim R, Callister RJ, Poppi LA, Holt JC (2020-23)

National Health and Medical Research Council: Nanoengineered Bioelectronic Systems for All-Optical Control of Neuron Growth and Stimulation. Lim R, Brichta AM, Dastoor P, Holmes N, Cairney J, Griffith M (2021-24)

Publications

Venkata VD, Jamaluddin MFB, Goad J, Drury HR, Tadros MA, **Lim R**, Karakoti A, O'Sullivan R, Ius Y, Jaaback K, Nahar P, Tanwar PS. (2022) Development and characterization of human fetal female reproductive tract organoids to understand Müllerian duct anomalies. *Proceedings of the National Academy of Sciences USA*, 119(30), doi: 10.1073/pnas.2118054119.

Stitt IM, Wellings TP, Drury HR, Jobling P, Callister RJ, **Brichta AM, Lim R**. (2022) Properties of Deiters' neurons and inhibitory synaptic transmission in the mouse lateral vestibular nucleus. *Journal of Neurophysiology*, Jun 22, <https://doi.org/10.1152/jn.00016.2022>

Lorincz D, Drury HR, **Lim R, Brichta AM**. (2022) The long and winding road - vestibular efferent anatomy in mice. *Frontiers in Neuroscience*, Jan 28;15:751850. doi: 10.3389/fncir.2021.751850

Khan SI, **Brichta AM**, and Migliaccio AA. (2022) A Once-Daily High Dose of Intraperitoneal Ascorbate Improves Vestibulo-ocular Reflex Compensation After Unilateral Labyrinthectomy in the Mouse. *Journal of the Association for Research in Otolaryngology*, Feb;23(1):27-34. doi: 10.1007/s10162-021-00831-1. Epub 2022 Jan 3

<http://www.newcastle.edu.au/profile/alan-brichta>

<http://www.newcastle.edu.au/profile/rebecca-lim>



Dr Lizzie Manning

Behavioural Neuroscience Research

Dr Manning aims to improve outcomes for people affected by psychiatric disorders that feature inflexible behaviour patterns, such as obsessive-compulsive disorder (OCD), depression and Tourette's syndrome. She aims to achieve this by investigating the neural mechanisms that contribute to inflexible behaviours, using unique and cutting-edge neuroscience techniques with gold standard preclinical models of disease. Only with this understanding can Dr Manning develop appropriate therapeutics that target the affected neural mechanisms directly. This will be a significant advance over the "sledgehammer" approach used currently, where therapeutics affect neurochemistry throughout the brain and body, resulting in moderate symptom improvements alongside a high incidence of adverse side-effects. Her research responds to the urgent need for new neuroscience-guided novel therapeutics that directly treat the cause of disease pathophysiology, to improve health and quality of life for those affected. In 2022 Dr Manning transitioned to a lecturer position in the School. Prior to this, she spent ~20 months working as a Research Associate with Professor Chris Dayas, after completing more than 5 years postdoctoral training at the University of Pittsburgh (USA). Her growing independent and collaborative research in the neuroscience theme at the University of Newcastle and the HMRI brain neuromodulation program is supported by early career grants from the Rebecca L Cooper foundation and Tourette Association of America, as well as funding from both ARC and NHMRC. Dr Manning leads a team alongside Professor Chris Dayas and Dr Erin Campbell that includes 2 x postdoctoral researchers, 4 x PhD students, 2 x research assistants, 2 x honours students and other undergraduate research students completing 3rd year research projects and in other casual research positions.

Grants

Rebecca L Cooper Medical Research Foundation Ltd: Visualizing neuronal activity patterns associated with cognitive symptoms relevant to schizophrenia using in vivo microscopy. Manning EE (2020-22)

Tourette Association of America: Hypothalamic-basal ganglia circuit control of stress-induced repetitive behavior. Manning EE, Dayas CV, Pittenger C, Ahmari S (2021-23)

Australian Research Council Discovery Project: Hunger flexibly modifies hypothalamic neural circuits responding to threat. Dayas CV, Andrews Z, Graham B, Manning EE (2022-25)

Publications

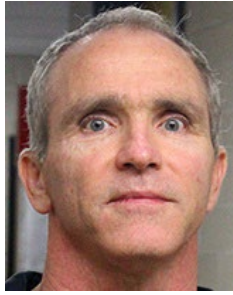
Hudson MR, Foreman J, Rind G, **Manning EE**, Jones NC, van den Buuse M. (2022) Differential Effects of Chronic Methamphetamine Treatment on High-Frequency Oscillations and Responses to Acute Methamphetamine and NMDA Receptor Blockade in Conscious Mice. *Brain Sciences*, 12(11) 1503. doi: 10.3390/brainsci12111503

Dyason KM, Farrell LJ, **Manning EE**, Grisham JR, Perkes IE. (2022) Falling through the cracks in science and clinical service - A call to action for people with OCD. *Australian and New Zealand Journal of Psychiatry*, 56 1213-1216 doi: 10.1177/00048674221125595

Piantadosi S*, **Manning EE***, Chamberlain B, Hyde J, LaPalombara Z, Bannon N, et al. (2022) Hyperactivity of indirect pathway-projecting spiny projection neurons drives compulsive behavior, *Preprint (BioRxiv)*, doi: 10.1101/2022.02.17.480966

Manning EE, Bradfield LA, Jordanova MD. (2021) Adaptive behaviour under conflict: Deconstructing extinction, reversal and active avoidance learning. *Neuroscience and Biobehavioral Reviews*, 120, 526-536. doi: 10.1016/j.neubiorev.2020.09.030

<https://www.newcastle.edu.au/profile/lizzie-manning>



**Associate Professor
Doug Smith**

HDR Students
Ethan Cresswell
Jazz Mason
Renee Bevege

Neurobiology of Aging and Dementia Laboratory Research

The main aim of this research is to better understand the effects of aging on nervous system function. Many elderly people will develop dementia and age is by far the biggest risk factor for this debilitating disease. By understanding how aging impacts the nervous system the group hope to mitigate early disease processes, thereby preventing, delaying, or slowing progress to reduce the burden of dementia on individuals, families, and society. They primarily use genomics (RNA-Seq, microarray, qPCR), lipidomics (LC and GC/MS), protein, electrophysiological and behavioural approaches to determine how aging changes central (brain and spinal cord) and peripheral (inner ear vestibular apparatus) nervous system structure and function. For example, using RNA deep sequencing they have characterised how aging disrupts the transcriptome in various regions of the CNS. Intriguingly, they found that not all regions of the CNS are similarly affected. This has major implications for intervention, meaning a single intervention may not be beneficial for the whole CNS. One of the major challenges to obtaining a comprehensive understanding of the impacts of aging on the brain and other nervous system structures, is that it is not known whether age-related changes are common across all cell types of the CNS, or whether they occur in a cell-type-specific manner. This is particularly important for the nervous system given it is extremely diverse in terms of cell types – one of many reasons why it is considered the most complex organ in the body and hence the most challenging to study! To address this issue, they are characterising the genomic changes in specific populations of cells using state-of-the-art, fluorescence-activated nuclei sorting (FANS), laser-based microdissection, and cell-type-specific genomics. FANS is particularly appealing as archived frozen tissue can be used as source material, making it applicable to human tissue. They have used these cell-type-specific genomics approaches to investigate the effects of aging on midbrain dopamine neurons, which play an important role in motor control as can be appreciated from Parkinson's disease, blood vessel associated cells, spinal cord motor neurons and inner ear vestibular hair cells. Currently these approaches are being used to investigate how aging changes cholesterol metabolism in different CNS cell types. Their genomics studies in both rats and mice have indicated cholesterol homeostasis is markedly changed in the aging CNS. They have introduced lipidomics into their battery of approaches to obtain a more comprehensive understanding of how aging impacts the way the CNS processes cholesterol and other lipids. An important aspect of their studies relates to the broader and important issue of whether the course of aging can be modified. For example, intermittent fasting is thought to be beneficial to health span and they are finding out whether this type of intervention can alter age-related genomic and lipidomic changes in various regions of the nervous system. Early indications are that intermittent fasting has significant benefits to health span.

Grants

Hunter Medical Research Institute: Kiriwana Foundation - Understanding how cholesterol dysregulation in the aging brain causes Alzheimer's disease. Smith DW, Cresswell ET (2022-23)

Publications:

Gradwell MA, Smith KM, Dayas CV, **Smith DW**, Hughes DI, Callister RJ, Graham BA. (2022) Altered intrinsic properties and inhibitory connectivity in aged parvalbumin-expressing dorsal horn neurons. *Front Neural Circuits*, 16:834173 doi: 10.3389/fncir.2022.834173

Madden JF, Davis OC, Boyle KA, Iredale JA, Browne TJ, Callister RJ, **Smith DW**, Jobling P, Hughes DI, Graham BA. (2020) Functional and molecular analysis of proprioceptive sensory neuron excitability in mice. *Frontiers in Molecular Neuroscience*, 13:36 doi: 10.3389/fnmol.2020.00036

Mayhew JA, Cummins MJ, Cresswell ET, Callister RJ, **Smith DW**, Graham BA. (2020) Age-related gene expression changes in lumbar spinal cord: Implications for neuropathic pain. *Molecular Pain*, 16:1744806920971914. doi: 10.1177/1744806920971914

Mayhew JA, Callister RJ, Walker FR, **Smith DW**, Graham BA. (2019) Aging alters signalling properties in the mouse spinal dorsal horn. *Molecular Pain*, 15. doi:10.1177/1744806919839860

Parkinson GM, Dayas CV, **Smith DW** (2016) Perturbed cholesterol homeostasis in aging spinal cord. *Neurobiology of Aging*, 45, 123-135. doi:10.1016/j.neurobiolaging.2016.05.017

Khan SI, Hübner PP, Brichta AM, **Smith DW**, Migliaccio AA. (2017) Aging reduces the high-frequency and short-term adaptation of the vestibulo-ocular reflex in mice. *Neurobiology of Aging*, 51, 122-131. doi:10.1016/j.neurobiolaging.2016.12.007

Bigland MJ, Brichta AM, **Smith DW**. (2018) Effects of ageing on the mitochondrial genome in rat vestibular organs. *Current Aging Science*, 11(2), 108-117. doi:10.2174/1874609811666180830143358 <http://www.newcastle.edu.au/profile/douglas-smith>



Professor Neil Spratt

Research Fellow
Dr Kirsten Coupland

Research Assistants
Debbie Pepperall
Sara Azarpeykan
Kristy Martin
David Clark

HDR Students
Magdalena Litman

Affiliate
Dr Daniel Beard

Clinical HDR Students
Nicola Postol
Katrina Kenah

Stroke Research

Recent stroke research from this laboratory has led to a breakthrough finding that provides a potential new treatment target to maintain blood flow after ischemic stroke. The team's discoveries indicate that pressure within the skull (intracranial pressure) tends to rise sharply in stroke victims around 24 hours after stroke. This is important because blood flow to the brain tissue downstream of the blocked artery after ischemic stroke is highly susceptible to changes in pressure, and this susceptibility may persist for days after the artery has been unblocked. They also discovered that short duration (2 hours) cooling (to 33°C) can completely prevent this rise in intracranial pressure while avoiding most side effects. There appears to be a molecular trigger for the pressure rise. The team's research focusses on preventing this pressure rise, to maintain blood flow to the vulnerable brain region, and thereby reduce long term neurological impairment and disability in patients who have had a stroke. Ongoing work in this laboratory aims to:

- Understand the molecular mechanisms of short duration body cooling in preventing intracranial pressure elevation (Dr Coupland and team).
- Identify the best method to prevent elevation of intracranial pressure, applicable in patients.
- Understand the pathophysiology of impaired brain fluid homeostasis post stroke (Dr Coupland and Spratt).
- Design novel therapeutics to enhance residual blood supply during stroke (Dr. Beard and team).
- Computational modelling of residual blood flow (Dr. Beard and team).

Professor Spratt is a senior staff specialist Neurologist at John Hunter Hospital and co-Director of the Hunter Medical Research Institute Heart and Stroke Program and leads an active clinical stroke research program.

Grants

Department of Health: Stroke in patients with large ischaemic core: assessment of reperfusion therapy impact on outcome (SICARIO). Levi C, Bivard A, Parsons M, Churilov L, Butcher K, Moodie M, Holliday L, Spratt NJ, Bladin C, Yan B (2021-23)

Department of Health: Yarning up after stroke. Levi C, Usher K, Janssen H, Smallwood R, Peake R, Spratt NJ, Nilsson M, Holliday L, Esperon CG, Ciccone N (2021-23)

CSL Innovation: Mapping temporal changes in cerebrospinal fluid composition after stroke to identify novel therapeutic targets for future drug discovery. Coupland KG, Spratt NJ, Skerrett-Byrne D, Turner R (2022-23)

National Health and Medical Research Council: New pathways to improved stroke outcome: the importance of managing intracranial pressure. Coupland K, Spratt NJ (2022-24)

Cardiovascular Research Network: Investigating the role of pericytes in leptomeningeal collateral vessel function. Beard DJ, Spratt NJ, Sutherland (2022-23)

National Health and Medical Research Council: Shear-activated nanotherapeutics to selectively enhance cerebral collateral blood flow in ischaemic stroke. Beard DJ, Spratt NJ, Ingber DE (2020-22)

Brain Foundation Research Grant: Daniel Beard, Neil Spratt, Donald Ingber, Neal Muni. Assessment of the safety and efficacy of shear-activated nanotherapeutics to selectively enhance leptomeningeal collateral blood flow in stroke (2022)

Selected Publications 2022

Janssen H, Ada L, Middleton S, Pollack M, Nilsson M, Churilov L, Blennerhassett J, Faux S, New P, McCluskey A, **Spratt NJ***, Bernhardt J*, AREISSA Trial group. (2022) Altering the rehabilitation environment to improve stroke survivor activity: A Phase II trial.

International Journal of Stroke, 17(3):299-307 *co-senior authors

Guillaumier A, **Spratt NJ**, Pollack M, Baker A, Magin P, Turner A, Oldmeadow C, Collins C, Callister R, Levi C, Searles A, Deeming S, Clancy B, Bonevski B. (2022) Evaluation of an online intervention for improving stroke survivors' health-related quality of life: A randomised controlled trial. *PLoS Medicine*, 19(4)

Mitchell PJ, Yan B, Churilov L, Dowling RJ, Bush SJ, Bivard A, Huo XC, Wang G, Zhang SY, Ton MD, Cordato DJ, Kleinig TJ, Ma H, Chandra RV, Brown H, Campbell BCV, Cheung AK, Steinfort B, Scroop R, Redmond K, Miteff F, Liu Y, Duc DP, Rice H, Parsons MW, Wu TY, Nguyen HT, Donnan GA⁺, Miao ZR⁺, Davis SM⁺, on behalf of the DIRECT-SAFE Investigators. (2022) Endovascular thrombectomy versus standard bridging thrombolytic with endovascular thrombectomy within 4-5 h of stroke onset: an open-label, blinded-endpoint, randomised non-inferiority trial. *The Lancet*, 400, 116-125

Garcia Esperon C, Bivard A, Johns H, Chen C, Churilov L, Lin L, Butcher K, Kleinig TJ, Choi PMC, Cheng X, Dong Q, Aviv RI, Miteff F, **Spratt NJ**, Levi CR, Parsons MW, on behalf of the INSPIRE Study group. (2022) Association of endovascular thrombectomy with functional outcome in patients with acute stroke with a large ischemic core. *Neurology*, 99(13)

Dzator JSA, Howe PRC, Coupland KG, Wong RHX. (2022) A Randomised, Double-Blind, Placebo-Controlled Crossover Trial of Resveratrol Supplementation for Prophylaxis of Hormonal Migraine. *Nutrients*, 14(9):1763

<http://www.newcastle.edu.au/profile/neil-spratt>



Centre for Advanced Training Systems (ATS)

Professor Walker directs the Centre for Advanced Training Systems (ATS). The mission of the centre is to develop improved methodologies for training, with a specific focus on digital simulation. A strength of ATS is enhancing training outcomes via the inner world training techniques. The centre now partners widely across academia and industry. Professor Walker currently leads several major projects with the Department of Defence, the Meat and Livestock Industry, NSW Health, the Agency for Clinical Innovation, Ramsay Health Care, as well as several other industry partners. In 2019 he was appointed to the Assistant Dean of Partnerships and Innovation for the Faculty of Health and Medicine. He works closely with Professor Michael Nilsson within the Centre for Rehabilitation Innovation; sits as an executive member of the Stroke and Brain Injury Priority Research Centre and is an active member of The Animal Welfare Collaborative.

Grants

National Health and Medical Research Council: Using a national level multi-registry analysis to determine whether prescribed anti-platelet therapies post-stroke can modify the risk of cognitive decline or dementia. Nilsson M, Walker FR, Kuhn G, Attia J, Gustavsson S, Hinwood M, Nyberg J, Oldmeadow C, Ilicic M, Spratt N, Levi C, Carey L (2021-23)

College of Emergency Nursing Australasia: Measuring occupational stress in emergency nurses using biomarkers and psychometric tools: an observational study. Inder K, Mithen L, Walker R, Weaver N (2022)

Hunter New England Local Health District: Antiplatelet medications and cognitive function post-stroke. Paul M, Hinwood M, Nilsson M, Pollack M, Walker R (2022)

eHealth NSW: Development of Mobile Communications Training Tools. Walker R, Kluge M, Maltby S, Stevenson A (2022)

Victoria Police: Design and Evaluation of Team Based Immersive Simulation Training. Walker R, Kluge M, Maltby S (2022)

Department of Defence: Cognitive Load Training System – Joint Land Command and Control Staff. Walker R, Eidels A, Heathcote A, Kluge M (2022)

Publications

Kluge MG, Maltby S, **Walker FR.** (2022) Current State and General Perceptions of the Use of Extended Reality (XR) Technology at the University of Newcastle: Interviews and Surveys from Staff and Students. *SAGE Open*, doi: 10.1177/21582440221093348 [C1]

Sanchez-Bezanilla S, Beard DJ, Hood RJ, Aberg ND, Crock P, **Walker FR**, et al. (2022) Growth Hormone Increases BDNF and mTOR Expression in Specific Brain Regions after Photothrombotic Stroke in mice. *Neural Plasticity*, doi: 10.1155/2022/9983042 [C1]

Ryan A, Paul CL, Cox M, Whalen O...Walker FR, et al. (2022) TACTICS-Trial of Advanced CT Imaging and Combined Education Support for Drip and Ship: evaluating the effectiveness of an 'implementation intervention' in providing better patient access to reperfusion therapies; protocol for a non-randomised controlled stepped wedge cluster trial in acute stroke. *BMJ Open*, doi: 10.1136/bmjopen-2021-055461

Hinwood M, Ilicic M, Gyawali P, Kluge MG, Coupland K, Smith A, Nilsson M, **Walker FR.** (2020) Exploration of stress management interventions to address psychological stress in stroke survivors: a protocol for a scoping review. *BMJ Open*, Mar 26; 10(3):e035592. doi: 10.1136/bmjopen-2019-035592

Afkhami RG, **Walker FR**, Ramadan S, Johnson S. (2019) A dynamic model of brain hemodynamics in near-infrared spectroscopy. *IEEE Transactions on Biomedical Engineering*, Jul; 67(7):2103-2109. doi: 10.1109/tbme.2019.2954829 Epub 2019 Nov 21. PMID: 31751221

<http://www.newcastle.edu.au/profile/rohan-walker>

Professor Rohan Walker

Research Fellows

Dr Kirsten Coupland
Dr Marina Ilicic
Dr Rebecca Hood

Project Manager

Ann Stevenson

Research

Coordinator

Murielle Kluge

Project Officers

Steven Maltby
Angela Keynes



Associate Professor
Phil Jobling

HDR Student:
Anne Ibbotson

Co-Supervised HDR Students:
Brittany McCarthy
Mark Marsland
David Lorincz

Honours student:
Madeleine Walton Smith

Wil Student:
Chloe Evans

Autonomic Nervous System Research

This laboratory studies the autonomic motor and primary sensory neurones that control peripheral tissues. The group use a combination of anatomical, electrophysiological, and molecular techniques to study populations of neurons that communicate with a wide range of organs and cells. Projects in 2022 included:

● Neuroimmune modulation of breast cancer

This project investigates the relationship between nerves and immune cells in human tumours and a mouse model of breast cancer that resembles human HER2-positive tumors. They first quantified the distribution of nerves, lymphocytes, and macrophages in tumours from women and mice. Flow cytometry was also used to characterise immune cell populations in mouse tumours. They found that this preclinical model mirrors the innervation patterns seen in human disease allowing us to trial targeted interventions to reduce tumour growth.

● Effect of chlamydia reproductive tract infection on spinal cord signalling

Infertility subsequent to inflammation of the reproductive tract (e.g., pelvic inflammatory disease-PID) is an increasing clinical problem. In this project they use a well-defined model of genital tract infection and subsequent PID to investigate changes in motility of the female reproductive tract. The group use *in vivo* and *in vitro* physiological recording techniques and acquire detailed knowledge on cellular changes that occur after Chlamydia infection. This year they found that Chlamydia infection altered sensory processing in the spinal cord and altered behaviour. This is the first time that Chlamydia infection of the female reproductive tract has been shown to alter sensory perception and paves the way for exploration of treatments to reduce chronic pain subsequent to infection.

Collaborations Collaborative projects being conducted with investigators in other laboratories within the School include Dr Brett Graham (Pain Research), Professor Hubert Hondermarck (Cancer Research), Dr Rebecca Lim (Vestibular System), Professor Dirk van Helden (Cardiovascular System) and Associate Professor Nikki Verrills.

Grants

Mark Hughes Foundation: Targeting ER stress-induced neurotropism as a therapy in glioblastoma. Hondermarck H, Jiang CC, Jobling P, Faulkner S (2021-23)

Mark Hughes Foundation: An Effective Targeted Therapy for Glioblastoma. Hondermarck H, Dowdell A, Faulkner S, Gedye C, Jiang CC, Jobling P, Lynam J, Marsland M, Rush R (2022)

Maitland Cancer Appeal Committee Incorporated: Pancreatic Cancer. Hondermarck, H, Jiang CC, Jobling P (2022-23)

Publications

Jobling P. (2022) Nervous System: Neurons and Glial Cells. *Encyclopedia of Cell Biology (Second Edition)*, doi: 10.1016/B978-0-12-821618-7.00271

Astono IP, Welsh JS, Rowe W, **Jobling P.** (2022) Objective quantification of nerves in immunohistochemistry specimens of thyroid cancer utilising deep learning. *PLOS Computational Biology*, doi: 10.1371/journal.pcbi.1009912

Stitt IM, Wellings TP, Drury HR, **Jobling P.**, Callister RJ, Brichta AM, Lim R. (2022) Properties of Deiters' neurons and inhibitory synaptic transmission in the mouse lateral vestibular nucleus. *JNP Journal of Neurophysiology*, doi: 10.1152/jn.00016.2022

<https://www.newcastle.edu.au/profile/phillip-jobling>



Madeleine Walton Smith



**Associate Professor
Paul Tooney**

DNA Repair - Brain Cancer Research

Associate Professor Tooney has a keen interest in understanding the cellular and molecular mechanisms of diseases, so that better diagnoses and treatment strategies can be developed. Research from 1998-2017 focused on the neurobiology and genetics underpinning schizophrenia. The laboratory conducted and collaborated on studies detailing the changes to gene expression in the brain and blood from patients with schizophrenia. In 2017, the research took a new direction investigating glioblastoma, the most devastating adult brain cancer. He established a new collaboration with Dr Michael Fay (GenesisCare), Associate Professor Nikola Bowden, Dr Moira Graves, and Professor Jennifer Martin. The group focuses on understanding how to overcome treatment resistance in patients with recurrent glioblastoma. They study new and repurposed drugs to assess their efficacy against treatment resistant glioblastoma. Paul is also interested in the impact of the immune system and tumour microenvironment on glioblastoma with the view to prolonging patient survival. The group collaborates with colleagues at the University of Queensland and the CSIRO based in Brisbane on the development of new diagnostic approaches to brain cancer.

Grants

Mark Hughes Foundation: Mark Hughes Foundation Early Career Research Fellow. Fay M, Tooney PA, Lozinski M. (2022-23)

Mark Hughes Foundation: Can the brain's immune cell be used to track treatment response in high-grade glioma? Tooney PA, Fay M, Lane R, Lobb R, Puttick S. (2021-23)

Publications

Trubetskoy V, ... **Tooney PA**, ... O'Donovan MC, Schizophrenia Working Group of the Psychiatric Genomics Consortium. (2022) Mapping genomic loci implicates genes and synaptic biology in schizophrenia. *Nature*, 604(7906):502-508. doi: 10.1038/s41586-022-04434-5

Lozinski M, Bowden NA, Graves MC, Fay M, Day BW, Stringer BW, **Tooney PA**. (2022) Transcriptomic Profiling of DNA Damage Response in Patient-Derived Glioblastoma Cells before and after Radiation and Temozolomide Treatment. *Cells*, 11(7):1215. doi: 10.3390/cells11071215

Lozinski M, Bowden NA, Graves MC, Fay M, **Tooney PA**. (2021) DNA damage repair in glioblastoma: current perspectives on its role in tumour progression, treatment resistance and PIKKing potential therapeutic targets. *Cellular Oncology*, 44(5):961-981. doi: 10.1007/s13402-021-00613-0

Maddison K, Bowden NA, Graves MC, Fay M, Villain RE, Faulkner S, **Tooney PA**. (2021) Low tumour-infiltrating lymphocyte density in primary and recurrent glioblastoma. *Oncotarget*, 12(21):2177-2187. doi: 10.18632/oncotarget.28069

Pardiñas AF, ... **Tooney P**, ... Owen MJ, James H, MacCabe MC, O'Donovan J, Walters TR and the Genetics Workstream of the Schizophrenia Treatment Resistance and Therapeutic Advances (STRATA) Consortium and the Schizophrenia Working Group of the Psychiatric Genomics Consortium (PGC). (2022) Interaction Testing and Polygenic Risk Scoring to Estimate the Association of Common Genetic Variants with Treatment Resistance in Schizophrenia. *JAMA Psychiatry*, doi:10.1001/jamapsychiatry.2021.3799

<https://www.newcastle.edu.au/profile/paul-tooney>



Dr Hayley Croft

Pharmacy Practice Research

Dr Croft is a lecturer in Pharmacy and began her research career focused on scholarship of teaching and learning, then expanding her research in workforce development to focus on exploring roles for pharmacists in the effective, and safe utilisation of pharmacotherapies for complex, chronic patients. Her research program focuses on two key areas: (1) *Advancing roles of pharmacists in improving care for people with disability*: collaborating with a multidisciplinary team of practitioners Dr Croft aims to improve the uptake and utilisation of team-based health programs whereby pharmacists are able to ensure optimal safeguarding and outcomes are achieved in the prescription of medications to manage patients with chronic and complex health needs, including those receiving disability care, and especially in regional, rural and remote communities. This addresses a widening gap in care for patients with intellectual disability, and especially in the use of psychotropic medicines for behaviours of concern and the management of minor ailments. (2) *Development and implementation of advanced techniques to enhance workforce skills and capacity*: the focus of this research is the use of novel approaches for assessing health professional competence in pharmacy including Entrustable Professional Activities (EPAs) in workplace-based learning that provide a means of evaluating the progressive increase in responsibility and autonomy that a student/learner can be entrusted to undertake professional task(s) safely and accurately. Dr Croft is a registered pharmacist and credentialed consultant pharmacist, and practises in the primary health sector regularly. Her extensive contemporary practice experience and strong industry connections bring meaningful engagement between the pharmacy discipline and pharmacists across various industry settings through teaching, research, and service activities within the Bachelor of Pharmacy (Hons) team at the University of Newcastle.

Grants

Newcastle Hunter Valley Pharmacists Association philanthropic funds: Exploring the role of the community pharmacist within a team-based model of care for patients with disability. Croft H (CI), Felkai C, Newby D, Munro I, Ross D. (2022)

Newcastle Hunter Valley Pharmacists Association philanthropic funds: Empowering community pharmacists to support trainees through entrustable professional activities (EPAs). Croft H (CI), Newby D, Dineen-Griffin S, Salem S, Munro I. (2022)

Educator Professional Development Grant: Ins and Outs of Entrustable Professional Activities International Course. Croft H. (2022)

Publications

Maundu J, Galbraith K, **Croft H**, Clarke B, Kirsa S, Wilkinson G, Abeyaratne C. (2022) Development of workplace-based assessment tools to support postgraduate training of provisionally registered pharmacists in Australia. *Journal of the American College of Clinical Pharmacy*, 1-7

Croft H. (2022) Case Report. In Cooke J (Ed) Overcoming challenges with disability medicines. *Practice Feature – Australian Pharmacist*.

<https://www.newcastle.edu.au/profile/hayley-croft>



Dr Saad Salem

Pharmacy Research

Dr Saad Salem graduated with a Doctor of Pharmacy (PharmD) degree with a strong clinical focus and appreciates the importance of understanding the mechanism of action of medicines to develop and optimise pharmacotherapeutic plans and make sound clinical judgements. Dr Salem completed a PhD at The University of Melbourne investigating the role of transforming growth factor-beta (TGF- β) in modulating the cellular responses of glucocorticoids, an important class of medicines used to treat asthma and inflammatory conditions. Dr Salem's research was awarded multiple prizes including best oral presentation at the Thoracic Society of Australia and New Zealand (TSANZ) annual scientific meeting and Neville Percy prize for best poster presentation at the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT) annual scientific meeting. He was invited by the British Pharmacological Society (BPS) to present his research at the BPS annual winter scientific meeting in London for which he was awarded a travel grant. He is a member of the Centre of Drug Repurposing and Medicines Research (CDRMR) at the Hunter Medical Research Institute (HMRI). He is a pharmacist registered with the Pharmacy Board of Australia and the Australian Health Practitioner Regulation Agency (AHPRA). He incorporates his experience as a community pharmacist into his teaching of pharmacotherapy and pharmacy practice and strives to equip students with the knowledge and skills to become future leaders in pharmacy.

Grants

School of Biomedical Sciences and Pharmacy: Development of New Consumer Medicines Information (CMI) Leaflets for Patients with Low Literacy Rates or from Different Cultural Backgrounds. Salem S, Munro I, Dineen-Griffin S, Croft H, Newby D (2022)

Publications

Salem S, Cooper J, Schneider J, Croft H, Munro I. (2020) Student Acceptance of Using Augmented Reality Applications for Learning in Pharmacy: A Pilot Study. *Pharmacy*; (Basel, Switzerland), 8 1-10

Schneider J, Patfield M, Croft H, **Salem S**, Munro I. (2020) Introducing Augmented Reality Technology to Enhance Learning in Pharmacy Education: A Pilot Study. *Pharmacy*; (Basel, Switzerland), 8

Drovandi A, **Salem S**, Barker D, Booth D, Kairuz T. (2020) Human Biomarker Exposure from Cigarettes Versus Novel Heat-Not-Burn Devices: A Systematic Review and Meta-Analysis. *Nicotine and Tobacco Research*; 22 1077-1085

<https://www.newcastle.edu.au/profile/saad-salem>



Dr Sarah Dineen-Griffin

Community Pharmacy Research

Dr Dineen-Griffin (PhD MPharm BBSci GradCertPharmPrac AACPA MPS) is a full-time teaching and research academic and is a registered pharmacist with significant experience in various fields in pharmacy, including community, hospital and as an accredited medicines review pharmacist. Her research interests encompass the future of community pharmacy in current and emergent national and international settings and her specific research programs evaluate the clinical, humanistic, economic impact, and implementation aspects of community pharmacy as part of primary health care. Sarah has led national and international pharmacy research projects and has established a collaborative network with universities, professional organisations, health professionals, primary health networks and industry. Her research in pharmacy has resulted in peer-reviewed publications in high-impact international journals and her publications have attracted over 250 citations. Sarah was awarded the UTS Dean's award for outstanding PhD thesis in 2021 and NSW Young Pharmacist of the Year by the Pharmaceutical Society of Australia in 2020. In the short time she worked at Charles Sturt University, Sarah was awarded the RED Research Excellence Award for *Most Productive Early Career Researcher* in 2021. These achievements recognise her impact as an early career researcher and the currency of her research. Sarah is an editorial board member for two international pharmacy journals, *Research in Social and Administrative Pharmacy* and *Pharmacy Practice*. Her extensive participation in leadership roles in committees at international, national, and state levels demonstrates an outstanding ability to influence the future of the profession. This is evidenced by her appointment to an expert advisory committee leading the review of the National Medicines Policy by the Federal Minister of Health and her election as Vice-President to the Pharmaceutical Society of Australia NSW Branch. Additionally, internationally, she is elected to the International Pharmaceutical Federation's Community Pharmacy executive committee. These roles allow her to remain abreast of global changes in the industry and the real-world challenges of practising pharmacists and importantly apply these learnings to the Australian and regional context.

Grants

Pharmaceutical Society of Australia Ltd: Healthy North Coast: Improving access to primary health care. Dineen-Griffin S, Benrimoj S, Siamandis S. (2022-24)

Consumer Health Care Products Australia: A local model to enhance consumer self-care behaviour using digital information: a partnership between a Primary Health Network, Community Pharmacy and Consumers. Dineen-Griffin S, Benrimoj S. (2022-23)

Consumer Healthcare Products Australia: Digital self-care and health literacy. Dineen-Griffin, S (2021-22)

Newcastle & Hunter Valley Pharmacists Association Inc: Community Pharmacy Advice: determining the value of community pharmacy to primary health care. Dineen-Griffin S (2022-23)

Consumer Health Cre Products Australia: Consumer behaviour related to access and use of online health information and the impact on self-care. Dineen-Griffin S, Benrimoj S (2022)

Publications

Crespo-Gonzalez C, **Dineen-Griffin S**, Rae J, Hill R. (2022) Mental health training programs for community pharmacists, pharmacy staff and students: a systematic review. *Research in Social and Administrative Pharmacy*, 18(11), 3895–3910.

<https://doi.org/10.1016/j.sapharm.2022.06.006>

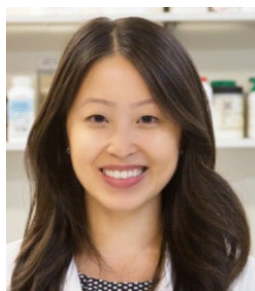
Crespo-Gonzalez C, **Dineen-Griffin S**, Rae J, Hill RA. (2022) A qualitative exploration of mental health services provided in community pharmacies. *PLoS One*, May 12;17(5):e0268259. doi: 10.1371/journal.pone.0268259. PMID: 35551556; PMCID: PMC9098086

Viegas R, **Dineen-Griffin S**, Söderlund LA, Acosta-Gómez J, Guiu JM. (2022) Telepharmacy and pharmaceutical care: A narrative review by International Pharmaceutical Federation. *Farm Hosp*, 46(Supl 1):S86-91

Zheluk A, Anderson J, **Dineen-Griffin S**. (2022) Analysis of acute non-specific back pain content on Tiktok: an exploratory study. *Cureus*, 19;14(1):e21404. doi: 10.7759/cureus.21404. PMID: 35198311

Zheluk A, Anderson J, **Dineen-Griffin S**. (2022) Adolescent anxiety and TikTok. An exploratory study. 2022. *Cureus*, 14(12):e32530. doi:10.7759/cureus.32530

<https://www.newcastle.edu.au/profile/sarah-dineengriffin>



**Associate Professor
Susan Hua**

HDR Students

Kehong Yang
Thi-Xuan-Phuong Dong
Yazmin Crossingham
Tarun Srivastava
Ai Wei Lim
Jaskaran Bains

Therapeutic Targeting Research

Associate Professor Hua is an academic pharmacist and group leader of the Therapeutic Targeting research program. She has independently established the first translational nanopharmaceutics laboratory in the Hunter region, which has led to significant research discoveries in targeted nanomedicines. Nanomedicine applies nanotechnology to highly specific medical interventions for the prevention, diagnosis, and treatment of diseases. The research is focused on improving the way patients are treated through the development of more effective and safer medications and diagnostic agents. The general research focus of the group is on therapeutic targeting utilising novel drug delivery platforms in biomedical applications. Of particular interest is using nanotechnology to study novel mechanistic pathways as well as to develop more efficient therapeutic delivery systems. Her research expertise covers the areas of advanced pharmaceutical formulation, *in vitro* cellular studies, and preclinical *in vivo* animal studies. This expertise provides a solid foundation to formulate and evaluate new drug delivery systems and to apply them to pathological disease states, to assess potential clinical applicability and identify novel therapeutic targets. This research provides a platform for the translational development of targeted therapeutics that will ultimately provide a novel therapeutic strategy in clinical disease management.

Grants

National Health and Medical Research Council Ideas: Development of improved treatments for oesophageal diseases.

Hua S, Storm G (2020-24)

NSW Ministry of Health MRSP Funding: Precision Medicine Research Program. Cairns M, Verrills N, Hua S, Lee H, Enjeti A, Dun MD (2022-23)

Hunter Medical Research Institute: Precision Medicine Research Program. Cairns M, Verrills N, Hua S, Lee H, Enjeti A, Dun MD (2022-23)

GH Varley Pty Ltd Research Funding: Investigation of respiratory dust associated with the Hunter Valley rail corridor. Surjan Y, Hua S, Fiedler T, Williams K (2017-22)

The University of Newcastle Multi-disciplinary Innovation Grant: Evaluation of the effect of micro- and nano-particulate dust exposure in the mining industry on human health and the development of an early detection system. Hua S, Williams K, Fiedler T, Surjan Y (2017-22)

Publications

Hua S, Lye EC. (2022) Impact of gastric and bowel surgery on gastrointestinal drug delivery. *Drug Delivery and Translational Research*, 13(1): 37-53

Dong PTX, Trinh HT, Nguyen DH, Nguyen ST, Pham VTT, Ngo HB, Hua S, Li SC, Nguyen HTL. (2022) Implementing clinical pharmacy activities in hospital setting in Vietnam: current status from a national survey. *BMC Health Services Research*, 22:878

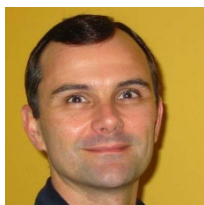
Dong PTX, Pham VTT, Nguyen LT, Le AV, Nguyen TT, Vu HD, Nguyen HTL, Nguyen HT, Hua S, Li SC. (2022) Impact of pharmacist-initiated educational interventions on improving medication reconciliation practice in geriatric inpatients during hospital admission in Vietnam. *Journal of Clinical Pharmacy and Therapeutics*, 47(12):2107-14

Bains J, Carver S & Hua S. (2022) Pathophysiological and Pharmaceutical Considerations for Enhancing the Control of *Sarcoptes scabiei* in Wombats Through Improved Transdermal Drug Delivery. *Frontiers in Veterinary Science*, 9:944578

Dong PTX, Pham VTT, Nguyen TT, Nguyen HTL, Hua S & Li SC. (2022) Unintentional Medication Discrepancies at Admission Among Elderly Inpatients with Chronic Medical Conditions in Vietnam: A Single-Centre Observational Study. *Drugs - Real World Outcomes*, 9(1):141-51

Dong PTX, Pham VTT, Dinh CT, Le AV, Tran HTH, Nguyen HTL, Hua S & Li SC. (2022) Implementation and Evaluation of Clinical Pharmacy Services on Improving Quality of Prescribing in Geriatric Inpatients in Vietnam: An Example in a Low-Resources Setting. *Clinical Interventions in Aging*, 17:1127-38

<http://www.newcastle.edu.au/profile/susan-hua>



**Associate
Professor David
Newby**

HDR Students

Lee Lethbridge
Xiang Wang
Chelsea Felkai
Alison Hooper
Linzi-Jane Robson

Pharmacy Research

Associate Professor Newby has conducted both qualitative and quantitative research primarily involving surveys, interviews, and focus group discussions. He teaches into both the medical and pharmacy courses and his teaching is in evidence-based practice, pharmacoepidemiology, Pharmacoeconomics and clinical pharmacology. Associate Professor Newby was the foundation lecturer in the Master of Pharmacy course and established the pharmacy practice component. He has been awarded a Vice-Chancellors Citation and an Australian Learning and Teaching Council citation for outstanding contribution to teaching for the development of the pharmacy practice course related to the evidence-based management of minor illnesses. He is a Ministerial appointee to the Pharmaceutical Benefits Advisory Committee and has been made a Fellow of the Pharmaceutical Society of Australia in recognition of his contribution to the profession.

Publications

Ren S, Hansbro PM, Sriksalanukul W, Horvat JC, Hunter T, Brown AC, Peel R, Faulkner J, Evans T-J, Li SC, Newby D, Hure A, Abhayaratna WP, Tsimikas S, Gonen A, Witztum JL, Attia J, D'Este C, Tonkin A, Hopper I, Thrift A, Levi C, Sturm J, Durrheim D, Hung J, Briffa T, Chew D, Anderson P, Moon L, Mcevoy M. (2022) Generation of cardio-protective antibodies after pneumococcal polysaccharide vaccine: Early results from a randomised controlled trial. *Atherosclerosis*, 346, 68–74. <https://doi.org/10.1016/j.atherosclerosis.2022.02.011>

Ren, S, Attia J, Li SC, Newby D. (2021) Pneumococcal polysaccharide vaccine is a cost saving strategy for prevention of acute coronary syndrome. *Elsevier*, 39(12):1721-1726

Horby PW, Roddick A, Spata E, Staplin N, Emberson J, Pessoa-Amorim G, et al. (2021) Azithromycin in patients admitted to hospital with COVID-19 (RECOVERY): a randomised, controlled, open-label, platform trial. *Lancet*, 397:605-621

Miller P, Newby D, Walkom E, Schneider J, Li SC, Evans T-J. (2021) The performance and accuracy of depression screening tools capable of self-administration in primary care: A systematic review and meta-analysis. *Elsevier*, 35(1):1-18

<https://www.newcastle.edu.au/profile/david-newby>



Dr Lauren Harms

Biological Psychiatry Research

Dr Harms is a lecturer within the School who completed her PhD in Neuroscience from The University of Queensland in 2012. During her PhD, she trained at Queensland Brain Institute, where her research focused on how environmental risk factors for neuropsychiatric disorders such as schizophrenia impact brain development and adult behaviour. In her postdoctoral role at University of Newcastle's School of Psychology, as well as her current role as lecturer, she has continued research into how early-life exposures can contribute to disease risk. Particularly, how exposure to immune activation during gestation can affect brain development and have a long-term impact on the ability of the brain to generate electrical impulses such as mismatch negativity (MMN) and high-frequency brain wave activity. In an integrative project, she examines how early-life and adolescent factors contribute to the brain's ability to generate electrophysiological signals and how these electrical changes affect cognitive behaviour, such as attention and memory.

Grants

Hunter Medical Research Institute: Examination of the impact of mismatch responses on attention in rats: relevance for future drug discovery for the cognitive impairments of schizophrenia. Harms L

Neuroscience Research Australia: Investigating the role of mismatch negativity (MMN) in attention allocation. Harms L

Publications

Harms L, Parras GG, Michie PT, Malmierca MS. (2021) The Role of Glutamate Neurotransmission in Mismatch Negativity (MMN), A Measure of Auditory Synaptic Plasticity and Change-detection. *Neuroscience*, 456 106-113 (2021) 10.1016/j.neuroscience.2020.01.046
Jalewa J, Todd J, Michie PT, Hodgson DM, Harms L. (2021) Do rat auditory event related potentials exhibit human mismatch negativity attributes related to predictive coding? *Hearing Research*, 399. doi: 10.1016/j.heares.2020.107992

Dunn AL, Michie PT, Hodgson DM, Harms L. (2020) Adolescent cannabinoid exposure interacts with other risk factors in schizophrenia: A review of the evidence from animal models. *Neuroscience and Biobehavioral Reviews*, 116 202-220. doi: 10.1016/j.neubiorev.2020.06.028

Harms L, Fulham WR, Todd J, Meehan C, Schall U, Hodgson DM, Michie PT. (2018) Late deviance detection in rats is reduced, while early deviance detection is augmented by the NMDA receptor antagonist MK-801. *Schizophrenia Research*, 191 43-50. doi: 10.1016/j.schres.2017.03.042
<https://www.newcastle.edu.au/profile/lauren-harms>



Dr Roger Liang

Biomaterials and Drug Delivery Research

This research is at the interface of multidisciplinary fields including chemical and molecular engineering, materials science, chemistry, biotechnology, and medicine. The group seeks to develop novel biomaterials and strategies for the diagnosis and treatment of human diseases. One of the group's specific interests lies in the mechanistic understanding of nanoparticle interaction with biological systems, with special focus on improving cell-specific uptake of therapeutic nanoparticles and understanding sub-cellular dynamics associated with nanoparticle trafficking. They are also working on microfluidic synthesis of multifunctional nanoparticles and development of novel nanopharmaceuticals for cancer, asthma, and animal sterilisation. The group also carried out research in subcellular mitochondrial targeting, which has great potentials in tackling many mitochondria-associated diseases including cancer, diabetes, aging, neurodegenerative and neuromuscular diseases.

Grants

Found Animal Project Grant: Development of nanopharmaceutical strategies for the sterilization of domestic cats and dogs. Smith L, Aitken J, Liang M (2020-22)

National Health and Medical Research Council Ideas Grant: Adrenal-Targeted Nanobiotechnology: A Novel Therapy for Adrenal Disease. Smith L, Gannon A, Liang M (2022-24)

Publications

Santhanes D, Wilkins A, Zhang H, John Aitken R, Liang M. (2022) Microfluidic formulation of lipid/polymer hybrid nanoparticles for plasmid DNA (pDNA) delivery. *International Journal of Pharmaceutics*, 627, 122223

Gao H, Kan S, Ye Z, Feng Y, Jin L, Zhang X, Liang M, Li H, Ouyang D. (2022) Development of in silico methodology for siRNA lipid nanoparticle formulations. *Chemical Engineering Journal*, 442, 136310

Kan S, Grainge C, Nichol K, Reid A, Knight D, Sun Y, Bartlett NW, Liang M. (2022) TLR7 agonist loaded airway epithelial targeting nanoparticles stimulate innate immunity and suppress viral replication in human bronchial epithelial cells. *International Journal of Pharmaceutics*, 617, 121586

Fraser B, Peters AE, Sutherland JM, Liang M, Reboucet D, Nixon B, Aitken RJ. (2021) Biocompatible Nanomaterials as an Emerging Technology in Reproductive Health; a Focus on the Male. *Frontiers in Physiology*, 11. doi: 10.389/fphys.20

Kan S, Hariyadi DM, Grainge C, Knight DA, Bartlett NW, Liang M. (2020) Airway epithelial-targeted nanoparticles for asthma therapy. *American Journal of Physiology Lung Cellular and Molecular Physiology*, 318(3)

<http://www.newcastle.edu.au/profile/roger-liang>

PhD Students

Barbara Frazer

Nada Altheyab

Shan Mohanan

Diviya Santhanes

Thomas Adams

Nathan Bryant

Akhil Gajipara

ACADEMIC PROMOTIONS

Promotion to Lecturer	Dr Jemma Mayall Dr Sarah Delforce Dr Yuan Yuan Zhang
Promotion to Professor	Associate Professor Brett Graham Associate Professor Jay Horvat Associate Professor Kirsty Pringle Associate Professor Nathan Bartlett Associate Professor Suzanne Evans

ACADEMIC HONOURS RECEIVED BY STAFF/STUDENTS

Bekkers, Matthijs	Awarded Best Poster Prize at HDR Student Showcase 2022
Burfitt, Kate	College of Health, Wellbeing and Medicine Medallist 2022 (Bachelor Pharmacy)
Coupland, Kirsten	Awarded Cardiovascular Research Network Professional Development Award
Duchatel, Ryan	Awarded ChadTough Defeat DIPG Early Career Fellowship
Findlay, Izac	Awarded Bachelor of Biomedical Science (Honours)
Germon, Zacary	Awarded PhD Medical Biochemistry "Targeting Reactive Oxygen Species for the Treatment of Acute Myeloid Leukaemia" Supervisors: Associate Professor Matt Dun, Dr Heather Lee, Professor Nikki Verrills
Kalagi, Nora	Awarded PhD "Relationship between Plasma Trimethylamine N-Oxide Levels and Type 2 Diabetes in a Saudi Arabian Cohort" Supervisor: Professor Manohar Garg
Lochrin, Alyssa	Awarded Best late HDR presentation: Fetal and Neonatal Workshop of Australia and New Zealand. Awarded School of Biomedical Sciences and Pharmacy Researcher Showcase: Excellence in communication HDR winner
Miller, Chrissy	Awarded College of Health, Wellbeing and Medicine Medallist 2022 (Bachelor Biomedical Science) Awarded Dunkley Medal Winner 2021 Supervisor: Associate Professor Kathryn Skelding
Moore, Isabella	Awarded Best Poster Presentation at the Hunter Cell Biology Meeting
Staudt Barreto, Dilana	Awarded PhD Medical Biochemistry "Molecular and Phosphoproteomic Characterisation of FLT3 Inhibitor Resistance in Acute Myeloid Leukaemia" Supervisors: Associate Professor Matt Dun, Professor Nikki Verrills, Professor Rodney Scott
Syed, Shafiq	Awarded the Kellerman Award for Research Excellence
Xu, Ran	Awarded 2022 AACBS best oral presentation – first place
Zhao, Xiaohong	Awarded 2022 AACBS best oral presentation – second place. Awarded 2022 Cancer and Precision Medicine Symposium – People's Choice Student Presentation

AWARDS RECEIVED BY STAFF/STUDENTS

Adams, Danielle	Achieved competition finalist in the Three Minute Thesis 2022 for her presentation "Individual treatments for individual patients"
Beard, Daniel	Awarded 2022 Paul Dudley White International Scholar for highest ranked abstract from Australia submitted to the International Stroke Conference in New Orleans, USA
Bartlett, Nathan	Awarded RNA Future Leaders Program Grant for his project "TLR2/6 agonist-boosting immunogenicity of tumour-targeting RNAi-based nanomedicines"
Bevege, Renee	Awarded best blitz talk presentation – Brain Neuromodulation Emerging Researcher Conference
Budden, Kurtis	Awarded the Thoracic Society of Australia and New Zealand (TSANZ) Past Presidents Scholarship Award for research titled: "Association between dietary fibre, microbial metabolites and airway obstruction in COPD patients and murine models"
Burfitt, Kate	Awarded Pharmaceutical Defence Best Overall Performance in Pharmacotherapeutics, Bachelor of Pharmacy (Honours) Program Awarded Professor Shane Scott Memorial Award for Excellence in Pharmacy Research and Clinical Leadership in Healthcare, Bachelor of Pharmacy (Honours) Program Awarded SHPA Best Overall Performance in Clinical Pharmacotherapy and Professional Practice in Pharmacy, Bachelor of Pharmacy (Honours) Program

Burns, Grace	Awarded School of Biomedical Sciences and Pharmacy Showcase award – Best Elevator Pitch Award
Campbell, Erin	Awarded Discovery Early Career Researcher 2023, fellowship titled “Deconstructing the brain circuits of reward-seeking”
Carroll, Olivia	Awarded Thoracic Society of Australia and New Zealand (TSANZ) Ann Woolcock Young Investigator for 2022 Awarded Peter Van Asperen Career Development Grant through Asthma Australia Awarded HDR Leadership Award PhD Student Professor Lisa Wood and Associate Professor Jay Horvat
Cook, Georgia	Awarded 2021 Australian Society of Biochemistry and Molecular Biology Prize for Biomedical Science (Bachelor of Biomedical Science Program) Awarded 2021 ADInstruments Prize for Human Structure and Function
Croft, Hayley	Awarded the 2022 College Early-Career Teaching Award (College Health, Medicine and Wellbeing)
Daly, Katie	Awarded an ASI Career Advancement Award
Dineen-Griffin, Sarah	International Excellence Award for Women in Science, International Pharmaceutical Federation Awarded the 2022 College Newby Award (College Health, Medicine and Wellbeing)
Dowling, Laura	Awarded School of Biomedical Sciences and Pharmacy Showcase award – Best Elevator Pitch Award
Duchatel, Ryan	Awarded Young Investigator Award for best oral presentation at NSW Cancer Conference 2022 Awarded grant from The Cure Starts Now foundation which will enable him to further develop treatments for DMG/DIPG Awarded Best Oral Presentation, National Brain Tumour Symposium, Sydney, Australia
Dunn, Matt	Awarded grant funding (\$846 000) from AptaBio Therapeutics to support research involving in vitro and in vivo assessment of AptaBio-19 against high-risk leukaemia Awarded “Big Hero” – ChadTough Defeat DIPG Foundation, USA Awarded the 2022 College Mid-Career Research Award (College Health, Medicine and Wellbeing Award) Awarded grant from The Cure Starts Now foundation which will enable him to further develop treatments for DMG/DIPG Awarded Top Ranked Abstract-Plenary Presentation-Society of Neurooncology (SNO), Tampa Florida
Endacott (Morosin), Saije	Awarded School of Biomedical Sciences and Pharmacy Publication of Prestige (2 nd Place)
Findlay, Izac	Awarded best student poster presentation at Hunter Cell Biology Meeting
Germon, Zac	Awarded New Investigator at New Directions in Leukemia Research (top award for ECR at international conference)
Global Centre for Gynaecological Diseases	Awarded the 2022 College Industry Engagement Award (College Health, Medicine and Wellbeing) – Pradeep Tanwar, Shafiq Syed, Mamta Pariyar, Charlotte Alemao, Fairuz Jamaluddin, Riaz Muhammad, Arnab Ghosh, Nikita Panicker, Fangfang Gao, Emily Williamson, Poonam Rani & Shanu Parameswaran
Gomez, Henry	Awarded Hunter Children’s Research Grants to investigate the impact of iron status and supplementation during pregnancy on the respiratory health of children
Hayward, Bonnie	Awarded the 2021 Pharmaceutical Defence Limited Prize for Bachelor of Pharmacy (Honours) Year 1
Hoedt, Emily	Awarded School of Biomedical Sciences and Pharmacy Showcase award - Best Oral Presentation ECR Winner Awarded School of Biomedical Sciences and Pharmacy Showcase award - People’s Choice Award
Horvat, Jay	2022 HMRI Mid-Career Research Award finalist
HUBS1105 Anatomy Demonstrators 2022	Awarded the 2022 College Kindness Award (College Health, Medicine and Wellbeing Award) – Gemma Parkinson, Jacqueline Iredale, Chris Kang, Ethan Cresswell, Jessica Madden, David Parsons & Elizabeth Pearsall
Jackson, Evangeline	Awarded third place for oral presentation at NSW Cancer Conference 2022
Jin, Lei	Awarded Field Leader in Cell Biology, Research Magazine 2023. (One of the only two recipients across all disciplines from UON).
Kaiko, Gerard	Awarded RNA Future Leaders Program Grant for his project “Cellular production of targeted RNA therapies”
Madden, Jessica	Awarded best full talk presentation – Brain Neuromodulation Emerging Researcher Conference
Marsland, Mark	Awarded Student Poster Prize at the Australian Brain Cancer Research Alliance (ABCARA) 2022 Scientific Research Symposium. Title “Prongf and Sortilin as a potential therapeutic target in glioblastoma”
Miller, Chrissy	Awarded Dunkley Medal for Excellence in Research 2021, Bachelor of Biomedical Science (Honours) Program
Murray, Heather	Awarded best ECR talk at the ASMR Hunter Meeting
Ngo, Doan Verrills, Nikki Cairns, Murray Lee, Heather	Awarded MRFF grant funded from the Cardiovascular Health Mission, to enable the team to explore the links between cardiovascular disease and cancer
Persson, Mika	Awarded best oral presentation at the ASMR Hunter Meeting
Pryor, Jennifer	Finalist for the HDR Leadership Excellence Award

Reay, William	Awarded the 2022 College Early-Career Research Award (College Health, Medicine and Wellbeing)
Safety Team	Awarded the 2022 College Wellbeing, Health and Safety Award (College Health, Medicine and Wellbeing) – Simone Stanger, Jason Harris & Hannah Drury
Safranko, Carmel	Awarded the 2021 PCCA Pharmacy Prize, Bachelor of Biomedical Science (Honours) Program
Staudt Barreto, Dilana	Awarded best student oral presentation at Lorne Proteomics
Syed, Shafiq	Awarded the Kellerman Award for 2021 for outstanding achievement in Medicinal Biochemistry Awarded a Cure Cancer Australia Foundation Grant
Tadros, Melissa	Awarded a Fellowship from the Advance HE (UK) Higher Education Academy Awarded the 2022 College Mid-Career Teaching Award (College Health, Medicine and Wellbeing)
Tanwar, Pradeep	Awarded the 2022 HMRI Mid-Career Research Award Awarded the Robinson Research Institute Award for Research Excellence Awarded the 2022 College Mid-Career and Industry Engagement Award (College Health, Medicine and Wellbeing) Awarded the Matrix Biology Society of Australia and New Zealand Paper of the Month, October 2022
Valkenborghs, Sarah	Awarded Best Overall Paper within the Physical Activity and Health Promotion Award – 2022 Sports Medicine Australia Conference Awarded Best Poster within the Physical Activity and Health Promotion theme – 2022 Sports Medicine Australia Conference Awarded Best Early Career Researcher Paper – 2022 Sports Medicine Australia Conference Awarded the 2022 College Early-Career Teaching Award (College Health, Medicine and Wellbeing) Awarded Hunter Children's Research Grant to fund the IMPACT Study which explores the intergenerational effects of maternal physical activity of child development
Verrills, Nikki	Awarded NHMRC Ideas Grant funding (\$597 000) for project looking into an approach to activate a tumour suppressor for breast cancer therapy
Wood, Lisa	Awarded the Nutrition Society of Australia (NSA) Medal
Woodward, Chloe	Awarded NSW Pharmacy Student of the Year

CONJOINT PROFESSORS

Professor Eugene Aidman, Conjoint Professor	Dr Katie Ashton, Conjoint Lecturer
Dr Gough Au, Conjoint Senior Lecturer	Dr Kim Bellamy, Conjoint Associate Lecturer
Dr Greer Bennett, Conjoint Lecturer	Professor Caroline Blackwell, Conjoint Professor
Professor Philip Bolton, Conjoint Professor	Mr Jason Bridge, Conjoint Associate Lecturer
Professor Robert Callister, Conjoint Professor	Professor Robin Callister, Honorary Professor
Associate Professor Loris Chahl, Conjoint A/Professor	Professor Christopher Chen, Conjoint Professor
Dr Chantal Donovan, Conjoint Associate Lecturer	Professor Margaret Dunkley, Conjoint Professor
Associate Professor John Ferguson, Conjoint A/ Professor	Dr Lan Gao, Conjoint Senior Fellow
Mr Timothy Garrett, Conjoint Senior Lecturer	Dr Pierluigi Gasparini, Conjoint Senior Lecturer
Dr Rod Givney, Conjoint Senior Lecturer	Mrs Kearney Gleadhill, Conjoint Fellow
Emeritus Professor Maree Gleeson, Conjoint Professor	Dr Anna Hackett, Conjoint Senior Lecturer
Professor Phil Hansbro, Conjoint Professor	Mrs Melanie Harrison, Conjoint Lecturer
Dr Syed Hasan, Conjoint Senior Lecturer	Dr Brian Hughes, Conjoint Senior Lecturer
Dr Andrea Johns, Conjoint Fellow	Richard Kim, Honorary Associate Lecturer
Professor Darryl Knight, Conjoint Professor	Professor Derek Laver, Honorary Professor
Dr Lisa Lincz, Conjoint Lecturer	Professor Eugenie Lumbers, Conjoint Professor
Dr Damian McLeod, Conjoint Lecturer	Associate Professor Americo Migliaccio, Conjoint Associate Professor
Dr Irene Munro, Conjoint Lecturer	Dr Lin Kooi Ong, Conjoint Associate Lecturer
Dr Adjanie Patabendige, Honorary Lecturer	Mr Christopher Piggott, Conjoint Professor of Practice
Dr Maximilian Plank, Conjoint Senior Lecturer	Ms Felicity Prior, Conjoint Senior Lecturer
Dr Min Yuan Quah, Conjoint Associate Lecturer	Associate Professor Glenn Reeves, Conjoint Associate Professor
Dr Marc Russo, Conjoint Lecturer	Professor Jodie Simpson, Honorary Professor
Mr Alan Smith, Conjoint Fellow	Associate Professor Estelle Sontag, Honorary Associate Professor
Dr Malcolm Starkey, Honorary Senior Lecturer	Dr Bente Talseth-Palmer, Conjoint Senior Lecturer
Dr Rohith Thota, Conjoint Fellow	Professor Dirk van Helden, Conjoint Professor
Dr Fei-Li Zhao, Conjoint Senior Lecturer	

EDITORIAL SERVICE

Avery-Kiejda, Kelly	Editorial Board Member: PloSOne Editorial Board Member: Discover Oncology Editorial Board Member: Frontiers in Oncology
Baker, Mark	Editorial Board Member: Journal of Cell Science Editorial Board Member: Proteomes Associated Editor: Reproduction Fertility and Development
Beard, Daniel	Topic Editor: Frontiers in Stroke
Brichta, Alan	Associate Editor: Journal of Association for Research in Otolaryngology
Dineen-Griffin, Sarah	Guest Editor: Exploratory Research in Clinical and Social Pharmacy. Themed Series: Self-care in community pharmacy Editorial Board Member: Research in Social and Administrative Pharmacy
Dun, Matt	Editor: Frontiers of Oncology
Hondermarck, Hubert	Editor: International Journal of Molecular Science (MDPI) Associate Editor: Natural Science (Wiley) Editorial Board Member: Proteomics Clinical Applications (Wiley) Editorial Board Member: Molecular and Cellular Proteomics (ASBMB) Editorial Board Member: Translational Oncology Editorial Board Member: Frontiers in Endocrinology Deputy Editor: FASEB BioAdvances
Hua, Susan	Associate Editor: Frontiers in Drug Delivery Associate Editor: Frontiers in Pharmacology
Kaiko, Gerard	Associate Editor: Frontiers in Immunology
Keely, Simon	Associate Editor: Gut Microbes Senior Editor: Experimental Physiology Associate Editor: Physiological Reports Editorial Board Member: Cellular and Molecular Editorial Board Member: Gastroenterology and Hepatology Editorial Board Member: American Journal of Physiology – Gastrointestinal and Liver Physiology
Scott, Rodney	Editor: PlosOne Editor: Scientific Reports Editor-in-Chief: Hereditary Cancer in Clinical Practice
Skelding, Kathryn	Editorial Board Member: Frontiers in Oncology Associate Editor: BMC Cancer
Tanwar, Pradeep	Associate Editor: Frontiers in Reproductive Health Editorial Board Member: Cells Editorial Board Member: Journal of Gynaecology and Obstetrics
Zhang, Xu Dong	Editorial Board Member: The Journal of Immunotherapy Applications Editorial Board Member: World Journal of Gastrointestinal Oncology Editorial Board Member: Gavin Journal of Oncology Research and Therapy Editorial Board Member: Gavin Journal of Dermatology Research and Therapy Editorial Board Member: Cellular & Molecular Oncology Editorial Board Member: Asia Pacific Journal of Clinical Oncology Associate Editor: Frontiers in Oncology Associate Editor: Frontiers in Pharmacology

EXPERT REVIEWS FOR INSTITUTIONS OR ORGANISATIONS

Avery-Kiejda, Kelly	PhD Thesis Examiner: Western Sydney University PhD Thesis Examiner: University of Tasmania PhD Thesis Examiner: University of Otago, New Zealand PhD Thesis Examiner: University of Queensland
Beard, Daniel	PhD Thesis Examiner: University of Otago, New Zealand
Croft, Hayley	Consultant-workplace-based assessment: Australian Pharmacy Council
Dun, Matt	Mid-Career Fellowships Biomedical Evaluation Panel Member: Victorian Cancer Agency (VCA) Grant Reviewer: Dutch Cancer Society, The Netherlands
Hua, Susan	PhD Thesis Examiner: University of New South Wales PhD Thesis Examiner: Curtin University PhD Thesis Examiner: University of Queensland

Jobling, Phil	PhD Thesis Examiner: University of New South Wales
Kaiko, Gerard	PhD Thesis Examiner: Monash University PhD Thesis Examiner: University of Queensland
Keely, Simon	Consultant: Microba Ltd Consultant: Immuron Ltd Advisory Board: Gossamer Bio Advisory Board: Anantara Lifesciences
Pringle, Kirsty	PhD Thesis Examiner: University of Manchester
Scott, Rodney	Promotion Evaluator: University of Melbourne Thesis Examiner: Queensland University of Technology
Skelding, Kathryn	PhD Thesis Reviewer: University of Sydney External Examiner: (BSc (Hons) in Biomedical Science), International Medical University Expert Reviewer: Food and Health Bureau, Health and Medical Research Fund, Hong Kong Expert Reviewer: European Research Council Assessor: Australian Research Committee Deputy Chair and REA: Human Research Ethics Committee
Spratt, Neil	Grant Review Panel Member: John Hunter Hospital Charitable Trust
Zhang, Xu Dong	PhD Thesis Examiner: The University of Sydney PhD Thesis Examiner: The University of Macquarie HDR Co-ordinator: The University of Newcastle (SMPH) Research Management Committee Panel Member: The University of Newcastle (SMPH)

HDR STUDENT COMPLETIONS 2022

Student	Program	Thesis Title
Akbari, Leila	PhD Medical Genetics	How do Medial Amygdala (MeA) Excitatory Neurons Control Behavioural Responses to Olfactory Stimuli? Supervisor: Professor Chris Dayas, Professor Brett Graham
Araujo Hoefel, Gabriela	PhD Immunology & Microbiology	The Role of ncRNAs in Pulmonary Immune Responses Supervisor: Professor Paul Foster, Dr Hock Tay
Bothwell, Steven William	PhD Human Physiology	Intracranial Pressure Elevation and Cerebrospinal Fluid Change After Ischaemic Stroke Supervisor: Professor Neil Spratt
Crombie, Gabrielle Kate	PhD Experimental Pharmacology	Prenatal and Postnatal Stress on Neurobehavioral Outcomes: Understanding Mechanisms and Preventative Therapies Supervisors: Professor Jon Hirst, Dr Hannah Palliser
Cummins, Mitchell James	PhD Anatomy	Investigating the Processes of Age-Related Inflammation in the Central Nervous System Supervisor: Professor Doug Smith
Dong, Thi Xuan Phuong	PhD Pharmacy	The Potential Contribution of Clinical Pharmacist to Quality Use of Medicines in Geriatric Patients in Vietnam Supervisors: Professor Shu Chuen Li, Associate Professor Susan Hua
Eslick, Shaun	PhD Nutritional Biochemistry	Approaches to Reducing Inflammation in Obesity: An Investigation into the Effects of Short Chain Fatty Acids Supervisors: Professor Lisa Wood, Dr Bronwyn Berthon, Dr Evan Williams
Germon, Zacary	PhD Medical Biochemistry	Targeting Reactive Oxygen Species for the Treatment of Acute Myeloid Leukaemia Supervisors: Associate Professor Matt Dun, Dr Heather Lee, Professor Nikki Verrills
Kalagi, Nora	PhD Pharmacy	Relationship between Plasma Trimethylamine N-Oxide Levels and Type 2 Diabetes in a Saudi Arabian Cohort Supervisor: Professor Manohar Garg
Katz-Barber, Max	PhD Anatomy	Understanding the Impact of Addictive Drugs on Stress Circuits Supervisors: Professor Chris Dayas, Professor Brett Graham, Dr Lizzie Manning
Kumar, Vinod	PhD Immunology & Microbiology	Investigating New Treatments for Chronic Obstructive Pulmonary Disease Supervisors: Professor Jay Horvat, Dr Chantal Donovan (Honorary Associate Lecturer) Professor Phil Hansbro (Honorary Professor)
Liu, Xiaoming	PhD Immunology & Microbiology	Understanding the Pathogenesis of Common Respiratory Virus and Infection-induced Exacerbation of Asthma Supervisors: Professor Paul Foster, Associate Professor Ming Yang
Loering, Svenja	PhD Immunology & Microbiology	Understanding How Group 2 Innate Lymphoid Cells in Early Life Regulate Postnatal Lung Development and Susceptibility to Chronic Lung Diseases Supervisors: Professor Paul Foster, Dr Malcolm Starkey (Honorary Senior Lecturer)
Lopez, Nia	PhD Immunology & Microbiology	Effects of Chlamydia Infection on Immune Responses in the Central Nervous System and in Multiple Sclerosis

		Supervisors: Professor Jay Horvat, Professor Liz Milward, Professor Phil Hansbro (Honorary Professor), Dr Richard Kim (Honorary Associate Lecturer)
McCarthy, Huw	PhD Immunology & Microbiology	The Role of Inflammasomes during Chlamydia Infection Supervisors: Professor Jay Horvat, Dr Jemma Mayall, Professor Phil Hansbro (Honorary Professor)
Omileke, Daniel	PhD Human Physiology	Elucidating the Mechanisms Involved in Intracranial Pressure Elevation and Hypothermia Treatment for Ischaemic Stroke Supervisors: Professor Neil Spratt, Dr Kirsten Coupland, Dr Daniel Beard, Dr Adjanie Patabendige
Panicker, Nikita	PhD Medical Biochemistry	Functional Role of Protein Phosphatase 2A and its Regulatory Subunit B55a in Development and Breast Cancer Supervisors: Associate Professor Nikki Verrills, Associate Professor Matt Dun, Dr Severine Roselli Dayas
Pickles, Sophie May	PhD Immunology & Microbiology	Investigating the Development of New Treatments for Lung Cancer Supervisors: Dr Chantal Donovan (Honorary Associate Lecturer) Professor Phil Hansbro (Honorary Professor)
Prasad, Sharmila	PhD Pharmacy	Exploring the Role of Pharmacists in the Primary Care Management of Inflammatory Bowel Disease Supervisor: Associate Professor Therese Kairuz
Reay, William	PhD Medical Genetics	Investigation of Clinically Actionable Components of Genomic Risk for Complex Disorders Supervisor: Professor Murray Cairns
Rehman, Saima Firdous	PhD Immunology & Microbiology	Understanding the Molecular Mechanisms of Chronic Respiratory Diseases through MultiOmics Approaches Supervisors: Professor Jay Horvat, Dr Chantal Donovan (Honorary Associate Lecturer) Professor Phil Hansbro (Honorary Professor), Dr Richard Kim (Honorary Associate Lecturer)
Rodrigues Sabino, Lorena	PhD Immunology & Microbiology	The Role of GPR84 and IL-36R/IL-36γ in Respiratory Infections Supervisors: Professor Paul Foster, Dr Hock Tay
Schuhmacher, Diana	PhD Medical Biochemistry	Novel Insights into Protein Phosphatase 2A Regulation and Function in Cell Adhesion Supervisors: Professor Estelle Sontag (Honorary Associate), Professor Hubert Hondermarck, Dr Jean-Marie Sontag
Staudt Barreto, Dilana	PhD Medical Biochemistry	Molecular and Phosphoproteomic Characterisation of FLT3 Inhibitor Resistance in Acute Myeloid Leukaemia Supervisors: Associate Professor Matt Dun, Professor Nikki Verrills, Professor Rodney Scott
Stoodley, Isobel	PhD Nutritional Biochemistry	Addressing Sarcopenia in an Aging Population Supervisors: Professor Lisa Wood, Dr Bronwyn Berthon, Dr Evan Williams
Tamanna, Sonia	PhD Medical Biochemistry	The Role of Angiotensin Converting Enzyme 2 (ACE2) in Pregnancy: Preeclampsia and Small for Gestational Age Supervisors: Professor Kirsty Pringle / Emeritus Scientia Professor Eugenie Lumbers
Tu, Xiaofan	PhD Immunology & Microbiology	Investigating Asthma-COPD Overlap Using Mouse Models Supervisors: Professor Jay Horvat, Dr Chantal Donovan (Honorary Associate Lecturer) Professor Phil Hansbro (Honorary Professor)
Uddipto, Kumar	PhD Medical Genetics	Single Cell Epigenomics in Myeloid Malignancies Supervisor: Dr Heather Lee
Vanka, Kanth Swaroop	PhD Immunology & Microbiology	Characterizing the Effects of Mining Dust Particulate Matter Exposure on Respiratory Health Supervisor: Professor Jay Horvat
Wei, Lan “Ida”	PhD Medical Biochemistry	The Role of STATs in the Interaction of Virus and Type 2 Cytokines in Airway Epithelial Cells Supervisors: Professor Nathan Bartlett, Professor Darryl Knight (Honorary Professor)

HONORARY PROFESSIONAL APPOINTMENTS

Beard, Daniel	Visiting Scientist: University of Oxford
Brichta, Alan	Conjoint Professor: Neuroscience Research Australia (NeuRA)
Dineen-Griffin, Sarah	Expert Advisory Committee Member: Australia National Medicines Policy: Australian Government Department of Health Adjunct Lecturer: School of Dentistry and Medical Sciences, Charles Sturt University
Harms, Lauren	Head of Organising Committee: Biological Psychiatry Australia meeting 2022 in Newcastle
Lim, Rebecca	Conjoint Associate Professor: Neuroscience Research Australia (NeuRA)
Pringle, Kirsty	Member: United Nations Institute for Training and Research (UNITAR) Experts Committee on Breastfeeding Treasurer: Australian and New Zealand Placental Research Association
Scott, Rodney	Visiting Professor: Pomeranian Medical University

	Adjunct Professor: National University of Malaysia
Skelding, Kathryn	Primary Examiner: RACDS
Wood, Lisa	Research Advisory Committee Member: Asthma Australia

INVITED OR PLENARY SPEAKER

Adams, Danielle	Poster Presentation: European Society of Human Genetics (ESHG) Conference. Vienna, Austria. 11-14 June Poster Presentation: “Multiomic Prioritisation of Risk Genes for Anorexia Nervosa.” World Congress of Psychiatric Genetics 2022. Fortezza da Basso, Florence, Italy. 13-17 September
Afrin, Farjana	Poster Presentation: New Directions in Leukaemia Research Conference. Brisbane Convention Centre, QLD. 30 May-1 June
Austin, Grace	Presentation: “Cardiovascular disease risk of Australians following plant-based dietary patterns compared to regular meat eaters: preliminary results from the Plant-based Diet Cohort Study.” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December
Avery-Kiejda, Kelly	Invited Speaker: “Making Sense of p53 isoforms.” The Royal College of Pathologists of Australasia Update 2022. International Convention Centre, Sydney, NSW. 5 March Invited Speaker: “Making friends with the enemy- Δ40p53 and breast cancer.” Graduate Program in Bioscience Seminar (virtual). Universidade Federal de Ciências da Saúde de Porto Alegre, Brazil. 23 June Student Presentation: 2022 NSW Cancer Conference. Sydney, NSW. 15-16 September
Baker, Mark	Invited Speaker: “Applied Reproductive Engineering.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November
Bartlett, Nathan	Invited Speaker: “Innate Immunity.” Australasian Virology Society Meeting, Gold Coast, QLD. 5-9 December
Beard, Daniel	Invited Speaker: “Shear-activated Nanoparticle Aggregates Containing Nitroglycerin Selectively Increase Collateral Perfusion During Experimental Ischemic Stroke.” International Stroke Conference 2022 (Virtual and in person). New Orleans, Louisiana, USA. 9-11 February Workshop Presentation: Teaching Workshop for ECI’s “How to run a lab.” 30 th International Symposium on Cerebral Blood Flow, Metabolism and Function. Glasgow, Scotland. 29 May-1 June Invited Speaker: “Nanoparticle delivery of selective collateral dilation.” Stroke Society of Australasia Conference 2022 (SSA ASM 2022). Christchurch, NZ. 30 August-2 September Invited Speaker: “No mechanisms to protect the vasculature in stroke.” Australasia Pharmaceutical Science Association (ASCEPT) ASM 2022 Annual Scientific Meeting. Perth, WA. 29 November-2 December
Berthon, Bronwyn	Presentation: “Predictors of response to rescue inhalers in adult asthma and associations with fatty acid biomarkers and weight loss.” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December
Bond, Danielle	Poster Presentation: New Directions in Leukemia Research (NDLR) Conference. Brisbane, QLD. 30 May – 1 June Presentation: “Unravelling epigenetic heterogeneity induced by DNA hypomethylating agents in acute myeloid leukaemia.” Australian Epigenetics Alliance (AEpiA) 2022 – Epigenetics Conference. Kingscliffe, NSW. 11-14 September
Bowden, Nikola	Invited Speaker: “The MRFF ovarian cancer drug repurposing project.” Australasia Pharmaceutical Science Association (ASCEPT) ASM 2022 Annual Scientific Meeting. Perth, WA. 29 November-2 December
Brown, Michelle	Invited Speaker: “Australian Program of Drug Repurposing for Treatment-Resistant Ovarian Cancer.” ANZGOG (Australia New Zealand Gynaecological Oncology Group) 2022 Annual Scientific Meeting. Melbourne, VIC. 23-26 March Session Chair: “Translational genomics and precision medicine – plenary and panel discussion.” 2022 NSW Cancer Conference. Sydney, NSW. 15-16 September
Burns, Grace Wai Sinn Soh, Joanne	Invited Speaker: “Seroreactivity to mucosa associated microbiota in functional dyspepsia patients.” Gastroenterological Society of Australia, GESA Research Workshop 2022. ICC, Sydney. NSW. 8-9 September
Cairns, Murray	Invited Speaker: “Genomically informed pathways to new treatments and precision medicine for psychiatric disorders.” Society for Mental Health Research Meeting. Hobart, TAS. 24-26 March Invited Speaker: “Introducing a precision medicine platform for chronic disorders that matches drugs with their heterogeneous common variant architecture.” Precision Medicine World Congress 2022. Santa Clara, CA. 28-30 June Poster Presentation: “Perceptions of causal attribution and attitudes to genetic testing among people with Schizophrenia and their first-degree relatives.” World Congress of Psychiatric Genetics 2022. Fortezza da Basso, Florence, Italy. 13-17 September Poster Presentation: “Multiomic Prioritisation of Risk Genes for Anorexia Nervosa.” World Congress of Psychiatric Genetics 2022 Florence, Italy. Fortezza da Basso, Florence, Italy. 13-17 September
Cameron, Raquel	Poster & Presentation: “MP157 Eosinophils in Colonic Diverticular Disease.” United Gastroenterology Week (UEGW) Conference. Vienna, Italy. 8-11 October
Campbell, Erin	Event Organiser: Australian Appetitive Motivation Symposium. University of Newcastle, NuSpace. 2 November

Carroll, Olivia	Invited Talk: Imperial College London. UK. 28 August-3 September Invited Talk: “New Insights into asthma immunology: from mouse to man.” European Respiratory Society (ERS) Congress. Barcelona, Spain. 4-6 September
Chen, Dongqing	Presentation: “Doxorubicin-induced upregulation of follistatin-like 3 (FSTL3): a new therapeutic target.” 70 th Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand (CSANZ 2022). Gold Coast Convention and Exhibition Centre, Gold Coast, QLD. 11-14 August Presentation: “Acquired forms of heart failure: cancer and inflammatory disorders.” European Society of Cardiology ESC Congress 2022. Barcelona, Spain. 26-29 August
Croft, Hayley	Presentation: “Intern Workplace based assessment; an interactive workshop (APC).” Pharmaceutical Society of Australia National Conference (PSA22). Sydney, NSW. 29-31 July
Coupland, Kirsten	Oral Presentation: “Cerebrospinal fluid circulation and outflow is reduced 24 hours but not two weeks after stroke.” Brain & Brain PET 2022 Conference. Scottish Event Campus, Glasgow, Scotland. 29 May-1 June Session Chair: “Seedlings to forests: Growing a collaborative cerebrovascular research pipeline from the ground up. The StrokeCORE model.” Australasian Neuroscience Society (ANS), 40 th Annual Scientific Meeting. Melbourne, VIC. 5-7 December
Dayas, Chris	Chair: “The diverse actions of stress on appetitive and anticipatory behaviour.” Australasian Neuroscience Society (ANS), 40 th Annual Scientific Meeting. Melbourne, VIC. 5-7 December Invited Speaker: “Subcortical control of motivated behaviour.” Molecular and Cellular Cognition Society. MCCS-Asia-Pacific, ANS Satellite Conference, Melbourne, VIC. 4 December
Delforce, Sarah	Speaker: “Lipopolysaccharide induced inflammation in fetal membranes can be mitigated by treatment with Angiotensin-(1-7).” Society of Reproductive Biology Annual Meeting. Christchurch, NZ. 13-16 November Speaker: “Decreased Angiotensin-Converting Enzyme 2 (ACE2) is associated with reduced nuclear receptor factor-2 (NRF2) driven antioxidant capacity in placentas associated with fetal growth restriction.” Australia and New Zealand Placental Research Associations Annual Meeting. Hammer Springs, Christchurch, NZ. 17-18 November Speaker: “Oxidative stress and the placental renin-angiotensin system.” Australian Physiological Society Scientific Meeting. Hobart, TAS. 20-23 November
Dineen-Griffin, Sarah	Presentation: “The role of community pharmacy in a reinvented primary health care system.” 80 th FIP World Congress of Pharmacy and Pharmaceutical Sciences. Seville, Spain. 18-22 September Invited Speaker: “Changes in the environment of community pharmacies in the era of digital transformation and expansion of the role of pharmacists.” 2022 Fall International Convention of PSK. Jeju Shinhwa World, Jeju-do, Korea. 19-21 October
Duchatel, Ryan	Presentation: “Preclinical optimisation of the P13K/AKT/mTOR inhibitor Paxalisib for the treatment of diffuse intrinsic pontine glioma.” ANZ Children’s Haematology/Oncology Group Annual Scientific meeting (ANZCHOG ASM 2022). Sydney, NSW. 27-30 July Oral Presentation: “Preclinical optimisation of the PI3K/Akt inhibitor Paxalisib for the treatment of diffuse midline glioma.” NSW Cancer Conference. Sydney, NSW. 15-16 September Oral Presentation: “Preclinical optimisation of the P13K/Akt inhibitor Paxalisib for the treatment of diffuse midline glioma.” Zero Childhood Cancer National Symposium. Surry Hills, Sydney, NSW. 26-27 October
Dun, Matt	Invited Speaker: “Pharmaco-proteogenomic profiling of paediatric diffuse midline glioma.” Present findings of a collaborative project to Chief Investigators from Monash University. Monash Department of Medicine Seminar (virtual). Monash University. Melbourne, VIC. February Invited Speaker: “Disease Proteomics II.” 27 th Annual Lorne Proteomics Symposium 2022. Lorne, VIC. 3-6 February Invited Speaker: “Fundamental understanding of how the unique epigenetic landscape of DIPG influences metabolic processes will help us to develop effective treatments.” The Cure Starts Now ‘Children’s Brain Cancer Conference. Brisbane, QLD. 24-25 March Keynote Speaker: “PNOC DMG-ACT.” Pediatric Neuro Oncology Consortium Spring Meeting (virtual). San Francisco, USA. May Invited Speaker: New Directions in Leukaemia Research (NDLR) 2022 Conference. Brisbane, QLD. 30 May-1 June Invited Speaker: ANZ Children’s Haematology/Oncology Group Annual Scientific meeting (ANZCHOG ASM 2022). Sydney, NSW. 27-30 July Invited Speaker: “Dual targeting: metabolic and cytoprotective.” DMG-ACT in the Alps Research Meeting. Zurich, Switzerland. October Invited Speaker: “Targeting the PI3K/Akt/mTOR Pathway in DMG.” DMG-ACT in the Alps Research Meeting. Zurich, Switzerland. October Invited Keynote Speaker: “Athlete to Advocate, from Heartbreak to Hope.” Cancer Institute NSW Fellows Forum. NSW Mint, Sydney, NSW. Invited Research Presentation: ““Systems biology to unlock the metabolic and therapeutic vulnerabilities of diffuse midline glioma.” Seattle Children’s Hospital, hosted by Associate Professor Nicholas Vitanza (DMG Preclinical Working Group). Seattle, Washington, USA. 10 November Keynote Address and “Big Hero” Award Acceptance: ChadTough Defeat DIPG Gala, Dream Big Gala. Bethesda North Marriott Hotel, Maryland, USA. 12 November Invited Research Presentation: “Systems biology to unlock the metabolic and therapeutic vulnerabilities of diffuse midline glioma.” Children’s National Hospital, hosted by Associate Professor Javad Nazarian, Scientific Director of the Brain Tumor Institute, Children’s National Hospital. Washington, DC, USA. November Invited Plenary Speaker: “PI3K/AKT inhibitor paxalisib for the treatment of diffuse midline glioma.” Society of Neuro-Oncology Annual Meeting. Tampa Bay, USA. November

	<p>Keynote Speaker: “Pharmaco-proteogenomic profiling of paediatric diffuse midline glioma.” React4Kids Symposium (virtual). Cancer Research Center of Lyon, France.</p> <p>Invited Speaker: “Harnessing the power from within: Neoantigen immunopeptidomics for the development of immunotherapies for the treatment of DIPG.” Charlie Teo Foundation Brain Cancer Research Symposium. Sydney, NSW. 2 March</p> <p>Keynote Speaker “Exploring and exploiting the immortality of DIPG to develop multimodal treatment strategies that improve outcomes” (virtual). University of Michigan Pediatric Medical Department. Michigan, USA.</p>
Dzator, Jemima	<p>Presenting Paper: “Can resveratrol supplementation increase neurovascular coupling capacity in menstrual migraineurs? A pilot study.” Brain & Brain PET 2022 Conference. Scottish Event Campus, Glasgow, Scotland. 29 May-1 June</p>
Fan, Kening	<p>Presentation: “PO553 Characterisation of the mucosal immune response in colonic spirochaetosis.” United Gastroenterology Week (UEGW) Conference. Vienna, Italy. 8-11 October</p>
Felkai, Chelsea	<p>Presentation: “Disability Medicines Safety.” Pharmaceutical Society of Australia National Conference (PSA22). Sydney, NSW. 29-31 July</p>
Fen, Yuchen	<p>Invited Speaker: “The pan-cancer lncRNA MILIP sustains cellular redox homeostasis through G6PD.” China-Australia Translational Research Youth Forum, Zhengzhou, China. 10 January</p> <p>Invited Speaker: “Long noncoding RNA and Cancer - From Mechanism to Therapy.” The 16th Australian Association of Chinese Biomedical Scientists (AACBS) Annual Scientific Meeting. Sydney, NSW. 26 November</p>
Ferguson, Jessica	<p>Oral Presentation: “Antioxidant effects of a polyphenol-rich dietary supplement containing Pinus Massoniana bark extract in healthy older adults: a two-arm, parallel group, randomised placebo-controlled trial.” Annual Scientific Meeting of the Nutrition Society of Australia. Perth, WA. 29 November-2 December</p> <p>Session Chair: “Nutrition and Chronic Disease 2.” Annual Scientific Meeting of the Nutrition Society of Australia. Perth, WA. 29 November-2 December</p>
Findlay, Izac	<p>Presentation: “Preliminary analysis of the pharmaco-phospho-proteo-genomic landscape of paediatric high-grade gliomas.” ANZ Children’s Haematology/Oncology Group Annual Scientific meeting (ANZCHOG ASM 2022). Sydney, NSW. 27-30 July</p> <p>Oral Presentation: “A real time, multi-omics approach to identify treatment targets for paediatric high-grade gliomas.” Zero Childhood Cancer National Symposium. Surry Hills, Sydney, NSW. 26-27 October</p>
Ford, Emmalee	<p>Invited Speaker: “Fertility tracking Apps and fertility knowledge.” Fertility Nurses Association Workshop, Fertility Society of Australia & New Zealand Annual Conference. Sydney, NSW. 30 July-2 August</p>
Germon, Zacary	<p>Presentation: “Oncogenic second messenger signalling influences the kinome and methylome of kinase-activated acute myeloid leukemia.” New Directions in Leukemia Research (NDLR) 2022 Conference. Brisbane Convention Centre, QLD. 30 May-1 June</p>
Graham, Adam	<p>Conference Organiser: Cancer and Precision Medicine Symposium. HMRI, Newcastle, NSW. 24 November</p> <p>Invited Speaker: “Optogenetic dissection of spinal sensory circuits.” Australasian Neuroscience Society (ANS), 40th Annual Scientific Meeting. Melbourne, VIC. 5-7 December</p>
Graham, Brett	<p>Invited Speaker: “Refurbishing the pain gate: An updated view of the spinal modules that process our sensory world.” 2022 Australian Pain Society 42nd Annual Scientific Meeting. Hobart, TAS. 10-13 April</p> <p>Invited Speaker: “Optogenetic dissection of spinal sensory circuits.” Australasian Neuroscience Society (ANS), 40th Annual Scientific Meeting. Melbourne, VIC. 5-7 December</p>
Greco, Laura	<p>Invited Speaker: “Pairwise genetic meta-analyses between schizophrenia and substance dependence reveals novel genes and pathways associated with these comorbidities.” Society for Mental Health Research Meeting. Hobart, TAS. 24-26 March</p>
Groen, Kira	<p>Presentation: NSW Cancer Conference 2022. Sydney, NSW. 15-16 September</p>
Harms, Lauren	<p>Chair Local Organising Committee: Biological Society Australia Meeting. Newcastle City Hall, NSW. 30 October-1 November</p>
Hirst, Jon	<p>Invited Speaker & Chair: “Prenatal Stress-Induced Disruption of Myelination is Improved by Postnatal Emapunil Treatmen.” PSANZ 2022 Annual Congress. Adelaide, SA. 16-18 May</p>
Hoedt, Emily	<p>Invited Speaker: “Cognitive Gut Project.” Defence Human Sciences Symposium (DHSS) 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 28 November-2 December</p> <p>Presentation: “Exploring the relationship between human microbiota, cognition and diet in Australian Army recruits undergoing basic military training: Preliminary findings from the HPRnet Microbiome study.” Human Performance Week, Defence Human Sciences Symposium 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 28 November-2 December</p> <p>Presentation: “Advancing dietary assessment in human gut microbiome research: review and gap analysis.” Human Performance Research Network Symposium 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 1-2 December</p> <p>Invited Speaker: Australian Gastrointestinal Research Alliance Day. Translational Research Institute, Brisbane, QLD. 9 December</p> <p>Plenary Presentation: ASCRS (virtual). Washington, USA.</p>
Hoedt, Emily Fan, Kening Cameron, Raquel	<p>Presentation: AGIRA, Translational Research Institute. Brisbane QLD.</p>
Horvat, Jay	<p>Invited Talk: Imperial College London. UK. 28 August-3 September</p>

Ilicic, Marina	Abstract Presentation: “Cognitive impacts of antiplatelets used for secondary stroke prevention.” 14 th World Stroke Congress. Singapore. 26-29 October
Iredale, Jacqueline	Invited Presentation: PhD work presentation. Monash University, Melbourne, VIC. 4 November
Jackson, Evangeline	Presentation: ANZ Children’s Haematology/Oncology Group Annual Scientific meeting (ANZCHOG ASM 2022). Sydney, NSW. 27-30 July Poster Presentation: Australian Epigenetics Alliance (AEpiA) 2022 – Epigenetics Conference. Kingscliffe, NSW. 11-14 September
Jin, Lei	Keynote Speaker: “The long non-coding RNA in Cancer.” Zhengzhou University International Medical Forum 2022. Zhengzhou, China. Keynote Speaker: “Towards the pan-cancer-associated long non-coding RNA world.” Sino-Australian Symposium on Cancer Care. Hangzhou, China. 20 November Invited Speaker: “Pan-cancer dysregulated lncRNA – from bench to bedside.” The 16th Australian Association of Chinese Biomedical Scientists (AACBS) Annual Scientific Meeting. Sydney, NSW. 26 November
Jobling, Phil	Presentation: 2022 Australian Pain Society 42 nd Annual Scientific Meeting. Hobart, TAS. 10-13 April Invited Speaker: “Chlamydia alters smooth muscle motility and sensory pathways in the female reproductive tract.” Australasian Neuroscience Society (ANS), 40 th Annual Scientific Meeting. Melbourne, VIC. 5-7 December
Kaiko, Gerard	Presentation: International Congress of Mucosal Immunology (ICMI 2022), Seattle, Washington, USA. 16-20 July
Keely, Simon	Presentation: “Cognitive Gut: Foundations of Cognitive Performance.” The Australian Defence Science, Technology and Research (ADSTAR) Summit 2022. International Convention Centre, Sydney, NSW. 20-22 July Presentation: Eosinophil Summit. GSK, Melbourne, VIC. Presentation: “Exploring the relationship between human microbiota, cognition and diet in Australian Army recruits undergoing basic military training: Preliminary findings from the HPRnet Microbiome study.” Human Performance Week, Defence Human Sciences Symposium 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 28 November-2 December Presentation: “Newcastle & QUT, Cognitive Gut.” Human Performance Research Network Symposium 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 1-2 December Presentation: “Advancing dietary assessment in human gut microbiome research: review and gap analysis.” Human Performance Research Network Symposium 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 1-2 December
Kiltschewskij, Dylan	Presentation: “Epigenetic dysregulation associated with clinical dimensions of schizophrenia.” Australian Epigenetics Alliance (AEpiA) 2022 – Epigenetics Conference. Kingscliffe, NSW. 11-14 September
Lee, Heather	Invited Speaker: “Heterogeneous response to hypomethylating agents in Acute Myeloid Leukaemia cells.” New Directions in Leukemia Research (NDLR) 2022 Conference. Brisbane Convention Centre, QLD. 30 May-1 June
Lochrin, Alyssa	Speaker: “Hyperglycaemia Modulates Insulin-regulated Aminopeptidase in Human Trophoblasts: Implications for Gestational Diabetes.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November Moderator: “Te Po nui – Session 1.” Australia and New Zealand Placental Research Associations Annual Meeting. Hammer Springs, Christchurch, NZ. 17-18 November
Lorincz, David	Poster Presentation: Australasian Neuroscience Society (ANS), 40 th Annual Scientific Meeting. Melbourne, VIC. 5-7 December
Manning, Lizzie	Committee Co-chair: 31 st Annual meeting of the International Behavioral Neuroscience Society (IBNS). Glasgow, Scotland. 7-11 June Co-chair and presentation: “Obsessive compulsive rodents? Advances and challenges in the use of preclinical models in OCD research.” 4 th opto-DBS Conference. Geneva, Switzerland. 15-17 June Event Organiser: Australian Appetitive Motivation Symposium. NuSpace, Newcastle, NSW. 2 November
Moloney, Roisin	Abstract Presentation: “Sex dependent disruptions to the dopaminergic, GABAergic and glutamatergic systems throughout development of preterm born guinea pigs.” Society of Reproductive Biology Annual Meeting. Christchurch, NZ. 13-16 November
Moore, Isabella	Presentation: Australian Reproduction Update Conference. Melbourne, VIC. 28-29 March
Murray, Heather	Presentation: “Proteogenomic characterisation of acute myeloid leukaemia identifies aberrant RNA splicing.” New Directions in Leukaemia Research 2022 Meeting. Brisbane Convention Centre, QLD. 9-11 March
McLachlan, Tabitha	Presentation: New Directions in Leukaemia Research (NDRL) 2022 Conference. Brisbane Convention Centre, QLD. 30 May-1 June
Pavy, Carlton	Presentation: “Inhibitory/Excitatory balance changes within the cerebellum in a guinea pig model of preterm birth.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November
Persson, Mika	Presentation: ANZ Children’s Haematology/Oncology Group Annual Scientific meeting (ANZCHOG ASM 2022). Sydney, NSW. 27-30 July
Peters, Alexandra	Speaker: “Lysosomal inhibition of mouse oocytes as a model of age-related oocyte quality decline.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November

Pringle, Kirsty	<p>Speaker: PSANZ 2022 Annual Congress. Adelaide, SA. 16-18 May</p> <p>Speaker: “SRB Indigenous Reproductive Health Forum.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November</p> <p>Speaker: “Pressure Cooker: The Future of Placental Research.” Australia and New Zealand Placental Research Associations Annual Meeting. Hammer Springs, Christchurch, NZ. 17-18 November</p> <p>Plenary Speaker: The Australian Society for Medical Research Annual Symposium Newcastle. NSW.</p>
Reay, William	<p>Invited Speaker: “Genomically informed pathways to new treatments and precision medicine for psychiatric disorders.” Society for Mental Health Research Meeting. Hobart, TAS. 24-26 March</p> <p>Poster Presentation: “Multiomic Prioritisation of Risk Genes for Anorexia Nervosa.” World Congress of Psychiatric Genetics 2022 Florence, Italy. Fortezza da Basso, Florence, Italy. 13-17 September</p>
Reinhardt, Luiza Steffens	Presentation: 2022 NSW Cancer Conference. Sydney, NSW. 15-16 September
Santhanes, Diviya	Poster Presentation: Drug Delivery Australia Conference 2022. University of South Australia, Adelaide, SA. 24-25 November
Schofield, Lachlan	Speaker: “Reduced placental (P)RR inhibits trophoblast growth and placental development.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November
Simpson, Jodie	Invited Speaker: Kings College London. London, UK. 29 September-7 October
Spencer, Alexandra	<p>Invited Speaker: “Utilising the tropism of viral vectored vaccines to target the immune response to the liver.” Australasian Virology Society Meeting, Gold Coast, QLD. 5-9 December</p> <p>Meeting Speaker: “Utilising the tropism of viral vectored vaccines to target the immune response to the liver.” Melbourne, VIC. 27 November-2 December</p>
Staudt Barreto, Dilana	Poster Presentation: “Preview Flash Talk for Poster Session.” New Directions in Leukemia Research 2022 (NDLR) Conference. Brisbane Convention Centre, QLD. 30 May – 1 June
Sutherland, Jessie	Speaker: “Addressing preventable infertility through understanding ovary development and improving fertility education.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November
Tadros, Melissa	Invited Speaker: NSW Histotechnology Society of NSW – Continuing Education Seminar. November
Tanwar, Pradeep	<p>Invited Speaker: “Organoid technology to understand human reproductive tract diseases.” Australian Reproduction Update 2022, Melbourne, VIC. 28-29 March</p> <p>Invited Speaker & Session Chair: “Clinical partnered reproductive science.” Society of Reproductive Biology (ESA-SRB-APEG-NZSE) Annual Scientific Meeting. Christchurch, NZ. 13-16 November</p>
Tooney, Paul	Invited Speaker: “DNA repair inhibition enhances the response of glioblastoma cells to treatment with temozolomide and radiation.” Australian Brain Cancer Research Alliance (ABCRA) 2022 Scientific Research Symposium. Hilton Brisbane, QLD. 16 October
Varshini Devarapalli Venkata	Abstract Presentation: Australian Reproduction Update Conference. Park Hyatt Melbourne, VIC. 28-29 March
Verrills, Nikki	<p>Scientific Committee Member & Chair: New Directions in Leukaemia Research 2022. Brisbane Convention Centre, QLD. 30 May-1 June</p> <p>Invited Speaker: “The complex role of PP2A-B55alpha in development and cancer.” FASEB Protein Phosphatases Conference. Palm Springs, California, USA. 11-15 December</p>
Walker, Rohan	<p>Invited Speaker: “Design, development and evaluation of performance edge VR: a modularised stress management strategies training platform for the Australian Defence Force.” North Atlantic Treaty Organisation Human Factors and Medicine (HFM) Personalised Medicine in Mental Health & Performance Conference. University of Melbourne, VIC. 6 October</p> <p>Presentation: “Development of Cognitive Load Mitigation Strategies in Combat Force Headquarters Personnel.” Human Performance Week, Defence Human Sciences Symposium 2022. Western Sydney University Paramatta South Campus, Sydney, NSW. 28 November-2 December</p>
Williams, Evan	<p>Presentation: “Neutrophil Extracellular Traps in Obese Asthma.” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December</p> <p>Presentation: “Ferrous Iron (Fe2+) increases pro-inflammatory cytokine production of Peripheral Blood Mononuclear Cells in Response to Influenza A Virus (IAV).” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December</p>
Williams, Lily	<p>Presentation: “Bacterial Metabolites of dietary fibre fermentation, propionate and butyrate, reduce type 2 cytokine responses by peripheral blood mononuclear cells from subjects with asthma.” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December</p> <p>Presentation: “Medicinal mushroom extracts exert differential effects in vitro on the release of inflammatory mediators by stimulated peripheral blood mononuclear cells from healthy other adults.” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December</p>
Wood, Lisa	Session Chair: “Nutrition Mechanisms.” Nutrition Society Australia Annual Scientific Meeting (NSA2022). Perth, WA. 28 November-2 December

OUTREACH TO COMMUNITY AND/OR MEDIA

Avery-Kiejda, Kelly	<p>Community Event: Guest Speaker, HMRI Volunteers Luncheon, 9 December</p> <p>Media: The Newcastle Herald interview: “Breast cancer protein helps Hunter researchers identify ways to target cells that resist chemotherapy” on 21st November 2022. https://www.newcastleherald.com.au/story/7989387/hunter-breast-cancer-researchers-have-found-a-way-to-predict-chemo-resistance/</p>
Baker, Mark	<p>Event: “Scrotal cooling device.” Design Industries Conference</p>
Bartlett, Nathan	<p>Media & Community Event: HMRI’s COVID Q&A: The Future of COVID-19. Streamed online. 26 July</p> <p>Media: News article for The Conversation, entitled “Why haven’t I had COVID yet?” https://theconversation.com/why-havent-i-had-covid-yet-193861</p> <p>Media: Radio interviews on ABC Sydney Mornings and ABC Newcastle Drive “Why haven’t I had COVID yet?”</p> <p>Media: Interview and news article Newcastle Herald https://www.newcastleherald.com.au/story/7960640/fifth-covid-19-shot-not-likely-until-next-year/</p>
Beard, Daniel	<p>Community Event: Guest Speaker at University of the Third Age (U3A) “Blood supply in the brain after stroke: What happens when your brain’s pipes break?” Semester 2</p>
Brown, Michelle	<p>Community Event: Invited speaker at the Ionian Club monthly education session.</p> <p>Media: 2NURFM interview for the national radio show “Wellbeing” – Ovarian cancer</p>
Dun, Matt	<p>Community Event: UoN OAP x RUN DIPG – Dun Lab Open Day – 100 guests touring laboratories of UON, research presentation, philanthropic stewardship, DIPG family seminar.</p> <p>Media: Sydney Morning Herald, Good Weekend Magazine “Waiting for your child to die is not an option.” December</p> <p>Media: UON Wish Laboratory Opening “Jemima Gazley’s ‘JEM-bot’ begins cancer-detection work” Stuff.co.NZ. September</p> <p>Community Event: Bank of America Charity Giving Address “Systems biology to unlock the metabolic and therapeutic vulnerabilities of diffuse midline glioma.” Sydney</p> <p>Community Event: Guest of Honour, Keynote Speaker at Little Legs Foundation Charity Gala Ball. Sydney. September</p> <p>Community Event: Guest of Honour, Keynote Address and ‘Big Hero Award’ acceptance. Chadtough Defeat DIPG Dream Big Gala. Washington, DC. November</p> <p>Community Event: Guest of Honour, Keynote Address at Now Australia Gala Dinner. Townsville. July</p> <p>Board Member: RUN DIPG (DIPG research, advocacy, awareness and fundraising)</p>
Ferguson, Jessica Austin, Grace Garg, Manohar	<p>Media: ABC Newcastle Breakfast Show - interview “Plant-Based Diet Clinical Cohort Study. 16 February</p> <p>Media: Newcastle Herald article on cohort study “Health effects of plant-based diets.” https://www.newcastleherald.com.au/story/7930260/plant-based-diets-given-health-test-in-newcastle/?cs=8495</p>
Keely, Simon	<p>Media: 2NURFM interview Dr Bridie Goggins from Hunter Medical Research Institute HMRI</p> <p>Community Event: Newcastle Museum National Science Week HMRI’s Poo Palace</p> <p>Community Event: Hunter Medical Research Institute Dr Emily Hoedt International Women’s Day Online Panel at HMRI</p> <p>Community Event: Hunter Medical Research Institute Community Seminar, Jennifer Pryor, Dr Kerith Duncanson, Dr Grace Burns and Dr Emily Hoedt Upper Gut! Gluten and Functional Dyspepsia Community Seminar</p> <p>Community Event: Belmont Men’s Probus Club “Colorectal cancer microbiome research, Dr Emily Hoedt</p> <p>Community Event: Newcastle Parkinson’s Support Group “Parkinson’s microbiome research, Dr Grace Burns and Dr Emily Hoedt</p> <p>Community Event: Obihiro University, Obihiro Japan, Research lecture to postgraduate students, Dr Emily Hoedt</p>
Kiejda, Kelly Steffens Reinhardt, Luiza	<p>Media: Newcastle Herald article: https://www.newcastleherald.com.au/story/7989387/hunter-breast-cancer-researchers-have-found-a-way-to-predict-chemo-resistance/</p>
Smith, Doug	<p>Community Event: Hunter Medical Research Institute Healthy Ageing Seniors Festival</p>
Spratt, Neil	<p>Media: Hunter Medical Research Institute Searcher Magazine feature article</p> <p>Community Event: Hunter Medical Research Institute presentation to donor group/board</p> <p>Media: Australian Health Research Alliance feature article</p>

REVIEW NATIONAL / INTERNATIONAL GRANTS

Baker, Mark	National Reviewer: National Health and Medical Research Council National Reviewer: Australian Research Council
Beard, Daniel	External Expert Reviewer: Health Research Council of New Zealand (Project Grant Review Panel)
Dineen-Griffin- Sarah	Reviewer: Australian Government Department of Health, MRFF – 2022 Quality, Safety and Effectiveness of Medicine Use and Medicine Intervention by Pharmacists
Hua, Susan	Grant Review Panel: National Health and Medical Research Council Grant Assessment Committee: Medical Research Future Fund International Expert Reviewer & Rapporteur: DevelopMed – Marie Skłodowska-Curie COFUND Action (Ireland) International Expert Reviewer: Medical Research Council (MRD UK) Clinical Academic Research Partnerships Grant
Kaiko, Gerard	Panel Member: MRFF Stem Cells Mission Panel Member: NHMRC Ideas Grants
Keely, Simon	Ideas Grant Panel Member: National Health and Medical Research Council
Pringle, Kirsty	Panel Member: National Health and Medical Research Council
Scott, Rodney	Panel Member: European Science Foundation
Tanwar, Pradeep	Reviewer: French National Research Agency Reviewer: Health Research Council (HRD) of New Zealand
Zhang, Xu Dong	Panel Member: Ideas Grant Review Panel, National Health and Medical Research Council Panel member: Australian Research Council (ARC) Grant

CHAPTER:

- Smith KM; Graham BA. (2022) Channelrhodopsin-2 assisted circuit mapping in the spinal cord dorsal horn. In *Neuromethods*, (Vol. 178; pp. 347-373). doi:10.1007/978-1-0716-2039-7_18
- Groen K; Yusof K; Kiejda K. (2022) Function of microRNAs in the Cytoplasm. In J. Xiao (Ed.); *MicroRNA: From bench to bedside* (pp. 91-107). London; UK: Elsevier Science.
- Evans S; Somani T; Evans S. (2022) Introduction to Pharmacology. In Peate I; Evans S; Clegg L. (Eds.); *Fundamentals of Pharmacology for Paramedics* (pp. 1-17). Oxford: John Wiley & Sons.
- Lubans DR; Leahy AA; Mavilidi MF; Valkenborghs SR. (2022) Physical activity; fitness; and executive functions in youth: effects; moderators; and mechanisms. In S. L. Andersen (Ed.); *Sensitive periods of brain development and preventive interventions* (Vol. 53; pp. 103-130). Cham; Switzerland: Springer Nature Switzerland. doi:10.1007/978-1-0716-2039-7_18
- Dineen-Griffin S; Wimmer B. (2022) Formulations. In I. Peate; L. Clegg; & S. Evans (Eds.); *Fundamentals of Pharmacology for Paramedics*. UK: Wiley-Blackwell.
- Dineen-Griffin S; Anderson J; Stanley D. (2022) Creating a spirit of enquiry. In D. Stanley (Ed.); *Clinical Leadership in Nursing and Healthcare Values Into Action*. Australia: Wiley.
- Ong L; Ilicic M; Hood R; Warren K; Coupland K. (2022) Targeting adult neurogenesis for brain recovery after stroke: the next frontier in stroke medicine. In *Regenerative Therapies in Ischemic Stroke Recovery*. Singapore: Springer.
- Dunkley PR; Presek PP; Dreyer F; Jarvie PE. (2022) Tetanus toxin: Its effect on synaptosomal protein phosphorylation. In *Toxins and Targets*; (pp. 103-108). doi:10.4324/9781315076911-13
- Miller K; Harrison K; Martin J; Nixon B; De Luliis G. (2022) The impacts of wireless communication electromagnetic fields on human reproductive biology. In *Electromagnetic Fields of Wireless Communications: Biological and Health Effects*. Boca Raton: CRC Press. doi:10.1201/9781003201052
- Nizamoglu M; Joglekar MM; de Hilster RH; Ngassie MLK; Teitsma GJ; Migulina N; Burgess JK. (2022) Three-dimensional lung models – three-dimensional extracellular matrix models. In *3D Lung Models for Regenerating Lung Tissue* (pp. 109-131). doi:10.1016/B978-0-323-90871-9.00012-7
- Groen K; Yusof K; Kiejda K. (2022) Function of microRNAs in the cytoplasm. In J. Xiao (Ed.); *MicroRNA: From Bench to Bedside* (pp. 91-107). London; UK: Elsevier Science.
- Wadhwa R; Paudel KR; Shukla S; Shastri M; Gupta G; Devkota HP;...Dua K. (2022) Epigenetic Therapy as a potential approach for targeting oxidative stress-induced non-small-cell lung cancer. In *Handbook of Oxidative Stress in Cancer: Mechanistic Aspects* (pp. 1545-1560). Springer Nature Singapore. doi:10.1007/978-981-15-9411-3_106
- Nucera F; Caramori G; Hansbro PM; Paudel KR; Casolaro V; Appanna R;...Adcock IMI. (2022) Role of autoimmunity in the pathogenesis of chronic obstructive pulmonary disease and pulmonary emphysema. In *translational autoimmunity: autoimmune disease associated with different clinical features* (pp. 311-331). doi:10.1016/B978-0-323-85415-3.00003-9
- Devkota HP; Adhikari-Devkota A; Paudel KR; Panth N; Gupta G; Chellappan DK;...Dua K. (2022) Phytochemicals and their nano-formulations targeted for pulmonary diseases. In *Advanced Drug Delivery Strategies for Targeting Chronic Inflammatory Lung Diseases* (pp. 95-106). Springer Singapore. doi:10.1007/978-981-16-4392-7_5

CONFERENCE:

- Beyene T; Zosky G; Gibson P; McDonald V; Holliday E; Horvat J;...Jensen M. (2022) Environmental contaminants in breast milk during the 2019/2020 bushfire period. In TSANZSRS 2022 - The Australia & New Zealand Society of Respiratory Science and The Thoracic Society of Australia and New Zealand (ANZSRS/TSANZ); Annual Scientific Meeting for Leaders in Lung Health & Respiratory Science. <https://onlinelibrary.wiley.com/toc/14401843/2022/27/S1>: *Respirology*. doi:10.1111/resp.14216
- Pillar A; Brown A; Mayall J; Weaver J; Essilfie A; Hoefel G;...Horvat JC. (2022) Relationship between interleukin-13 and transferrin receptor-1 responses in asthma pathogenesis. In *Respirology*, Vol. 27 (pp. 105). Wiley.
- Mayall J; Pillar A; Daly K; Brown A; Essilfie A; Gomez H;...Horvat JC. (2022) Iron metabolism affects influenza an infection and associated disease. In

Respirology, Vol. 27 (pp. 211). Wiley.

- Carroll O; Brown A; Mayall J; Gomez H; Kim R; Donovan C;...Horvat JC. (2022) A relationship between female sex hormones; cellular metabolism and asthma. In *Respirology*, Vol. 27 (pp. 21). Wiley.
- Daly K; Hsu A; Nichol K; Mayall J; Horvat J; Hansbro PM; Wark P. (2022) Histone deacetylase-6 promotes protective antiviral responses during influenza infection. In *Respirology*, Vol. 27 (pp. 65). Wiley.
- Kim R; Sunkara K; Bracke J; Jarnicki A; Donovan C; Hsu A;...Hansbro P. (2022) MicroRNA-21 promotes chronic obstructive pulmonary disease through a SATB1/S100A9/NF-kappa B axis. In *Respirology*, Vol. 27 (pp. 127-128). Wiley.
- Brown A; Donovan C; Thorburn A; Ng K; Kim R; Balachandran L; Hansbro P. (2022) Bacterial components suppress experimental acute lung injury through regulatory T-cells. In *Respirology*, Vol. 27 (pp. 73). Wiley.
- Beyene T; Murphy V; Gibson P; McDonald V; Van Buskirk J; Holliday E; . . . Jensen M. (2022). The health impact of 2019/2020 bushfires on women with asthma. In *Respirology*, Vol. 27 (pp. 90-91). Wiley.
- Gome H; Ilic D; Robinson P; Zosky G; Haw JT; Vanka K; . . . Horvat J. (2022). Assessing the respiratory and cardiovascular effects of landscape fire smoke. In *Respirology*, Vol. 27 (pp. 167). Wiley.
- Kumar V; Horvat J; Whiteman M; & Hansbro P. (2022). Hydrogen sulfide prevents cigarette smoke-induced development of hallmark features of COPD in mice and Interleukin-8 production in human primary bronchial epithelial cells. In *American Journal of Respiratory and Critical Care Medicine*, Vol. 205 (pp. 1 page). San Francisco; Ca: American Thoracic Society.
- Bartlett N. W.; Williams T.; Loo S.; & Girkin J. (2022). IL-25 Inhibits airway anti-viral immunity and promotes virus exacerbation of allergic airways disease. In *American Journal of Respiratory and Critical Care Medicine*, Vol. 205 (pp. 1 page). San Francisco; Ca: American Thoracic Society.
- Mayall J. R.; Pillar A. L.; Daly K.; Brown A. C.; Essilfie A. T.; Gomez H. M.; . . . Horvat J. C. (2022). Iron metabolism affects influenza A infection and associated disease. In TSANZ ASM. Online: *Respirology*. doi:10.1111/resp.14226
- Girkin J.; Bryant N. E.; Loo S.; Demaison C.; Mercuri F.; & Bartlett N. W. (2022). TLR2/6 agonist treatment enhances antiviral innate immune responses in a novel mouse coronavirus respiratory infection model. In *American Journal of Respiratory and Critical Care Medicine* Vol. 205 (pp. 1 page). San Francisco; Ca: American Thoracic Society.
- Burns G. L.; Hoedt E. C.; Jamaluddin M. F.; Shanahan E. R.; Lim Y.; Teh J. J.; . . . Keely S. (2022). Functional dyspepsia patients have iga antibodies against a novel isolate of streptococcus salivarius. In *Gastroenterology*, Vol. 162 (pp. S71). W B Saunders Co-Elsevier Inc.
- Nazarian J.; Dun M.; Kilburn L.; Waszak S.; Vitanza N.; Franson A.; . . . Muller S. (2022). International preclinical drug discovery and biomarker program Informing an adoptive combinatorial trial for DMG. In *Neuro-Oncology*, Vol. 24 (pp. 29-30). Oxford Univ Press Inc.
- Dun M. D.; Jackson E. R.; Duchatel R. J.; Persson M. L.; Mannan A.; Yadavilli S.; . . . Mueller S. (2022). Preclinical and case study results underpinning the phase II clinical trial testing the combination of ONC201 and Paxalisib for the treatment of patients with diffuse midline glioma (NCT05009992). In *Neuro-Oncology*, Vol. 24 (pp. 18-19). Oxford Univ Press Inc.
- Daniel P.; Sun C.; Koptyra M.; Drinkwater C.; Chew N.; Bradshaw G.; . . . Firestein R. (2022). The childhood brain cancer cell line atlas: a resource for biomarker identification and therapeutic development. In *Neuro-Oncology*, Vol. 24 (pp. 172). Oxford Univ Press Inc.
- Myers C.; Noll A.; Biery M.; Meechan M.; Tahiri S.; Foster J.; . . . Vitanza N. (2022). Therapeutic HDAC targeting in hypermutant CNS tumors. In *Neuro-Oncology*, Vol. 24 (pp. 32). Oxford Univ Press Inc.
- Sanguino Y. C.; de la Fuente L. R.; Kisswani D.; Kearney P.; Jackson E.; Duchatel R.; . . . Mora F. V. (2022). Exploring the role of the epigenetic factor H2A.Z acetylation in DIPG. In *Neuro-Oncology*, Vol. 24 (pp. 26-27). Oxford Univ Press Inc.
- Lundahl M. L. E.; Mitermite M.; Ryan D. G.; Case S.; Williams N. C.; Yang M.; . . . Yona S. (2022). Macrophage innate training induced by IL-4 and IL-13 activation enhances OXPHOS driven anti-mycobacterial responses. In *ELIFE* Vol. 11 (pp. 33 pages). *eLife Sciences Pub. Ltd.* doi:10.7554/eLife.74690
- Kaur K.; Sculley D.; Veysey M.; Lucock M.; Wallace J.; & Beckett E. (2022). Associations between bitter and sweet perception and self-reported oral hygiene habits: A cross-sectional survey. In *Abstracts of the 45th Annual Scientific Meeting of the Nutrition Society of Australia* (pp. 53). Virtual: MDPI. doi:10.3390/proceedings2022080002
- Pillar A.; Brown A.; Mayall J.; Weaver J.; Essilfie A.; Hoefel G.; . . . Horvat J. (2022). Relationship between interleukin-13 and transferrin receptor-1 responses in asthma pathogenesis. In *Respirology*, Vol. 27 (pp. 105). Wiley.

- Mayall; J.; Pillar; A.; Daly; K.; Brown; A.; Essilfie; A.; Gomez; H.; . . . Horvat; J. (2022). Iron metabolism affects influenza an infection and associated disease. In *Respirology*, Vol. 27 (pp. 211). Wiley.
- Williams; L.; Berthon; B.; McLoughlin; R.; Nichol; K.; Negewo; N.; Thompson; C.; . . . Wood; L. (2022). Soluble fibre supplementation modulates inflammatory responses in non-eosinophilic asthma. In *Respirology*, Vol. 27 (pp. 114). Wiley.
- Carroll; O.; Brown; A.; Mayall; J.; Gomez; H.; Kim; R.; Donovan; C.; . . . Horvat; J. (2022). A relationship between female sex hormones; cellular metabolism and asthma. In *Respirology*, Vol. 27 (pp. 21). Wiley.
- Berthon; B.; Williams; L.; Negewo; N.; Thompson; C.; McLoughlin; R.; Wark; P. & Wood; L. (2022). Modest improvements following oral soluble fibre RCT in adult asthma. In *Respirology*, Vol. 27 (pp. 90). Wiley.
- Kim; R.; Sunkara; K.; Bracke; K.; Jarnicki; A.; Donovan; C.; Hsu; A.; . . . Hansbro; P. (2022). MicroRNA-21 promotes chronic obstructive pulmonary disease through a SATB1/S100A9/NF-kappa B axis. In *Respirology*, Vol. 27 (pp. 127-128). Wiley.
- Chen; H.; Galvao; I.; Donovan; C.; Kim; R.; Ortega; D.; & Hansbro; P. (2022). Spatial transcriptomics mapped regions in lungs upon cigarette smoking. In *Respirology*, Vol. 27 (pp. 121). Wiley.
- Brown; A.; Donovan; C.; Thorburn; A.; Ng; K.; Kim; R.; Balachandran; L.; . . . Hansbro; P. (2022). Bacterial components suppress experimental acute lung injury through regulatory T-cells. In *Respirology*, Vol. 27 (pp. 73). Wiley.
- Williams; E.; Wood; L.; Dowling; L.; Stanton; S.; & Baines; K. (2022). Neutrophil extracellular traps are increased in airways of obese asthmatics. In *Respirology*, Vol. 27 (pp. 74). Wiley.
- Scott; H.; Ng; H. M. S.; McLoughlin; R.; Valkenborghs; S.; & Wood; L. (2022). Obesity is associated with airway inflammation in asthma: A meta-analysis. In *Respirology*, Vol. 27 (pp. 60). Wiley.
- Thompson; D.; Wood; L. G.; Williams; E. J.; McLoughlin; R.; & Rastogi; D. (2022). Anthropometrics; metabolic measures; nutrients; and t helper cell immune profiles make distinct as well as interdependent contributions to the pediatric obese asthma endotype. In *American Journal of Respiratory and Critical Care Medicine*, Vol. 205 (pp. 1 page). San Francisco; Ca: American Thoracic Society.
- Mayall; J. R.; Pillar; A. L.; Daly; K.; Brown; A. C.; Essilfie; A. T.; Gomez; H. M.; . . Horvat; J. C. (2022). Iron metabolism affects influenza A infection and associated disease. In TSANZ ASM. Online: *Respirology*. doi:10.1111/resp.14226
- Hoedt; E. C.; Makanyengo; S.; Carroll; G.; Stephensen; B.; Togher; K. L.; Morrison; M.; . . . Pockney; P. (2022). The mucosal associated microbiota as Biomarkers of risk for anastomotic leak associated with colorectal Cancer surgery. In *Gastroenterology*, Vol. 162 (pp. S453). W B Saunders Co-Elsevier Inc.
- Burns; G. L.; Hoedt; E. C.; Jamaluddin; M. F.; Shanahan; E. R.; Lim; Y.; Teh; J. J.; . . Keely; S. (2022). Functional dyspepsia patients have IGG antibodies against a novel isolate of streptococcus salivarius. In *Gastroenterology*, Vol. 162 (pp. S71). W B Saunders Co-Elsevier Inc.
- Schooth; L. F.; Ahmed; A. S.; Kang; S.; Shah; A.; Fairlie; T.; Teh; J. J.; . . Morrison; M. (2022). Strain-level functional and phenotypic resolution of the duodenal mucosa-associated microbiota in functional dyspepsia and Healthy control subjects via a novel ex vivo combination of microbe culture and metagenomic sequencing. In *Gastroenterology*, Vol. 162 (pp. S509-S510). W B Saunders Co-Elsevier Inc.
- Dun; M. D.; Jackson; E. R.; Duchatel; R. J.; Persson; M. L.; Mannan; A.; Yadavilli; S.; . . Mueller; S. (2022). Preclinical and case study results underpinning the phase II clinical trial testing the combination of ONC201 and Paxalisib for the treatment of patients with diffuse midline Glioma (NCT05009992). In *Neuro-Oncology*, Vol. 24. (pp. 18-19). Oxford Univ Press Inc.
- Maltby; S.; Hood; R.; Keynes; A.; Kluge; M.; Nalivaiko; E.; Ryan; A.; . . Walker; F. (2022). Ongoing implementation of TACTICS VR: virtual reality-based acute stroke care workflow training. In *International Journal of Stroke*, Vol. 17 (pp. 28). SAGE Publications Ltd.
- Di Biase; M. A.; Geaghan; M.; Reay; W.; Seidlitz; J.; Weickert; C. S.; Green; M.; . . Zalesky; A. (2022). Cell Type-Specific Manifestations of Cortical Thickness Heterogeneity in Schizophrenia. In *Biological Psychiatry*, Vol. 91 (pp. S301). New Orleans; LA: Elsevier Science Inc.
- Abbas; A.; Wang; L.; & Mannan; A. (2022). Government's COVID-19 immunization drive through national immunization management system (NIMS) in Pakistan.
- S. Hosseini; D. H. Peluffo; J. Nganjji; & A. Arrona-Palacios (Eds.); Technology-enabled innovations in education (pp. 507-513). ELECTR NETWORK: SPRINGER-VERLAG SINGAPORE PTE LTD. doi:10.1007/978-981-19-3383-7_41
- Ilicic; M.; Paul; J.; Hinwood; M.; Martin; K.; Hood; R.; Johnson; S.; . . Walker; F. (2022). Cognitive impacts of antiplatelets used for secondary stroke prevention. In *International Journal of Stroke*, Vol. 17 (pp. 205). SAGE Publications Ltd.
- Litman; M.; Howe; P.; Wong; R.; & Coupland; K. (2022). Can resveratrol supplementation increase neurovascular coupling capacity in menstrual migraineurs? A pilot study. In *Journal of Cerebral Blood Flow and Metabolism*, Vol. 42 (pp. 93). Glasgow; Scotland: SAGE Publications Inc.
- Dun; M. D.; Jackson; E. R.; Duchatel; R. J.; Persson; M. L.; Mannan; A.; Yadavilli; S.; . . Mueller; S. (2022). Preclinical and case study results underpinning the phase II clinical trial testing the combination of ONC201 and Paxalisib for the treatment of patients with diffuse midline Glioma (NCT05009992). In *Neuro-Oncology*, Vol. 24 (pp. 18-19).
- Ma; T. M.; Chu; F. -I.; Romero; T.; Michalski; J. M.; Pisansky; T. M.; Roach; M.; . . Kishan; A. U. (2022). Local failure; distant metastasis; and survival after definitive radiotherapy for intermediate- and high-risk prostate cancer: An individual patient-level meta-analysis of 18 randomized trials. In *Journal of Clinical Oncology*, Vol. 40 (pp. 3 pages). Lippincott Williams & Wilkins. doi:10.1200/JCO.2022.40.6_suppl.277
- Kishan; A.; Ma; T. M.; Chu; F. -I.; Romero; T.; Michalski; J.; Pisansky; T.; . . Spratt; D. (2022). Local failure and distant metastatic events in prostate cancer treated with radiotherapy: a meta-analysis of 18 randomized trials from the MARCAP Consortium (LEVIATHAN). In *American Journal Of Clinical Oncology-Cancer Clinical Trials*, Vol. 45 (pp. S4-S5). Lippincott Williams & Wilkins.
- Pillar; A.; Brown; A.; Mayall; J.; Weaver; J.; Essilfie; A.; Hoefel; G.; . . Horvat; J. (2022). Relationship between interleukin-13 and transferrin receptor-1 responses in asthma pathogenesis. In *Respirology*, Vol. 27 (pp. 105). Wiley.
- Mayall; J.; Pillar; A.; Daly; K.; Brown; A.; Essilfie; A.; Gomez; H.; . . Horvat; J. (2022). Iron metabolism affects influenza an infection and associated disease. In *Respirology*, Vol. 27 (pp. 211). Wiley.
- Carroll; O.; Brown; A.; Mayall; J.; Gomez; H.; Kim; R.; Donovan; C.; . . Horvat; J. (2022). A relationship between female sex hormones; cellular metabolism and asthma. In *Respirology*, Vol. 27 (pp. 21). Wiley.
- Daly; K.; Hsu; A.; Nichol; K.; Mayall; J.; Horvat; J.; Hansbro; P.; & Wark; P. (2022). Histone deacetylase-6 promotes protective antiviral responses during influenza an infection. In *Respirology*, Vol. 27 (pp. 65). Wiley.
- Cook; A.; Harrington; J.; Simpson; J.; & Wark; P. (2022). Characterizing exacerbations among patients receiving biologic therapy for severe asthma. In *Respirology*, Vol. 27 (pp. 95). Wiley.
- Gordon; A.; Gunawardhana; L.; Cook; A.; Shaw; J.; Yang; I.; Taylor; S.; . . Simpson; J. (2022). Sputum NEATStik result predicts neutrophilic inflammation in chronic airways disease. In *Respirology*, Vol. 27 (pp. 98). Wiley.
- Kim; R.; Sunkara; K.; Bracke; K.; Jarnicki; A.; Donovan; C.; Hsu; A.; . . Hansbro; P. (2022). MicroRNA-21 promotes chronic obstructive pulmonary disease through a SATB1/S100A9/NF-kappa B axis. In *Respirology*, Vol. 27 (pp. 127-128). Wiley.
- Sadaf; T.; Kim; R.; Beckett; E.; Deane; A.; Faiz; A.; & Hansbro; P. (2022). Gene expression profiling differences in CS-induced experimental COPD. In *Respirology*, Vol. 27 (pp. 134). Wiley.
- Chen; H.; Galvao; I.; Donovan; C.; Kim; R.; Ortega; D.; & Hansbro; P. (2022). Spatial transcriptomics mapped regions in lungs upon cigarette smoking. In *Respirology*, Vol. 27 (pp. 121). Wiley.
- Brown; A.; Donovan; C.; Thorburn; A.; Ng; K.; Kim; R.; Balachandran; L.; . . Hansbro; P. (2022). Bacterial components suppress experimental acute lung injury through regulatory T-cells. In *Respirology*, Vol. 27 (pp. 73). Wiley.
- Jurak; L.; Yang; I.; Simpson; J.; Hill; M.; & Upham; J. (2022). Using sputum Proteomics for personalized prediction and treatment of severe asthma exacerbations. In *Respirology*, Vol. 27 (pp. 54). Wiley.
- Rathnayake; S.; Ditz; B.; van Nijmegen; J.; Hansbro; P.; Brandsma; C.; Timens; W.; . . Faiz; A. (2022). Impact of smoking on bronchial-mucus barrier cellular composition and transcriptome. In *Respirology*, Vol. 27. (pp. 116-117). Wiley.
- Beard; D.; Litman; M.; Azarpeykan; S.; Uzun; O.; Bhatta; D.; Buchan; A. M.; . . Ingber; D. (2022). Shear-activated nanoparticle aggregates containing Nitroglycerin selectively increase collateral perfusion during experimental ischemic stroke. In *Stroke*, Vol. 53 (pp. 2 pages). Lippincott Williams & Wilkins. doi:10.1161/str.53.suppl.1.81
- Kapellos; T.; Bassler; K.; Fujii; W.; Pecht; T.; Bonaguro; L.; Galvao; I.; . . Schultze; J. L. (2022). Inflammatory blood neutrophils in COPD stem from activated bone marrow progenitors. In *Airway Cell Biology and Immuno-Pathology*. European Respiratory Society. doi:10.1183/23120541.lsc-2022.210
- Kumar; V.; Horvat; J.; Whiteman; M.; & Hansbro; P. (2022). Hydrogen sulfide prevents cigarette smoke-induced development of hallmark features of COPD in mice and Interleukin-8 production in human primary bronchial epithelial cells. In *American Journal of Respiratory and Critical*

Care Medicine, Vol. 205 (pp. 1 page). San Francisco; Ca: Amer Thoracic Soc.

Thompson; D.; Wood; L. G.; Williams; E. J.; McLoughlin; R.; & Rastogi; D. (2022). Anthropometrics; metabolic measures; nutrients; and T helper cell immune profiles make distinct as well as interdependent contributions to the pediatric obese asthma endotype. In *American Journal of Respiratory and Critical Care Medicine*, Vol. 205 (pp. 1 page). San Francisco; California: American Thoracic Society.

Warren; K.; Coupland; K.; Hood; R.; Kang; L.; Walker; R.; & Spratt; N. (2022). Cerebrospinal fluid circulation and outflow is reduced 24 hours but not 2 weeks after stroke. In *Journal of Cerebral Blood Flow and Metabolism*, Vol. 42 (pp. 52-53). Glasgow; Scotland: SAGE Publications Inc.

Beard; D.; Hough; N.; Esperon; C. G.; Lillicrap; T.; Djenidi; L.; & Spratt; N. (2022) Computational fluid dynamic analysis of leptomeningeal collateral blood flow shear stress in ischaemic stroke patients. In *Journal of Cerebral Blood Flow And Metabolism*, Vol. 42 (pp. 244-245). Glasgow; Scotland: SAGE Publications Inc.

Litman; M.; Azarpeykan; S.; Uzun; O.; Bhatta; D.; Buchan; A.; Spratt; N.; . . . Beard; D. (2022). Shear-activated nanotherapeutics to selectively increase leptomeningeal collateral blood flow during ischemic stroke. In *Journal of Cerebral Blood Flow and Metabolism*, Vol. 42 (pp. 242). Glasgow; Scotland: SAGE Publications Inc.

Van Eckhoutte; H. P.; Donovan; C.; Kim; R.; Khan; H.; Jayaraman; R.; Dondelinger; Y.; . . . Bracke; K. (2022). Inhibiting RIPK1 kinase activity is protective in experimental models of COPD. In *American Journal of Respiratory and Critical Care Medicine*, Vol. 205 (pp. 2 pages). San Francisco; Ca: American Thoracic Society

Cameron; R. A.; Eslick; G. D.; Pockney; P.; Walker; M. M.; Keely; S.; & Talley; N. J. (2022). Diverticulosis and colonic eosinophilia: increased eosinophils in the base of the diverticulum present in diverticulosis. In *Gastroenterology*, Vol. 162 (pp. S511-S512). W B Saunders Co-Elsevier Inc.

Hoedt; E. C.; Makanyengo; S.; Carroll; G.; Stephensen; B.; Togher; K. L.; Morrison; M.; . . . Pockney; P. (2022). The mucosal associated microbiota as biomarkers of risk for anastomotic leak associated with colorectal cancer surgery in gastroenterology. Vol. 162 (pp. S453). W B Saunders Co-Elsevier Inc.

Burns; G. L.; Hoedt; E. C.; Jamaluddin; M. F.; Shanahan; E. R.; Lim; Y.; Teh; J. J.; . . . Keely; S. (2022). Functional dyspepsia patients have IGG antibodies against a novel isolate of streptococcus salivarius. In *Gastroenterology*, Vol. 162 (pp. S71). W B Saunders Co-Elsevier Inc.

Schooth; L. F.; Ahmed; A. S.; Kang; S.; Shah; A.; Fairlie; T.; Teh; J. J.; . . . Morrison; M. (2022). Strain-level functional and phenotypic Resolution of the duodenal mucosa-associated microbiota in Functional dyspepsia and healthy control subjects via a novel Ex vivo combination of microbe culture and metagenomic Sequencing. In *Gastroenterology*, Vol. 162 (pp. S509-S510). W B Saunders Co-Elsevier Inc.

Denham; A. M. J.; Haracz; K.; Bird; M. -L.; Simpson; D. B.; Bonevski; B.; Spratt; N. J.; . . . Janssen; H. (2022). Female Carers Co-produce Support 4 Heart and Emotional health to Address Risk facTors (FoCCuS4HEART): exploring the relationship between mental health; management of modifiable risk factors; and caregiving. In *International Journal of Stroke*, Vol. 17 (pp. 14). SAGE Publications Ltd.

Kenah; K.; Tavener; M.; Bernhardt; J.; Spratt; N. J.; & Janssen; H. (2022). "Wasting time": a qualitative study of stroke survivors' experiences of boredom during inpatient rehabilitation. In *International Journal of Stroke*, Vol. 17 (pp. 3). SAGE Publications Ltd.

Maltby; S.; Hood; R.; Keynes; A.; Kluge; M.; Nalivaiko; E.; Ryan; A.; . . . Walker; F. (2022). Ongoing implementation of TACTICS VR: virtual reality-based acute stroke care workflow training. In *International Journal of Stroke*, Vol. 17 (pp. 28). SAGE Publications Ltd.

Levi; C.; Ryan; A.; Delcourt; C.; Kuhle; S.; Paul; C.; Cox; M.; . . . Kleinig; T. (2022). Evaluating access to stroke reperfusion treatment in an Australian cohort from an acute stroke reperfusion therapy community of practice. In *International Journal of Stroke*, Vol. 17 (pp. 33). SAGE Publications Ltd.

Senanayake; T.; Makanyengo; S.; Hoedt; E.; Goggins; B.; Smith; S.; & Keely; S. (2022). Bile acid-microbiota axis in ileal surgery: A systematic review. In *Journal of Gastroenterology and Hepatology*, Vol. 37 (pp. 109-110). Wiley.

Senanayake; T.; Makanyengo; S.; Moore; I.; Hoedt; E.; Goggins; B.; Smith; S.; & Keely; S. (2022). A robust mouse model of ileocolic resection to study effects of excess bile acids on anastomotic healing. In *Journal Of Gastroenterology and Hepatology*, Vol. 37 (pp. 111). Wiley.

Litman; M.; Azarpeykan; S.; Uzun; O.; Bhatta; D.; Buchan; A.; Spratt; N.; . . . Beard; D. (2022). Shear-activated nanotherapeutics to selectively enhance collateral cerebral blood flow during ischaemic stroke. In *International Journal of Stroke*, Vol. 17 (pp. 27). SAGE Publications Ltd.

Di Biase; M. A.; Geaghan; M.; Reay; W.; Seidlitz; J.; Weickert; C. S.; Green; M.; . . . Zalesky; A. (2022). Cell type-specific manifestations of cortical thickness heterogeneity in schizophrenia. In *Biological Psychiatry*, Vol. 91 (pp. S301). New Orleans; LA: Elsevier Science Inc.

White; C.; Paul; C.; Scott; R.; & Ackland; S. (2022). Feasibility of DPYD Genotype-guided personalised fluoropyrimidine dosing. In *Asia-Pacific Journal of Clinical Oncology*, Vol. 18 (pp. 144-145). Wiley.

White; C.; Ackland; S.; Scott; R.; & Paul; C. (2022). DPYD Genotype-guided personalised fluoropyrimidine dosing: Determining the barriers and enablers of implementation. In *Asia-Pacific Journal of Clinical Oncology*, Vol. 18 (pp. 157-158). Wiley.

Castro; C.; Dias; C.; Sohrabi; H.; Shah; T.; Chatterjee; P.; Hillebrandt; H.; . . . Martins; R. (2022). Medium-chain fatty acids for the prevention or treatment of Alzheimer's disease: A systematic review and meta-analysis. In *Journal of The American Oil Chemists Society*, Vol. 99 (pp. 96). Wiley.

Xavier; A.; Maltby; V.; Ewing; E.; Campagna; M. P.; Scott; R. J.; Butzkueven; H.; . . . Lechner-Scott; J. (2022). Functional epigenetic networks are associated with multiple sclerosis. In *Multiple Sclerosis Journal*, Vol. 28 (pp. 502-503) Amsterdam; Netherlands: SAGE Publications Ltd.

Maltby; V.; Xavier; A.; Ewing; E.; Campagna; M. -P.; Scott; R.; Butzkueven; H.; . . . Lechner-Scott; J. (2022). B cells exhibit marked epigenetic age acceleration in multiple sclerosis. In *Multiple Sclerosis Journal*, Vol. 28 (pp. 85). Amsterdam; Netherlands: SAGE Publications Ltd.

Xavier; A.; Campagna; M. P.; Maltby; V.; Scott; R. J.; Butzkueven; H.; Taylor; B.;... Lechner-Scott; J. (2022). Beta-interferon treatment is a potent and targeted epigenetic modifier in multiple sclerosis. In *Multiple Sclerosis Journal*, Vol. 28 (pp. 758-759). Amsterdam; Netherlands: SAGE Publications Ltd.

Simpson-Yap; S.; Morwitch; E.; Tanner; S.; Lea; R. A.; Kilpatrick; T.; Lechner-Scott; J.; . . . Ausimmune; I. G. (2022). Differential methylation mediates significant proportions of environmental and lifestyle factors' associations with MS risk: results from the Ausimmune case-control study. In *Multiple Sclerosis Journal*, Vol. 28 (pp. 521-522). Amsterdam; Netherlands: SAGE Publications Ltd.

JOURNAL ARTICLE:

Gradwell; M. A.; Boyle; K. A.; Browne; T. J.; Bell; A. M.; Leonardo; J.; Reyes; FSP.; . . . Graham; B. A. (2022). Diversity of inhibitory and excitatory parvalbumin interneuron circuits in the dorsal horn. *Pain*; 163(3); E432-E452. doi:10.1097/j.pain.0000000000002422

Thiruchelvam; K.; Byles; J.; Hasan; S. S.; & Kairuz; T. (2022). Innovating medication reviews through a technology-enabled process. *Research in Social & Administrative Pharmacy*; 18(4); 2700-2705. doi:10.1016/j.sapharm.2021.07.019

Dong; P. T. X.; Pham; V. T. T.; Nguyen; T. T.; Nguyen; H. T. L.; Hua; S.; & Li; S. C. (2022) Unintentional medication discrepancies at admission among elderly inpatients with chronic medical conditions in Vietnam: a single-centre observational study. *Drugs - Real World Outcomes*; 9(1); 141-151. doi:10.1007/s40801-021-00274-3

Jarrott; B.; Head; R.; Pringle; K. G.; Lumbers; E. R.; & Martin; J. H. (2022). "Long COVID"-A hypothesis for understanding the biological basis and pharmacological treatment strategy. *Pharmacology Research & Perspectives*; 10(1); 10 pages. doi:10.1002/prp2.911

Esneau; C.; Duff; A. C.; & Bartlett; N. W. (2022). Understanding Rhinovirus circulation and impact on illness. *Viruses-Basel*; 14(1); 23 pages. doi:10.3390/v14010141

Griffin; R. A.; Swegen; A.; Baker; M. A.; Ogle; R. A.; Smith; N.; Aitken; R. J.; . . . Gibb; Z. (2022). Proteomic analysis of spermatozoa reveals caseins play a pivotal role in preventing short-term periods of subfertility in stallions. *Biology of Reproduction*; 106(4); 741-755. doi:10.1093/biolre/ioab225

Pardinas; A. F.; Smart; S. E.; Willcocks; I. R.; Holmans; P. A.; Dennison; C. A.; Lynham; A.J.; . . . Walters; J. T. R. (2022). Interaction testing and polygenic risk scoring to estimate the association of common genetic variants with treatment resistance in Schizophrenia. *JAMA Psychiatry*; 79(3); 260-269. doi:10.1001/jamapsychiatry.2021.3799

Hoang; H.; Jessup; B.; Obamiro; K.; Bourke; L.; Hellwege; B.; Podubinski; T.; . . . Knight; S. (2022). Impact of COVID-19 on rural and remote student placements in Australia: A national study. *Australian Journal of Rural Health*; 30(2); 197-207. doi:10.1111/ajr.12836

Lumbers; E. R.; Head; R.; Smith; G. R.; Delforce; S. J.; Jarrott; B.; Martin; J. H.; & Pringle; K. G. (2022). The interacting physiology of COVID-19 and the renin-angiotensin-aldosterone system: Key agents for treatment. *Pharmacology Research & Perspectives*; 10(1); 16 pages. doi:10.1002/prp2.917

Head; R. J.; Lumbers; E. R.; Jarrott; B.; Tretter; F.; Smith; G.; Pringle; K. G.; . . . Martin; J. H. (2022). Systems analysis shows that thermodynamic physiological and pharmacological fundamentals drive COVID-19 and response to treatment. *Pharmacology Research & Perspectives*; 10(1); 22 pages. doi:10.1002/prp2.922

- Iredale; J. A.; Stoddard; J. G.; Drury; H. R.; Browne; T. J.; Elton; A.; Madden; J. F.; . . . Velkov; T. (2022). Unique mechanistic insights into pathways associated with the synergistic activity of polymyxin B and caspofungin against multi-drug-resistant *Klebsiella pneumoniae*. *Computational and Structural Biotechnology Journal*; 20; 1077-1087. doi:10.1016/j.csbj.2022.02.0212001-0370
- Pariyar; M.; Thorne; R. F.; Scott; R. J.; & Avery-Kiejda; K. A. (2022). Verification and validation of a four-gene panel as a prognostic indicator in triple negative breast cancer. *Frontiers in Oncology*; 12; 11 pages. doi:10.3389/fonc.2022.821334
- Zhang; H.; Liu; S.; Li; Y.; Li; J.; Ni; C.; Yang; M.; . . . Qin; Z. (2022). Dysfunction of S100A4(+) effector memory CD8(+) T cells aggravates asthma. *European Journal of Immunology*; 52(6); 978-993. doi:10.1002/eji.202149572
- Calvert; L.; Green; M. P.; De Iulius; G. N.; Dun; M. D.; Turner; B. D.; Clarke; B. O.; . . . Nixon; B. (2022). Assessment of the emerging threat posed by perfluoroalkyl and polyfluoroalkyl substances to male reproduction in humans. *Frontiers in Endocrinology*; 12; 21 pages. doi:10.3389/fendo.2021.799043
- Lozinski; M.; Bowden; N. A.; Graves; M. C.; Fay; M.; Day; B. W.; Stringer; B. W.; & Tooney; P. A. (2022). Transcriptomic profiling of DNA damage response in patient-derived glioblastoma cells before and after radiation and Temozolomide treatment. *Cells*; 11(7); 15 pages. doi:10.3390/cells11071215
- Hunt; K.; Burnard; S. M.; Roper; E. A.; Bond; D. R.; Dun; M. D.; Verrills; N. M.; . . . Lee; H. J. (2022). scTEM-seq: Single-cell analysis of transposable element methylation to link global epigenetic heterogeneity with transcriptional programs. *Scientific Reports*; 12(1); 10 pages. doi:10.1038/s41598-022-09765-x
- Trigg; N. A.; Skerrett-Byrne; D. A.; Martin; J. H.; De Iulius; G. N.; Dun; M. D.; Roman; S. D.; . . . Nixon; B. (2022). Quantitative proteomic dataset of mouse caput epididymal epithelial cells exposed to acrylamide in vivo. *Data in Brief*; 42. doi:10.1016/j.dib.2022.108032
- Trubetskoy; V.; Pardin; A. F.; Qi; T.; Panagiotaropoulou; G.; Awasthi; S.; Bigdeli; T. B.; . . . O'Donovan; M. C. (2022). Mapping genomic loci implicates genes and synaptic biology in schizophrenia. *Nature*; 604(7906); 502-+. doi:10.1038/s41586-022-04434-5
- Li; X.; Liu; H.; Dun; M. D.; Faulkner; S.; Liu; X.; Jiang; C. C.; & Hondermarck; H. (2022). Proteome and secretome analysis of pancreatic cancer cells. *Proteomics*; 22(13-14); 8 pages. doi:10.1002/pmic.202100320
- Martin; J. H.; Mohammed; R.; Delforce; S. J.; Skerrett-Byrne; D. A.; de Meulstuart; C. C.; Almazi; J. G.; . . . Pringle; K. G. (2022). Role of the prorenin receptor in endometrial cancer cell growth. *Oncotarget*; 13(1); 587-599. doi:10.18632/oncotarget.28224
- Green; E.; Quilliam; C.; Sheepway; L.; Hays; C. A.; Moore; L.; Rasiah; R. L.; . . . Collett; M. (2022). Identifying features of quality in rural placements for health students: scoping review. *BMJ Open*; 12(4); 11 pages. doi:10.1136/bmjopen-2021-057074
- Kluge; M. G.; Maltby; S.; Keynes; A.; Nalivaiko; E.; Evans; D. J. R.; & Walker; F. R. (2022). Current state and general perceptions of the use of extended reality (XR) technology at the University of Newcastle: Interviews and surveys from staff and students. *SAGE Open*; 12(2); 15 pages. doi:10.1177/21582440221093348
- Tiburcius; S.; Krishnan; K.; Jose; L.; Patel; V.; Ghosh; A.; Sathish; C.; . . . Vinu; A. (2022). Egg-yolk core-shell mesoporous silica nanoparticles for high doxorubicin loading and delivery to prostate cancer cells. *Nanoscale*; 14(18); 6830-6845. doi:10.1039/d2nr00783e
- Persson; M. L.; Douglas; A. M.; Alvaro; F.; Faridi; P.; Larsen; M. R.; Alonso; M. M.; . . . Dun; M. D. (2022). The intrinsic and microenvironmental features of diffuse midline glioma: Implications for the development of effective immunotherapeutic treatment strategies. *Neuro-Oncology*; 24(9); 1408-1422. doi:10.1093/neuonc/noac117
- Girkin; J. L. N.; Maltby; S.; & Bartlett; N. W. (2022). Toll-like receptor-agonist-based therapies for respiratory viral diseases: thinking outside the cell. *European Respiratory Review*; 31(164); 15 pages. doi:10.1183/16000617.0274-2021
- Williams; T. C.; Loo; S. -L.; Nichol; K. S.; Reid; A. T.; Veerati; P. C.; Esneau; C.; . . . Bartlett; N. W. (2022). IL-25 blockade augments antiviral immunity during Respiratory virus infection. *Communications Biology*; 5(1); 13 pages. doi:10.1038/s42003-022-03367-z
- Skelding; K. A.; Barry; D. L.; Theron; D. Z.; & Lincz; L. F. (2022). Targeting the two-pore channel 2 in cancer progression and metastasis. *Exploration of Targeted Anti-Tumor Therapy*; 3(1); 62-89. doi:10.37349/etat.2021.00072
- Thiruchelvam; K.; Byles; J.; Hasan; S. S.; Egan; N.; & Kairuz; T. (2022). Impact of medication reviews on potentially inappropriate medications and associated costs among older women in aged care. *Research in Social & Administrative Pharmacy*; 18(10); 3758-3765. doi:10.1016/j.sapharm.2022.05.003
- Tu; X.; Kim; R. Y.; Brown; A. C.; De Jong; E.; Jones-Freeman; B.; Ali; K.; . . . Donovan; C. (2022). Airway and parenchymal transcriptomics in a novel model of asthma and COPD overlap. *Journal of Allergy and Clinical Immunology*; 150(4); 817-+. doi:10.1016/j.jaci.2022.04.032
- Graham; B. A. (2022). Recording network activity in spinal nociceptive circuits using microelectrode arrays. *Journal of Visualized Experiments*; (180). doi:10.3791/62920
- Kan; S.; Grainge; C.; Nichol; K.; Reid; A.; Knight; D.; Sun; Y.; . . . Liang; M. (2022) TLR7 agonist loaded airway epithelial targeting nanoparticles stimulate innate immunity and suppress viral replication in human bronchial epithelial cells. *International Journal of Pharmaceutics*; 617; 13 pages. doi:10.1016/j.ijpharm.2022.121586
- Donovan; C.; Kim; R. Y.; Galvao; I.; Jarnicki; A. G.; Brown; A. C.; Jones-Freeman; B.; . . . Hansbro; P. M. (2022). Aim2 suppresses cigarette smoke-induced neutrophil recruitment; neutrophil caspase-1 activation and anti-Ly6G-mediated neutrophil depletion. *Immunology and Cell Biology*; 100(4); 235-249. doi:10.1111/imcb.12537
- Przystal; J. M.; Cosentino; C. C.; Yadavilli; S.; Zhang; J.; Laternser; S.; Bonner; E. R.; . . . Nazarian; J. (2022). Imipridones affect tumor bioenergetics and promote cell lineage differentiation in diffuse midline gliomas. *Neuro-Oncology*; 24(9); 1438-1451. doi:10.1093/neuonc/noac041
- Jessup; B.; Hoang; H.; Podubinski; T.; Obamiro; K.; Bourke; L.; Hellwege; B.; . . . Rasiah; R. (2022). 'I can't go; I can't afford it': Financial concern amongst Health students undertaking rural and remote placements during COVID-19. *Australian Journal of Rural Health*; 30(2); 238-251. doi:10.1111/ajr.12855
- Skelding; K. A.; Barry; D. L.; Theron; D. Z.; & Lincz; L. F. (2022). Targeting the two-pore channel 2 in cancer progression and metastasis. Exploration of targeted anti-tumor therapy; 3(1); 62-89. doi:10.37349/etat.2022.00072
- Liu; X.; Li; X.; Chen; L.; Hsu; A. C. -Y.; Asquith; K. L.; Liu; C.; . . . Yang; M. (2022). Proteomic analysis reveals a novel therapeutic strategy using fludarabine for steroid-resistant asthma exacerbation. *Frontiers in Immunology*; 13; 13 pages. doi:10.3389/fimmu.2022.805558
- Ren; S.; Hansbro; P. M.; Sriksalanukul; W.; Horvat; J. C.; Hunter; T.; Brown; A. C.; . . . AUSPICE; I. (2022). Generation of cardio-protective antibodies after pneumococcal polysaccharide vaccine: Early results from a randomised controlled trial. *Atherosclerosis*; 346; 68-74. doi:10.1016/j.atherosclerosis.2022.02.011
- Tiburcius; S.; Krishnan; K.; Patel; V.; Netherton; J.; Sathish; C.; Weidenhofer; J.; . . . Vinu; A. (2022). Triple surfactant assisted synthesis of novel core-shell mesoporous silica nanoparticles with high surface area for drug delivery for prostate cancer. *Bulletin of The Chemical Society of Japan*; 95(2); 331-340. doi:10.1246/bcsj.20210428
- Verrills; N. M. (2022). PP2A activation targets AML stem cells. *Blood*; 139(9); 1267-1269. doi:10.1182/blood.2021014677
- Astono; I. P.; Welsh; J. S.; Rowe; C. W.; & Jobling; P. (2022). Objective quantification of nerves in immunohistochemistry specimens of thyroid cancer utilising deep learning. *PLoS Computational Biology*; 18(2). doi:10.1371/journal.pcbi.1009912
- Prasad; S. S.; Walker; M. M.; Talley; N. J.; Keely; S.; Kairuz; T.; Jones; M. P.; & Duncanson; K. (2022). Healthcare needs and perceptions of people living with inflammatory bowel disease in Australia: a mixed-methods study. *Crohn's and Colitis* 360; 4(1). doi:10.1093/crocol/otab084
- Runtsch; M. C.; Angiari; S.; Hooftman; A.; Wadhwa; R.; Zhang; Y.; Zheng; Y.; . . . O'Neill; L. A. J. (2022). Itaconate and itaconate derivatives target JAK1 to suppress alternative activation of macrophages. *Cell Metabolism*; 34(3); 487-+. doi:10.1016/j.cmet.2022.02.002
- Tamanna; S.; Morosin; S. K.; Delforce; S. J.; van Helden; D. F.; Lumbers; E. R.; & Pringle; K. G. (2022). Renin-angiotensin system (RAS) enzymes and placental trophoblast syncytialisation. *Molecular and Cellular Endocrinology*; 547; 9 pages. doi:10.1016/j.mce.2022.111609
- Singanayagam; A.; Footitt; J.; Marczyński; M.; Radicioni; G.; Cross; M. T.; Finney; L. J.; . . . Johnston; S. L. (2022). Airway mucins promote immune-pathology in virus-exacerbated chronic obstructive pulmonary disease. *Journal of Clinical Investigation*; 132(8); 17 pages. doi:10.1172/JCI120901
- Lawson; E. F.; Grupen; C. G.; Baker; M. A.; Aitken; R. J.; Swegen; A.; Pollard; C. L.; & Gibb; Z. (2022). Conception and early pregnancy in the mare: lipidomics the unexplored frontier. *Reproduction and Fertility*; 3(1); R1-R18. doi:10.1530/RAF-21-0104
- Radhakrishnan; D.; Mohanan; S.; Choi; G.; Choy; J. -H.; Tiburcius; S.; Trinh; H. T.; . . . Vinu; A. (2022). The emergence of nanoporous materials in lung cancer therapy. *Science And Technology of Advanced Materials*; 23(1); 225-274. doi:10.1080/14686996.2022.2052181
- John; A. R.; Singh; A. K.; Do; T. -N.; Eidels; A.; Nalivaiko; E.; Gavani; A. M.; . . . Lin; C. -T. (2022). Unraveling the physiological correlates of mental workload variations in tracking and collision prediction tasks. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*; 30; 770-781. doi:10.1109/TNSRE.2022.3157446
- Hussein; M.; Wong; L. J. M.; Zhao; J.; Rees; V. E.; Allobaw; R.; Sharma; R.;

- Messinger; D.; Harris; M. K.; Cummings JR; Thomas C; Yang T; Sweha SR.; . . . Yadav; V. N. (2022). Therapeutic targeting of prenatal pontine ID1 signaling in diffuse midline glioma. *Neuro-Oncology*; 14 pages. doi:10.1093/neuonc/noac141
- Hua; S.; & Lye; E. C. (2022). Impact of gastric and bowel surgery on gastrointestinal drug delivery. *Drug Delivery and Translational Research*; 17 pages. doi:10.1007/s13346-022-01179-6
- Aggarwal; A; Stella; A. O; Walker; G; Akerman; A.; Esneau; C.; Milogiannakis; V.; . . . Turville; S. G. (2022). Platform for isolation and characterization of SARS-CoV-2 variants enables rapid characterization of Omicron in Australia. *Nature Microbiology*; 7(6); 896-908. doi:10.1038/s41564-022-01135-7
- Hedley; K. E.; Callister; R. J.; Callister; R.; Horvat; J. C.; & Tadros; M. A. (2022). Alterations in brainstem respiratory centers following peripheral inflammation: A systematic review. *Journal of Neuroimmunology*; 369; 12 pages. doi:10.1016/j.jneuroim.2022.577903
- Burns; G. L.; Hoedt; E. C.; Jamaluddin; M. F. B.; Shanahan; E.; Lim; Y.; The JJ.; . . . Keely; S. (2022). Seroreactivity to mucosa associated microbiota is Associated with T cell gut-homing in functional dyspepsia patients (Withdrawal of Vol 36; 10.1096/FASEBJ.2022.36.S1.R4212; 2022). *FASEB Journal*; 36(6); 1 page. doi:10.1096/FASEBJ.2022.36.S1.R4212
- Thiruchelvam; K.; Hasan; S. S.; Pudmenzky; A.; Se; W. P.; & Kairuz; T. (2022). Development; validation and evaluation of an online medication review tool (MedReview). *PLoS One*; 17(6); 16 pages. doi:10.1371/journal.pone.0269322
- Reinhardt; L. S.; Groen; K.; Morten; B. C.; Bourdon; J. -C.; & Avery-Kiejda; K. A. (2022). Cytoplasmic p53 beta isoforms are associated with worse disease-free survival in breast cancer. *International Journal of Molecular Sciences*; 23(12); 20 pages. doi:10.3390/ijms23126670
- Beyene; T.; Harvey; E. S.; Van Buskirk; J.; McDonald; V. M.; Jensen; M. E.; Horvat; J. C.; . . . Gibson; P. G. (2022). 'Breathing Fire': impact of prolonged bushfire smoke exposure in people with severe asthma. *International Journal of Environmental Research and Public Health*; 19(12); 15 pages. doi:10.3390/ijerph19127419
- Yao; Y.; Liu; H.; Yuan; L.; Du; X.; Yang; Y.; Zhou; K.; . . . Liu; C. (2022). Integrins are double-edged swords in pulmonary infectious diseases. *Biomedicine & Pharmacotherapy*; 153; 7 pages. doi:10.1016/j.biopha.2022.113300
- Stitt; I. M.; Wellings; T. P.; Drury; H. R.; Jobling; P.; Callister; R. J.; Brichta; A. M.; & Lim; R. (2022). Properties of Deiters' neurons and inhibitory synaptic transmission in the mouse lateral vestibular nucleus. *Journal of Neurophysiology*; 128(1); 131-147. doi:10.1152/jn.00016.2022
- Awan; F. T.; Addison; D.; Alfraih; F.; Baratta; S. J.; Campos; R. N.; Cugliari MS.; . . . Ysebaert; L. (2022). International consensus statement on the management of cardiovascular risk of Bruton's tyrosine kinase inhibitors in CLL. *Blood Advances*; 6(18); 5516-5525. doi:10.1182/bloodadvances.2022007938.
- Dong; P. T. X.; Trinh; H. T.; Nguyen; D. H.; Nguyen; S. T.; Pham; V. T. T.; Ngo; H. B.; . . . Nguyen; H. T. L. (2022). Implementing clinical pharmacy activities in hospital setting in Vietnam: current status from a national survey. *BMC Health Services Research*; 22(1); 11 pages. doi:10.1186/s12913-022-08242-5
- Vanka; K. S.; Shukla; S.; Gomez; H. M.; James; C.; Palanisami; T.; Williams; K.; . . . Horvat; J. C. (2022). Understanding the pathogenesis of occupational coal and silica dust-associated lung disease. *European Respiratory Review*; 31(165); 17 pages. doi:10.1183/16000617.0250-2021
- Gradwell; M. A.; Smith; K. M.; Dayas; C. V.; Smith; D. W.; Hughes; D. I.; Callister; R. J.; & Graham; B. A. (2022). Altered intrinsic properties and inhibitory connectivity in aged parvalbumin-expressing dorsal horn neurons. *Frontiers in Neural Circuits*; 16; 13 pages. doi:10.3389/fncir.2022.834173
- Bains; J.; Carver; S.; & Hua; S. (2022). Pathophysiological and pharmacological considerations for enhancing the control of sarcoptes scabiei in wombats through improved transdermal drug delivery. *Frontiers in Veterinary Science*; 9. doi:10.3389/fvets.2022.944578
- Venkata; V. D.; Jamaluddin; M. F. B.; Goad; J.; Drury; H. R.; Tadros; M. A.; Lim; R.; . . . Tanwar; P. S. (2022). Development and characterization of human fetal female reproductive tract organoids to understand Müllerian duct anomalies. *Proceedings of the National Academy of Sciences of the United States of America*; 119(30). doi:10.1073/pnas.2118054119
- Phuong; T. X. D.; Van; T. T. P.; Chi; T. D.; Anh; V. L.; Ha; T. H. T.; Huong; T. L. N.; . . . Li; S. C. (2022). Implementation and evaluation of clinical pharmacy services on improving quality of prescribing in geriatric inpatients in Vietnam: An example in a low-resources setting. *Clinical Interventions in Aging*; 17; 1127-1138. doi:10.2147/CIA.S368871
- Schuhmacher; D.; Sontag; J. -M.; & Sontag; E. (2022). A novel role of PP2A methylation in the regulation of tight junction assembly and integrity. *Frontiers in Cell and Developmental Biology*; 10; 17 pages. doi:10.3389/fcell.2022.911279
- Du; X.; Yuan; L.; Yao; Y.; Yang; Y.; Zhou; K.; Wu; X.; . . . Liu; C. (2022). ITGB4 deficiency in airway epithelium aggravates rsv infection and increases HDM sensitivity. *Frontiers in Immunology*; 13; 12 pages. doi:10.3389/fimmu.2022.912095
- Liu; X.; Netto; K. G.; Sokulsky; L. A.; Zhou; L.; Xu; H.; Liu; C.; . . . Yang; M. (2022). Single-cell RNA transcriptomic analysis identifies Creb5 and CD11b-DCs as regulator of asthma exacerbations. *Mucosal Immunology*; 12 pages. doi:10.1038/s41385-022-00556-1
- Veerati; P. C.; Nichol; K. S.; Read; J. M.; Bartlett; N. W.; Wark; P. A. B.; Knight; D. A.; . . . Reid; A. T. (2022). Conditionally reprogrammed asthmatic bronchial epithelial cells express lower FOXJ1 at terminal differentiation and lower IFNs following RV-A1 infection. *American Journal of Physiology-Lung Cellular and Molecular Physiology*; 323(4); L495-L502. doi:10.1152/ajplung.00230.2022
- Phuong; T. X. D.; Van; T. T. P.; Linh; T. N.; Anh; V. L.; Thao; T. N.; Hoa; D. V.; . . . Li; S. C. (2022). Impact of pharmacist-initiated educational interventions on improving medication reconciliation practice in geriatric inpatients during hospital admission in Vietnam. *Journal of Clinical Pharmacy and Therapeutics*; 8 pages. doi:10.1111/jcpt.13758
- Lee; S. G.; Kiattiburut; W.; Khongkha; T.; Schinkel; S. C. B.; Lunn; Y.; Decker; A. P.; . . . Tanphaichitr; N. (2022). 17BIPHE2; an engineered cathelicidin antimicrobial peptide with low susceptibility to proteases; is an effective spermicide and microbicide against *Neisseria gonorrhoeae*. *Human Reproduction*; 37(11); 2503-2517. doi:10.1093/humrep/deac188
- Cooper; G. E.; Mayall; J.; Donovan; C.; Haw; T. J.; Budden; K. F.; Hansbro; N. G.; . . . Staples; K. J. (2022). Anti-viral responses of tissue-resident CD49a+ lung NK cells are dysregulated in COPD. *American Journal of Respiratory and Critical Care Medicine*. doi:10.1164/rccm.202205-0848oc
- Yusof; K. M.; Groen; K.; Rosli; R.; Abdullah; M.; Mahmud; R.; & Avery-Kiejda; K. A. (2022). Evaluation of Circulating MicroRNAs and adipokines in breast cancer survivors with arm lymphedema. *International Journal of Molecular Sciences*; 23(19); 21 pages. doi:10.3390/ijms231911359
- Yuan; L.; Liu; H.; Du; X.; Yao; Y.; Qin; L.; Xia; Z.; . . . Liu; C. (2022). Airway epithelial ITGB4 deficiency induces airway remodeling in a mouse model. *Journal of Allergy and Clinical Immunology*. doi:10.1016/j.jaci.2022.09.032
- Antunes; K. H.; Singanayagam; A.; Williams; L.; Faiez; T. S.; Farias; A.; Jackson; M. M.; . . . Johnston; S. L. (2022). Airway-delivered short-chain fatty acid acetate boosts antiviral immunity during rhinovirus infection. *The Journal of Allergy and Clinical Immunology*; S0091-6749(22)01331-8. doi:10.1016/j.jaci.2022.09.026
- Vitanza; N. A.; Wilson; A. L.; Huang; W.; Seidel; K.; Brown; C.; Gustafson; J. A.; . . . Park; J. R. (2022). Intraventricular B7-H3 CAR T cells for diffuse intrinsic pontine glioma: preliminary first-in-human bioactivity and safety. *Cancer Discovery*; CD-22-0750. doi:10.1158/2159-8290.cd-22-0750
- Xu; K.; Yao; Y.; Liu; H.; Yang; M.; Yuan; L.; Du; X.; . . . Liu; C. (2022). ITGB4 Deficiency induces DNA damage by downregulating HDAC1 in airway epithelial cells under stress stimulation. *Pediatric Allergy and Immunology*; 33(10); 10 pages. doi:10.1111/pai.13871
- Russo; M.; Graham; B.; & Santarelli; D. M. (2022). Gabapentin-friend or foe? *Pain Practice*; 7 pages. doi:10.1111/papr.13165
- Reinhardt; L. S.; Zhang; X.; Groen; K.; Morten; B. C.; De Iuliis; G. N.; Braithwaite; A. W.; . . . Avery-Kiejda; K. A. (2022). Alterations in the p53 isoform ratio govern breast cancer cell fate in response to DNA damage. *Cell Death and Disease*; 13(10); 18 pages. doi:10.1038/s41419-022-05349-9
- Skerrett-Byrne; D. A.; Anderson; A. L.; Bromfield; E. G.; Bernstein; I. R.; Mulhall; J. E.; Schjenken; J. E.; . . . Nixon; B. (2022). Global profiling of the proteomic changes associated with the post-testicular maturation of mouse spermatozoa. *Cell Reports*; 41(7). doi:10.1016/j.celrep.2022.111655
- George; P. M.; Reed; A.; Desai; S. R.; Devaraj; A.; Faiez; T. S.; Laverty; S.; . . . Singanayagam; A. (2022). A persistent neutrophil-associated immune signature characterizes post-COVID-19 pulmonary sequelae. *Science Translational Medicine*; 14(671); 16 pages. doi:10.1126/scitranslmed.abo5795
- Robinson; B. R.; Netherton; J. K.; Ogle; R. A.; & Baker; M. A. (2022). Testicular heat stress; a historical perspective and two postulates for why male germ cells are heat sensitive. *Biological Reviews*. doi:10.1111/brv.12921
- McGee; M. J.; Ray; M.; Briennes; S. C.; Sritharan; S.; Boyle; A. J.; Jackson; N.; . . . Sverdlow; A. L. (2022). Remote monitoring in patients with heart failure with cardiac implantable electronic devices: a systematic review and meta-analysis. *Open Heart*; 9(2); e002096. doi:10.1136/openhrt-2022-002096
- Beyene; T.; Murphy; V. E.; Gibson; P. G.; McDonald; V. M.; Van Buskirk; J.; Holliday EG.; . . . Jensen; M. E. (2022). The impact of prolonged landscape fire smoke exposure on women with asthma in Australia. *BMC Pregnancy and Childbirth*; 22(1); 919. doi:10.1186/s12884-022-05231-8
- Bartlett; N. W.; Bastarache; J. A.; Kuebler; W. M.; & Schmidt; E. P. (2022). Call for papers: "In it for the long haul: Understanding the lasting impact of COVID-19 on lung health and disease." *American Journal of Physiology. Lung Cellular and*

- Liu I; Jiang L; Samuelsson ER; Marco Salas S; Beck A; Hack OA;...Filbin MG. (2022). The landscape of tumor cell states and spatial organization in H3-K27M mutant diffuse midline glioma across age and location. *Nature Genetics*. doi:10.1038/s41588-022-01236-3
- Marr; I.; Swe; K.; Henderson; A.; Lacey; J. A.; Carter; G. P.; & Ferguson; J. K. (2022). Cefazolin susceptibility of coagulase-negative staphylococci (CoNS) causing late-onset neonatal bacteraemia. *The Journal of Antimicrobial Chemotherapy*; 77(2); 338-344. doi:10.1093/jac/dkab402
- Kunstler; B.; Newton; S.; Hill; H.; Ferguson; J.; Hore; P.; Mitchell; B.; Turner; T. (2022). P2/N95 respirators & surgical masks to prevent SARS-CoV-2 infection: effectiveness & adverse effects. *Infection; Disease and Health*; 27(2); 81-95. doi:10.1016/j.idh.2022.01.001
- Towns; J. M.; Leslie; D. E.; Denham; I.; Azzato; F.; Karapanagiotidis; T.; Williamson; D. A.; . . . Chen; M. Y. (2022). Timing of primary syphilis treatment and impact on the development of treponemal antibodies: A cross-sectional clinic-based study. *Sexually Transmitted Infections*; 98(3); 161-165. doi:10.1136/sextrans-2020-054739
- Gradwell; M. A.; Boyle; K. A.; Browne; T. J.; Bell; A. M.; Leonardo; J.; Reyes; F. S. P.; . . . Graham; B. A. (2022). Diversity of inhibitory and excitatory Parvalbumin interneuron circuits in the dorsal horn. *Pain*; 163(3); E432-E452. doi:10.1097/j.pain.0000000000002422
- Taylor; P.; Aidman; E.; & Heathcote; A. (2022). Effects of multimodal physical and cognitive fitness training on subjective well-being; burnout and resilience in a military cohort (vol 24; pg S35; 2021). *Journal of Science and Medicine in Sport*; 25(3); E6. doi:10.1016/j.jsams.2021.09.092
- Kleitman; S.; Jackson; S. A.; Zhang; L. M.; Blanchard; M. D.; Rizvandi; N. B.; & Aidman; E. (2022). Applying evidence-centered design to measure psychological resilience: the development and preliminary validation of a novel simulation-based assessment methodology. *Frontiers in Psychology*; 12; 20 pages. doi:10.3389/fpsyg.2021.717568
- Iredale; J. A.; Stoddard; J. G.; Drury; H. R.; Browne; T. J.; Elton; A.; Madden; J. F.; . . . Graham; B. A. (2022). Recording network activity in spinal nociceptive circuits using microelectrode arrays. *Journal of Visualized Experiments*; (180). doi:10.3791/62920
- Hedley; K. E.; Callister; R. J.; Callister; R.; Horvat; J. C.; & Tadros; M. A. (2022). Alterations in brainstem respiratory centers following peripheral inflammation: A systematic review. *Journal of Neuroimmunology*; 369; 12 pages. doi:10.1016/j.jneuroim.2022.577903
- Towns; J. M.; Chow; E. P. F.; Wigan; R.; Fairley; C. K.; Williamson; D.; Azzato; F.; . . . Chen; M. Y. (2022). Anal and oral detection of *Treponema pallidum* in men who have sex with men with early syphilis infection. *Sexually Transmitted Infections*. doi:10.1136/sextrans-2021-055370
- Garg; P.; Chan; S.; Peeceeyen; S.; Yousef; G.; Graves; S. R.; & Sullivan; R. (2022). Culture-negative polymicrobial chronic Q fever prosthetic valve infective endocarditis utilizing 16S ribosomal RNA polymerase chain reaction on explanted valvular tissue. *International Journal of Infectious Diseases*; 121; 138-140. doi:10.1016/j.ijid.2022.05.011
- Stitt; I. M.; Wellings; T. P.; Drury; H. R.; Jobling; P.; Callister; R. J.; Brichta; A. M.; & Lim; R. (2022). Properties of Deiters' neurons and inhibitory synaptic transmission in the mouse lateral vestibular nucleus. *Journal of Neurophysiology*; 128(1); 131-147. doi:10.1152/jn.00016.2022
- Gradwell; M. A.; Smith; K. M.; Dayas; C. V.; Smith; D. W.; Hughes; D. I.; Callister; R. J.; & Graham; B. A. (2022). Altered intrinsic properties and inhibitory connectivity in aged parvalbumin-expressing dorsal horn neurons. *Frontiers in Neural Circuits*; 16; 13 pages. doi:10.3389/fncir.2022.834173
- Aidman; E.; Fogarty; G. J.; Crampton; J.; Bond; J.; Taylor; P.; Heathcote A; & Zaichkowsky; L. (2022). An app-enhanced cognitive fitness training program for athletes: The rationale and validation protocol. *Frontiers in Psychology*; 13; 13 pages. doi:10.3389/fpsyg.2022.957551
- Cioabanu; L. G.; Stankov; L.; Schubert; K. O.; Amare; A. T.; Jawahar; M. C.; Lawrence-Wood; E.; . . . Aidman; E. (2022). General intelligence and executive functioning are overlapping but separable at genetic and molecular pathway levels: An analytical review of existing GWAS findings. *PLoS One*; 17(10 October). doi:10.1371/journal.pone.0272368
- Drummond; S. P. A.; Wiley; J. F.; Boardman; J. M.; Aidman; E.; Kensinger; E. A.; & Cunningham; T. J. (2022). Trait-level cognitive and psychological factors associated with longitudinal resilience to sleep disturbance under chronic stress. *Sleep*; 4 pages. doi:10.1093/sleep/zsac249
- Ferguson; J. J. A.; Oldmeadow; C.; Mishra; G. D.; & Garg; M. L. (2022). Plant-based dietary patterns are associated with lower body weight; BMI and waist circumference in older Australian women. *Public Health Nutrition*; 25(1); 18-31. doi:10.1017/S1368980021003852
- Foster; P. S.; Barnes; J. L.; Tay; H. L.; & Gibson; P. G. (2022). Transcriptomic drug-response gene signatures are informative for the stratification of patients for clinical trials. *Journal of Allergy and Clinical Immunology*; 149(1); 55-57. doi:10.1016/j.jaci.2021.09.021
- Pinkerton; J. W.; Kim; R. Y.; Brown; A. C.; Rae; B. E.; Donovan; C.; Mayall JR; . . . Horvat; J. C. (2022). Relationship between type 2 cytokine and inflammasome responses in obesity-associated asthma. *Journal of Allergy and Clinical Immunology*; 149(4); 1270-1280. doi:10.1016/j.jaci.2021.10.003
- Thanigaimani; S.; Phie; J.; Quigley; F.; Bourke; M.; Bourke; B.; velu; R.; . . . Golledge; J. (2022). Association of Diagnosis of Depression and Small Abdominal Aortic Aneurysm Growth. *Annals of Vascular Surgery*; 79; 256-263. doi:10.1016/j.avsg.2021.06.038
- Mate; K.; & Weidenhofer; J. (2022). Considerations and strategies for effective online assessment with a focus on the biomedical sciences. *FASEB BioAdvances*; 4(1); 9-21. doi:10.1096/fba.2021-00075
- Hu; M. D.; Golovchenko; N. B.; Burns; G. L.; Nair; P. M.; Kelly; T. J.; Agos; J.; . . . Edelblum; K. L. (2022). Gamma delta Intraepithelial lymphocytes facilitate pathological epithelial cell shedding via CD103-mediated granzyme release. *Gastroenterology*; 162(3); 877+. doi:10.1053/j.gastro.2021.11.028
- Liu; H.; Sun; W.; Zhou; Y.; Griffin; N.; Faulkner; S.; & Wang; L. (2022). iTRAQ-based quantitative proteomics analysis of Sprague-Dawley rats liver reveals perfluoro-octanoic acid-induced lipid metabolism and urea cycle dysfunction. *Toxicology Letters*; 357; 20-32. doi:10.1016/j.toxlet.2021.12.016
- Burnard; S. M.; Lea; R. A.; Benton; M.; Eccles; D.; Kennedy; D. W.; Lechner-Scott; J.; & Scott; R. J. (2022). Capturing SNP Association across the NK receptor and HLA gene regions in Multiple Sclerosis by targeted penalised regression models. *Genes*; 13(1); 28 pages. doi:10.3390/genes13010087
- Smyth; S. P.; Nixon; B.; Anderson; A. L.; Murray; H. C.; Martin; J. H.; MacDougall; L. A.; . . . Schjenken; J. E. (2022). Elucidation of the protein composition of mouse seminal vesicle fluid. *Proteomics*; 22(9); 7 pages. doi:10.1002/pmic.202100227
- Bukhari; I.; Khan; M. R.; Hussain; M. A.; Thorne; R. F.; Yu; Y.; Zhang; B.; . . . Mi; Y. (2022). PINTology: A short history of the lncRNA LINC-PINT in different diseases. *Wiley Interdisciplinary Reviews-RNA*; 13(4); 25 pages. doi:10.1002/wrna.1705
- Esneau; C.; Duff; A. C.; & Bartlett; N. W. (2022). Understanding Rhinovirus circulation and impact on illness. *Viruses-Basel*; 14(1); 23 pages. doi:10.3390/v14010141
- Turnbull; A.; Sculley; D.; Santos; D.; Maarj; M.; Chapple; L.; Gironès; X.; . Coda A. (2022). Emerging tools to capture self-reported acute and chronic pain outcome in children and adolescents: a literature review. *Medical Sciences*; 10(1); 6. doi:10.3390/medsci10010006
- Wong-Brown; M. W.; van der Westhuizen; A.; & Bowden; N. A. (2022). Sequential azacitidine and carboplatin induces immune activation in platinum-resistant high-grade serous ovarian cancer cell lines and primes for checkpoint inhibitor immune-therapy. *BMC Cancer*; 22(1); 12 pages. doi:10.1186/s12885-022-09197-w
- Butler; S.; Sculley; D.; Santos; D.; Fellas; A.; Singh-Grewal; D.; & Coda; A. (2022). Effectiveness of eHealth & mHealth interventions supporting children and young people living with juvenile idiopathic arthritis: systematic review and meta-analysis. *Journal of Medical Internet Research*; 24(2). doi:10.2196/30457
- Alshehri; A.; Al-iedani; O.; Arm; J.; Gholizadeh; N.; Billiet; T.; Lea; R.; . Ramadan; S. (2022). Neural diffusion tensor imaging metrics correlate with clinical measures in people with relapsing-remitting MS. *Neuroradiology Journal*; 35(5); 592-599. doi:10.1177/19714009211067400
- Bruce; J. K.; Burns; G. L.; Soh; W. S.; Nair; P. M.; Sherwin; S.; Fan; K.; . . . Keely; S. (2022). Defects in NLRP6; autophagy and goblet cell homeostasis are associated With reduced duodenal CRH receptor 2 expression in patients with functional dyspepsia. *Brain Behavior and Immunity*; 101; 335-345. doi:10.1016/j.bbi.2022.01.019
- Zhu; Y.; Jin; L.; Shi; R.; Li; J.; Wang; Y.; Zhang; L.; . . . Wu; M. (2022). The long non-coding RNA glycoLINC assembles a lower glycolytic metabolon to promote glycolysis. *Molecular Cell*; 82(3); 542+. doi:10.1016/j.molcel.2021.11.017
- Lumbers; E. R.; Head; R.; Smith; G. R.; Delforce; S. J.; Jarrott; B.; Martin; J. H.; & Pringle; K. G. (2022). The interacting physiology of COVID-19 and the renin-angiotensin-aldosterone system: Key agents for treatment. *Pharmacology Research & Perspectives*; 10(1); 16 pages. doi:10.1002/prp2.917
- Manning; E. E.; Geramita; M. A.; Piantadosi; S. C.; Pierson; J. L.; & Ahmari; S. E. (2022). Distinct patterns of abnormal lateral orbitofrontal cortex activity during compulsive grooming and reversal learning normalize after Fluoxetine. *Biological Psychiatry*. doi:10.1016/j.biopsych.2021.11.018
- Ryan; A.; Paul; C. L.; Cox; M.; Whalen; O.; Bivard; A.; Attia; J.; . . . Levi; C. R. (2022). TACTICS-trial of advanced CT imaging and combined education support for drip and ship: evaluating the effectiveness of an 'implementation intervention' in providing better patient access to reperfusion therapies: protocol for a non-randomised controlled stepped wedge cluster trial in acute stroke. *BMJ Open*; 12(2); 12 pages. doi:10.1136/bmjopen-2021-055461
- Kan; S.; Grainge; C.; Nichol; K.; Reid; A.; Knight; D.; Sun; Y.; . . . Liang; M.

- (2022). TLR7 agonist loaded airway epithelial targeting nanoparticles stimulate innate immunity and suppress viral replication in human bronchial epithelial cells. *International Journal of Pharmaceutics*; 617; 13 pages. doi:10.1016/j.ijpharm.2022.121586
- Di Biase; M. A.; Geaghan; M. P.; Reay; W. R.; Seidlitz; J.; Weickert; C. S.; Pebay; A.; . . . Zalesky; A. (2022). Cell type-specific manifestations of cortical thickness heterogeneity in schizophrenia. *Molecular Psychiatry*; 27(4); 2052-2060. doi:10.1038/s41380-022-01460-7
- Donovan; C.; Kim; R. Y.; Galvao; I.; Jarnicki; A. G.; Brown; A. C.; Jones-Freeman; B.; . . . Hansbro; P. M. (2022). Aim2 suppresses cigarette smoke-induced neutrophil recruitment; neutrophil caspase-1 activation and anti-Ly6G-mediated neutrophil depletion. *Immunology and Cell Biology*; 100(4); 235-249. doi:10.1111/imcb.12537
- Eslick; S.; Williams; E. J.; Berthon; B. S.; Wright; T.; Karihaloo; C.; Gately; M.; & Wood; L. G. (2022). Weight loss and short-chain fatty acids reduce systemic inflammation in monocytes and adipose tissue macrophages from obese subjects. *Nutrients*; 14(4); 17 pages. doi:10.3390/nu14040765
- Skelding; K. A.; Barry; D. L.; Theron; D. Z.; & Lincz; L. F. (2022). Targeting the two-pore channel 2 in cancer progression and metastasis. *Exploration of Targeted Anti-Tumor Therapy*; 3(1); 62-89. doi:10.37349/etat.2022.00072
- Liu; X.; Li; X.; Chen; L.; Hsu; A. C. -Y.; Asquith; K. L.; Liu; C.; . . . Yang; M. (2022). Proteomic analysis reveals a novel therapeutic strategy using fludarabine for steroid-resistant asthma exacerbation. *Frontiers in Immunology*; 13; 13 pages. doi:10.3389/fimmu.2022.805558
- Ren; S.; Hansbro; P. M.; Sriksalanukul; W.; Horvat; J. C.; Hunter; T.; Brown; A. C.; . . . AUSPICE; I. (2022). Generation of cardio-protective antibodies after pneumococcal polysaccharide vaccine: Early results from a randomised controlled trial. *Atherosclerosis*; 346; 68-74. doi:10.1016/j.atherosclerosis.2022.02.011
- Tiburcius; S.; Krishnan; K.; Patel; V.; Netherton; J.; Sathish; C.; Weidenhofer; J.; . . . Vinu; A. (2022). Triple surfactant assisted synthesis of novel core-shell mesoporous silica nanoparticles with high surface area for drug delivery for prostate cancer. *Bulletin of the Chemical Society of Japan*; 95(2); 331-340. doi:10.1246/bcsj.20210428
- Runtsch; M. C.; Angiari; S.; Hooftman; A.; Wadhwa; R.; Zhang; Y.; Zheng; Y.; . . . O'Neill; L. A. J. (2022). Itaconate and itaconate derivatives target JAK1 to suppress alternative activation of macrophages. *Cell Metabolism*; 34(3); 487+. doi:10.1016/j.cmet.2022.02.002
- Williams E. J.; Guilleminault L.; Berthon B. S.; Eslick S.; Wright T.; Karihaloo C.; . . . Wood L. G. (2022). Sulforaphane reduces pro-inflammatory response to palmitic acid in monocytes and adipose tissue macrophages. *Journal of Nutritional Biochemistry*; 104; 10 pages. doi:10.1016/j.jnutbio.2022.108978
- Tamanna; S.; Morosin; S. K.; Delforce; S. J.; van Helden; D. F.; Lumbers; E. R.; & Pringle; K. G. (2022). Renin-angiotensin system (RAS) enzymes and placental trophoblast syncytialisation. *Molecular and Cellular Endocrinology*; 547; 9 pages. doi:10.1016/j.mce.2022.111609
- Schuliga; M.; & Madala; S. K. (2022). ASK1ng to Delay the Progression of Pulmonary Fibrosis. *American Journal of Respiratory Cell and Molecular Biology*; 66(5); 465-467. doi:10.1165/rcmb.2022-0026ED
- Li; D.; Hu; L. N.; Zheng; S. M.; La; T.; Wei; L. Y.; Zhang; X. J.; . . . Gao; J. N. (2022). High nerve density in breast cancer is associated with poor patient outcome. *FASEB BioAdvances*; 4(6); 391-401. doi:10.1096/fba.2021-00147
- Zheluk; A.; Anderson; J.; & Dineen-Griffin; S. (2022). Analysis of acute non-specific back pain content on TikTok: an exploratory study. *Cureus*; 14(1); e21404. doi:10.7759/cureus.21404
- Williams; E. J.; Berthon; B. S.; Stoodley; I.; Williams; L. M.; & Wood; L. G. (2022). Nutrition in asthma. *Seminars in Respiratory and Critical Care Medicine*; 43(05); 646-661. doi:10.1055/s-0042-1742385
- Reinhardt; L. S.; Moras; A. M.; Henn; J. G.; Arantes; P. R.; Ferro; M. B.; Braganhol; E.; . . . Moura; D. J. (2022). Nek1-inhibitor and temozolomide-loaded microfibers as a co-therapy strategy for glioblastoma treatment. *International Journal of Pharmaceutics*; 617; 14 pages. doi:10.1016/j.ijpharm.2022.121584
- Robinson; K. J.; Lubans; D. R.; Mavilidi; M. F.; Hillman; C. H.; Benzing; V.; Valkenborghs; S. R.; . . . Riley; N. (2022). Effects of classroom-based resistance training with and without cognitive training on adolescents' cognitive function; on-task behavior; and muscular fitness. *Frontiers in Psychology*; 13. doi:10.3389/fpsyg.2022.811534
- Crombie GK; Palliser HK.; Shaw; JC; Hodgson; D. M.; Walker; D. W.; & Hirst; J. J. (2022). Evaluating changes in GABAergic and glutamatergic pathways in early life following prenatal stress and postnatal neurosteroid supplementation. *Psychoneuroendocrinology*; 139; 13 pages. doi:10.1016/j.psyneuen.2022.105705
- Lubans; D.; Smith; J.; Eather; N.; Morgan; P.; Leahy; A.; Plotnikoff; R.; . . . Hillman; C. (2022). Time-efficient physical activity intervention for older adolescents: The Burn 2 Learn cluster randomised controlled trial (Jan; 10.1016/j.jsams.2021.09.018; 2022). *Journal of Science and Medicine in Sport*; 25(3); E1.
- Li; X.; Duan; S.; Zheng; Y.; Yang; Y.; Wang; L.; Li; X.; . . . Yang; D. (2022). Hyperthermia inhibits growth of nasopharyngeal carcinoma through degradation of c-Myc. *International Journal of Hyperthermia*; 39(1); 358-371. doi:10.1080/02656736.2022.2038282
- Pariyar; M.; Thorne; R. F.; Scott; R. J.; & Avery-Kiejda; K. A. (2022). Verification and validation of a four-gene panel as a prognostic indicator in triple negative breast cancer. *Frontiers in Oncology*; 12; 11 pages. doi:10.3389/fonc.2022.821334
- Girkin; J. (2022). Is CC Chemokine Ligand 17 (TARC) driving disease progression in Chronic Obstructive Pulmonary Disease? *American Journal of Respiratory Cell and Molecular Biology*; 66(4); 358-360. doi:10.1165/rcmb.2021-0518ED
- Burns; G. L.; Talley; N. J.; & Keely; S. (2022). Immune responses in the irritable Bowel syndromes: time to consider the small intestine. *BMC Medicine*; 20 (1); 9 pages. doi:10.1186/s12916-022-02301-8
- Silva; A.; Scorgie; F. E.; Lincz; L. F.; Maduwage; K.; Siribaddana; S.; & Isbister; G. K. (2022). Indian polyvalent antigenome accelerates recovery from venom-induced consumption coagulopathy (VICC) in Sri Lankan Russell's Viper (*Daboia russelii*) envenoming. *Frontiers in Medicine*; 9; 8 pages. doi:10.3389/fmed.2022.852651
- Fowler; S.; Hoedt; E. C.; Talley; N. J.; Keely; S.; & Burns; G. L. (2022). Circadian rhythms and melatonin metabolism in patients with disorders of gut-brain interactions. *Frontiers in Neuroscience*; 16; 13 pages. doi:10.3389/fnins.2022.825246
- Twaddell; S. H.; & Baines; K. J. (2022). The unknown sequential behavior of neutrophil extracellular traps in parapneumonic effusions response. *Chest*; 161(4); E251. doi:10.1016/j.chest.2021.12.635
- Starkey; M. R.; Deshmukh; H.; Lukacs; N. W.; & Lloyd; C. M. (2022). Editorial: Pulmonary Innate Lymphoid Cells - Gatekeepers of Respiratory Health. *Frontiers in Immunology*; 13; 3 pages. doi:10.3389/fimmu.2022.871207
- Cheng; L.; Yang; Z.; Guo; W.; Wu; C.; Liang; S.; Tong; A.; . . . Chen; Q. (2022). DCLK1 autoinhibition and activation in tumorigenesis. *The Innovation*; 3(1). doi:10.1016/j.xinn.2021.100191
- Reay; W. R.; Kiltchewskij; D. J.; Geaghan; M. P.; Atkins; J. R.; Carr; V. J.; Green; M. J.; & Cairns; M. J. (2022). Genetic estimates of correlation and causality between blood-based biomarkers and psychiatric disorders. *Science Advances*; 8(14); 17 pages. doi:10.1126/sciadv.abj8969
- Hunt; K.; Burnard; S. M.; Roper; E. A.; Bond; D. R.; Dun; M. D.; Verrills; N. M.; . . . Lee; H. J. (2022). scTEM-seq: Single-cell analysis of transposable element methylation to link global epigenetic heterogeneity with transcriptional programs. *Scientific Reports*; 12(1); 10 pages. doi:10.1038/s41598-022-09765-x
- Lao; J. C.; Bui; C. B.; Pang; M. A.; Cho; S. X.; Rudloff; I.; Elgass; K.; . . . Nold; M. F. (2022). Type 2 immune polarization is associated with cardiopulmonary disease in preterm infants. *Science Translational Medicine*; 14(639); 17 pages. doi:10.1126/scitranslmed.aaz8454
- Au; G. G.; Marsh; G. A.; McAuley; A. J.; Lowther; S.; Trinidad; L.; Edwards; S.; . . . Vasani; S. S. (2022). Characterisation and natural progression of SARS-CoV-2 infection in ferrets. *Scientific Reports*; 12(1); 14 pages. doi:10.1038/s41598-022-08431-6
- Luan; L.; Hu; H.; Oldridge; N. B.; Zhao; F. L.; Gao; L.; Höfer; S.; . . . Li; S. C. (2022). Psychometric evaluation of the Mandarin HeartQoL health-related Quality of Life Questionnaire among patients with Ischemic Heart Disease in China. *Value in Health Regional Issues*; 31; 53-60. doi:10.1016/j.vhri.2022.03.001
- Li; X.; Liu; H.; Dun; M. D.; Faulkner; S.; Liu; X.; Jiang; C. C.; & Hondermarck; H. (2022). Proteome and secretome analysis of pancreatic cancer cells. *Proteomics*; 22(13-14); 8 pages. doi:10.1002/pmic.202100320
- Fan; K.; Eslick; G. D.; Nair; P. M.; Burns; G. L.; Walker; M. M.; Hoedt EC; Talley; N. J. (2022). Human intestinal spirochetosis; irritable bowel syndrome; and colonic polyps: A systematic review and meta-analysis. *Journal of Gastroenterology and Hepatology*; 37(7); 1222-1234. doi:10.1111/jgh.15851
- Martin JH; Mohammed R; Delforce SJ; Skerrett-Byrne DA; de Meaultsart; C. C.; Almazi; J. G.; . . . Pringle; K. G. (2022). Role of the prorenin receptor in endometrial cancer cell growth. *Oncotarget*; 13(1); 587-599. doi:10.18632/oncotarget.28224
- Marsland; M.; Dowdell; A.; Jiang; C. C.; Wilmott; J. S.; Scolyer; R. A.; Zhang XD; . . . Faulkner; S. (2022). Expression of NGF/proNGF and their receptors TrkA; p75(NTR) and Sortilin in melanoma. *International Journal of Molecular Sciences*; 23(8); 15 pages. doi:10.3390/ijms23084260
- Brown; G.; Hoedt; E. C.; Keely; S.; Shah; A.; Walker; MM; Holtmann G; & Talley; N. J. (2022). Role of the duodenal microbiota in functional dyspepsia. *Eurogastroenterology and Motility*; 34(11); 16 pages. doi:10.1111/nmo.14372
- Giri; R.; Hoedt; E. C.; Khushi; S.; Salim; AA; Bergot A-S; Schreiber V.;.. Begun;

- J. (2022). Article Secreted NF-kappa B suppressive microbial metabolites modulate gut inflammation. *Cell Reports*; 39(2); 20 pages. doi:10.1016/j.celrep.2022.110646
- Sanchez-Bezanilla S.; Beard DJ; Hood RJ; Aberg ND; Crock P; Walker FR; . . . Ong; L. K. (2022). Growth hormone increases BDNF and mTOR expression in specific brain regions after photothrombotic stroke in mice. *Neural Plasticity*; 2022; 13 pages. doi:10.1155/2022/9983042
- Gao; H.; Kan; S.; Ye; Z.; Feng; Y.; Jin; L.; Zhang; X.; . . . Ouyang; D. (2022). Development of in silico methodology for siRNA lipid nanoparticle formulations. *Chemical Engineering Journal*; 442. doi:10.1016/j.cej.2022.136310
- Tiburcius; S.; Krishnan; K.; Jose; L.; Patel; V.; Ghosh; A.; Sathish; C.; . . . Vinu; A. (2022). Egg-yolk core-shell mesoporous silica nanoparticles for high doxorubicin loading and delivery to prostate cancer cells. *Nanoscale*; 14(18); 6830-6845. doi:10.1039/d2nr00783e
- Marin; F. R.; Davalos; A.; Kiltschewskij; D.; Crespo; M. C.; Cairns; M.; Andres-Leon; E.; & Soler-Rivas; C. (2022). RNA-Seq; bioinformatic identification of potential microRNA-like small RNAs in the edible mushroom *Agaricus bisporus* and experimental approach for their validation. *International Journal of Molecular Sciences*; 23(9); 20 pages. doi:10.3390/ijms23094923
- Cuskelly; A.; Hoedt; E. C.; Harms; L.; Talley; N. J.; Tadros; M. A.; Keely; S.; & Hodgson; D. M. (2022). Neonatal immune challenge influences the microbiota and behaviour in a sexually dimorphic manner. *Brain Behavior and Immunity*; 103; 232-242. doi:10.1016/j.bbi.2022.04.023
- Berthon; B. S.; Williams; L. M.; Williams; E. J.; & Wood; L. G. (2022). Effect of Lactoferrin supplementation on inflammation; immune function; and prevention of respiratory tract infections in humans: a systematic review and meta-analysis. *Advances in Nutrition*; 13(5); 1799-1819. doi:10.1093/advances/nmac047
- Driller; B.; Talseth-Palmer; B.; Hole; T.; Stromskag; K. E.; & Brenne; A. -T. (2022). Cancer patients spend more time at home and more often die at home with advance care planning conversations in primary health care: a retrospective observational cohort study. *BMC Palliative Care*; 21(1); 10 pages. doi:10.1186/s12904-022-00952-1
- Dzator; J. S. A.; Howe; P. R. C.; Coupland; K. G.; & Wong; R. H. X. (2022). A randomised; double-blind; placebo-controlled crossover trial of Resveratrol supplementation for prophylaxis of hormonal migraine. *Nutrients*; 14(9); 10 pages. doi:10.3390/nu14091763
- Girkin; J. L. N.; Maltby; S.; & Bartlett; N. W. (2022). Toll-like receptor-agonist-based therapies for respiratory viral diseases: thinking outside the cell. *European Respiratory Review*; 31(164); 15 pages. doi:10.1183/16000617.0274-2021
- Hammerschmidt; T. G.; Donida; B.; Faverzani; J. L.; Moura; A. P.; dos Reis; B. G.; Machado; A. Z.; . . . Vargas; C. R. (2022). Cytokine profile and cholesterol levels in patients with Niemann-Pick type C disease presenting neurological symptoms: in vivo effect of Miglustat and in vitro effect of N-acetylcysteine and coenzyme Q10. *Experimental Cell Research*; 416(2); 9 pages. doi:10.1016/j.yexcr.2022.113175
- Hinwood M; Nyberg J; Leigh L; Gustavsson S; Attia J; Oldmeadow C; . . . Nilsson; P. M. (2022). Do P2Y12 receptor inhibitors prescribed poststroke modify the risk of cognitive disorder or dementia? Protocol for a target trial using multiple national Swedish registries. *BMJ Open*.
- Vavilov; S.; Roberts; E.; Smith; G. H. H.; Starkey; M.; Pockney; P.; & Deshpande; A. V. (2022). Parental decision regret among Australian parents after consenting to or refusing hypospadias repair for their son: Results of a survey with controls. *Journal of Pediatric Urology*; 18(4); 482-488. doi:10.1016/j.jpuro.2022.04.023
- Zhu; W. M.; Neuhaus; A.; Beard; D. J.; Sutherland; B. A.; & Deluca; G. C. (2022). Neurovascular coupling mechanisms in health and neurovascular uncoupling in Alzheimer's disease. *Brain*; 145(7); 2276-2292. doi:10.1093/brain/awac174
- Williams; T. C.; Loo; S. -L.; Nichol; K. S.; Reid; A. T.; Veerati; P. C.; Esneau; C.; . . . Bartlett; N. W. (2022). IL-25 blockade augments antiviral immunity during respiratory virus infection. *Communications Biology*; 5(1); 13 pages. doi:10.1038/s42003-022-03367-z
- Reay; W. R.; Haslam; R.; Cairns; M. J.; Moschonis; G.; Clarke; E.; Attia; J.; & Collins; C. E. (2022). Variation in cardiovascular disease risk factors among older adults in the Hunter community study cohort: A comparison of diet quality versus polygenic risk score. *Journal of Human Nutrition and Dietetics*; 35(4); 675-688. doi:10.1111/jhn.13031
- Shaw; J. C.; Dyson; R. M.; Palliser; H. K.; Sixtus; R. P.; Barnes; H.; Pavy; C. L.; . . . Hirst; J. J. (2022). Examining neurosteroid-analogue therapy in the preterm neonate for promoting hippocampal neurodevelopment. *Frontiers in Physiology*; 13; 15 pages. doi:10.3389/fphys.2022.871265
- Skelding; K. A.; Barry; D. L.; Theron; D. Z.; & Lincz; L. F. (2022). Targeting the two-pore channel 2 in cancer progression and metastasis. *Exploration of Targeted Anti-tumor Therapy*; 3(1); 62-89. doi:10.37349/etat.2021.00072
- Cheng; L.; Huang; S.; Chen; L.; Dong; X.; Zhang; L.; Wu; C.; . . . Thorne; R. F. (2022). Research progress of DCLK1 inhibitors as cancer therapeutics. *Current Medicinal Chemistry*; 29(13); 2261-2273. doi:10.2174/0929867328666210709110721
- Crespo-Gonzalez; C.; Dineen-Griffin; S.; Rae; J.; & Hill; R. A. (2022). A qualitative exploration of mental health services provided in community pharmacies. *PLoS One*; 17(5 May). doi:10.1371/journal.pone.0268259
- Valkenborghs; S. R.; Hillman; C. H.; Al-Iedani; O.; Nilsson; M.; Smith; J. J.; Leahy; A. A.; . . . Lubans; D. R. (2022). Effect of high-intensity interval training on hippocampal metabolism in older adolescents. *Psychophysiology*; 59(11); 13 pages. doi:10.1111/psyp.14090
- Tu; X.; Kim; R. Y.; Brown; A. C.; De Jong; E.; Jones-Freeman; B.; Ali; K.; . . . Donovan; C. (2022). Airway and parenchymal transcriptomics in a novel model of asthma and COPD overlap. *Journal of Allergy and Clinical Immunology*; 150(4); 817-+. doi:10.1016/j.jaci.2022.04.032
- Wong-Brown; M.; McPhillips; M.; Gleeson; M.; Spigelman; A. D.; Meldrum; C. J.; Dooley; S.; & Scott; R. J. (2022). When is a mutation not a mutation: the case of the c.594-2A > C splice variant in a woman harbouring another BRCA1 mutation in trans (vol 14; 6; 2016). *Hereditary Cancer in Clinical Practice*; 20(1); 1 page. doi:10.1186/s13053-022-00228-y
- Foster; P. S.; Tay; H. L.; & Oliver; B. G. (2022). Deficiency in the zinc transporter ZIP8 impairs epithelia renewal and enhances lung fibrosis. *Journal of Clinical Investigation*; 132(11); 4 pages. doi:10.1172/JCI160595
- Aggarwal; A.; Stella; A. O.; Walker; G.; Akerman; A.; Esneau; C.; Milogiannakis; V.; . . . Turville; S. G. (2022). Platform for isolation and characterization of SARS-CoV-2 variants enables rapid characterization of Omicron in Australia. *Nature Microbiology*; 7(6); 896-908. doi:10.1038/s41564-022-01135-7
- Pearson; H. C. L.; Hunt; K.; Trahair; T. N.; Lock; R. B.; Lee; H. J.; & de Bock; C. E. (2022). The promise of single-cell technology in providing new insights into the molecular heterogeneity and management of acute lymphoblastic leukemia. *Hemisphere*; 6(6); 9 pages. doi:10.1097/HS9.0000000000000734
- Patabendige; A.; & Chen; R. (2022). Astrocytic aquaporin 4 subcellular translocation as a therapeutic target for cytotoxic edema in ischemic stroke. *Neural Regeneration Research*; 17(12); 2666-2668. doi:10.4103/1673-5374.339481
- Hinwood; M.; Illic; M.; Gyawali; P.; Coupland; K.; Kluge; M.; Smith; A.; . . . Walker; F. (2022). Psychological stress management and stress reduction strategies for stroke survivors: a scoping review. *Annals of Behavioral Medicine*.
- Hedley; K. E.; Callister; R. J.; Callister; R.; Horvat; J. C.; & Tadros; M. A. (2022). Alterations in brainstem respiratory centers following peripheral inflammation: A systematic review. *Journal of Neuroimmunology*; 369; 12 pages. doi:10.1016/j.jneuroim.2022.577903
- Yang; Y.; Zhu; Y.; Zhou; S.; Tang; P.; Xu; R.; Zhang; Y.; . . . Chen; S. (2022). TRIM27 cooperates with STK38L to inhibit ULK1-mediated autophagy and promote tumorigenesis. *EMBO Journal*; 41(14); 17 pages. doi:10.15252/embj.2021109777
- Sanchez-Ovando; S.; Pavlidis; S.; Kermani; N. Z.; Baines; K. J.; Barker; D.; Gibson; P. G.; . . . Wark; P. A. B. (2022). Pathways linked to unresolved inflammation and airway remodelling characterize the transcriptome in two independent severe asthma cohorts. *Respirology*; 27(9); 730-738. doi:10.1111/resp.14302
- Isbister; G. K.; Polanski; R.; Cooper; J. M.; Keegan; M.; & Isoardi; K. Z. (2022). Duloxetine overdose causes sympathomimetic and serotonin toxicity without major complications. *Clinical Toxicology*; 60(9); 1019-1023. doi:10.1080/15563650.2022.2083631
- Al Mamun; M. M.; Khan; M. R.; Zhu; Y.; Zhang; Y.; Zhou; S.; Xu; R.; . . . Song; X. (2022). Stub1 maintains proteostasis of master transcription factors in embryonic stem cells. *Cell Reports*; 39(10); 18 pages. doi:10.1016/j.celrep.2022.110919
- Bokern; M. P.; Robijn; A. L.; Jensen; M. E.; Barker; D.; Baines; K. J.; & Murphy; V. E. (2022). Risk factors for asthma exacerbation during pregnancy: protocol for a systematic review and meta-analysis. *Systematic Reviews*; 11(1); 5 pages. doi:10.1186/s13643-022-01975-8
- Thompson; D.; Wood; L. G.; Williams; E. J.; McLoughlin RF; & Rastogi D. (2022) Endotyping pediatric obesity-related asthma: contribution of anthropometrics; metabolism; nutrients; and CD4(+) lymphocytes to pulmonary function. *Journal of Allergy and Clinical Immunology*; 150(4); 861-871. doi:10.1016/j.jaci.2022.04.033
- Burns; G. L.; Hoedt; E. C.; Jamaluddin; M. F. B.; Shanahan; E.; Lim; Y.; J. J.; . . . Keely; S. (2022). Seroreactivity to mucosa associated microbiota is associated With T cell gut-homing in functional dyspepsia patients (Withdrawal of Vol 36; 10.1096/FASEBJ.2022.36.S1.R4212; 2022). *FASEB Journal*; 36(6); 1 page. doi:10.1096/fasebj.2022.36.S1.R4212
- Hoedt; E. C.; Fan; K.; Burns; G. L.; Kang; S.; Morrison; M.; Talley; N. J.; & Keely; S. (2022). Functional dyspepsia duodenum mucosal associated microbiota:

- comparison between fresh biopsy and historical formalin-fixed paraffin embedded biopsies is viable. *FASEB Journal*; 36(6); 1 page. doi:10.1096/fasebj.2022.36.S1.R4272
- Fan; K.; Gottstein; M.; Walker; M. M.; Hoedt; E. C.; Talley; N. J.; & Keely; S. (2022) Mucosal immune characterization of colonic spirochetosis (Withdrawal of Vol 36; 10.1096/FASEBJ.2022.36.S1.R4289; 2022). *FASEB Journal*; 36(6); 1 page. doi:10.1096/fasebj.2022.36.S1.R4289
- Pertile RAN; Kiltschewskij D; Geaghan M; Barnett M; Cui X; Cairns MJ; & Eyles D. (2022). Developmental vitamin D-deficiency increases the expression of microRNAs involved in dopamine neuron development. *Brain Research*; 1789; 8 pages. doi:10.1016/j.brainres.2022.147953
- Reinhardt; L. S.; Groen; K.; Morten; B. C.; Bourdon; J. -C.; & Avery-Kiejda; K. A. (2022). Cytoplasmic p53 beta isoforms are associated with worse disease-free survival in breast cancer. *International Journal of Molecular Sciences*; 23(12); 20 pages. doi:10.3390/ijms23126670
- Thota RN; Chatterjee P; Pedrini S; Hone E; Ferguson JJA; Garg ML.; & Martins; R. N. (2022). Association of plasma neurofilament light chain with glycaemic control and insulin resistance in middle-aged adults. *Frontiers in Endocrinology*; 13; 8 pages. doi:10.3389/fendo.2022.915449
- Valkenborghs; S. R.; Anderson; S. L.; Scott; H. A.; & Callister; R. (2022). Exercise training programs improve cardiorespiratory and functional fitness in adults with asthma a systematic review and meta-analysis. *Journal of Cardio-Pulmonary Rehabilitation and Prevention*; 42(6); 423-433. doi:10.1097/HCR.0000000000000698
- Robijn AL; Bokern MP; Jensen ME; Barker D; Baines KJ; & Murphy; V. E. (2022). Risk factors for asthma exacerbations during pregnancy: a systematic review and meta-analysis. *European Respiratory Review*; 31(164); 12 pages. doi:10.1183/16000617.0039-2022
- Hari; S.; Burns; G. L.; Hoedt; E. C.; Keely; S.; & Talley; N. J. (2022). Eosinophils; hypoxia-inducible factors; and barrier dysfunction in functional dyspepsia. *Frontiers in Allergy*; 3; 851482. doi:10.3389/falgy.2022.851482
- Almeida; K. A.; Andrade; E. D. Q.; Burns; G.; Hoedt; E. C.; Mattes; J.; Keely; S.; & Collison; A. (2022). The microbiota in eosinophilic esophagitis: A systematic review. *Journal of Gastroenterology and Hepatology*; 37(9); 1673-1684. doi:10.1111/jgh.15921
- Wang; Y.; Zhang; Y.; Mi; J.; Jiang; C.; Wang; Q.; Li; X.; . . . Su; F. (2022). ANKFN1 plays both protumorigenic and metastatic roles in hepatocellular carcinoma. *Oncogene*; 41(29); 3680-3693. doi:10.1038/s41388-022-02380-0
- Patabendige; A. (2022). An improved in vitro porcine blood-brain barrier model for permeability screening and functional studies. *Unknown Journal*; 2492; 131-142. doi:10.1007/978-1-0716-2289-6_7
- Crespo-Gonzalez; C.; Dineen-Griffin; S.; Rae; J.; & Hill; R. A. (2022). Mental health training programs for community pharmacists; pharmacy staff and students: A systematic review. *Research in Social and Administrative Pharmacy*. doi:10.1016/j.sapharm.2022.06.006
- Reay; W. R.; Geaghan; M. P.; & Cairns; M. J. (2022). The genetic architecture of pneumonia susceptibility implicates mucin biology and a relationship with psychiatric illness. *Nature Communications*; 13(1); 16 pages. doi:10.1038/s41467-022-31473-3
- Eliezer; D. D.; Lam; C.; Smith; A.; Coomarasamy; J. M.; Samnakay; N.; Starkey; M. R.; & Deshpande; A. V. (2022). Optimising the management of children with concomitant bladder dysfunction and behavioural disorders. *European Child & Adolescent Psychiatry*; 11 pages. doi:10.1007/s00787-022-02016-4
- Scott; H. A.; Wood; L. G.; Williams; E. J.; Weaver; N.; & Upham; J. W. (2022). Comparing the effect of acute moderate and vigorous exercise on inflammation in adults with asthma. *Annals of the American Thoracic Society*; 19(11); 1848-1855. doi:10.1513/AnnalsATS.202109-1053OC
- Vanka; K. S.; Shukla; S.; Gomez; H. M.; James; C.; Palanisami; T.; Williams; K.; . . . Horvat; J. C. (2022). Understanding the pathogenesis of occupational coal and silica dust-associated lung disease. *European Respiratory Review*; 31(165); 17 pages. doi:10.1183/16000617.0250-2021
- Venkata; V. D.; Jamaluddin; M. F. B.; Goad; J.; Drury; H. R.; Tadros; M. A.; Lim; R.; . . . Tanwar; P. S. (2022). Development and characterization of human fetal female reproductive tract organoids to understand Müllerian duct anomalies. *Proceedings of the National Academy of Sciences of the United States of America*; 119(30). doi:10.1073/pnas.2118054119
- Wanigasuriya; I.; Kinkel; S. A.; Beck; T.; Roper; E. A.; Breslin; K.; Lee; H. J.; . . . Gouil; Q. (2022). Maternal SMCHD1 controls both imprinted Xist expression and imprinted X chromosome inactivation. *Epigenetics & Chromatin*; 15(1); 11 pages. doi:10.1186/s13072-022-00458-3
- Hosseini; B.; Berthon; B. S.; Jensen; M. E.; McLoughlin; R. F.; Wark; PAB.; Nichol; K.; . . . Wood; L. G. (2022). The effects of increasing fruit and vegetable intake in children with asthma on the modulation of innate immune responses. *Nutrients*; 14(15); 3087. doi:10.3390/nu14153087
- Thorne; R. F.; Yang; Y.; Wu; M.; & Chen; S. (2022). TRIMming down autophagy in breast cancer. *Autophagy*; 18(10); 2512-2513. doi:10.1080/15548627.2022.2105557
- Schuhmacher; D.; Sontag; J. -M.; & Sontag; E. (2022). A novel role of PP2A methylation in the regulation of tight junction assembly and integrity. *Frontiers in Cell and Developmental Biology*; 10; 17 pages. doi:10.3389/fcell.2022.911279
- Zhao; M.; Wang; Y.; Zhang; Y.; Li; X.; Mi; J.; Wang; Q.; . . . Su; F. (2022). The upregulation of stromal antigen 3 expression suppresses the Phenotypic hallmarks of hepatocellular carcinoma through the Smad3-CDK4/CDK6-cyclin D1 and CXCR4/RhoA pathways. *BMC Gastroenterology*; 22(1); 15 pages. doi:10.1186/s12876-022-02400-z
- Abbas; A.; Ar; A. Y.; Fard; R. G.; Mannan; A.; & Hosseini; S. (2022). Perceived coronavirus health risk associated with students' life satisfaction: the role of trust in government policies. *Ciencia & Saude Coletiva*; 27(8); 2995-3004. doi:10.1590/1413-81232022278.06282021
- Abbas; A.; & Mannan; A. (2022). Reasons behind declining of cases during the COVID-19 wavelets in Pakistan: public healthcare system or government smart lockdown policy? *Ciencia & Saude Coletiva*; 27(8); 2973-2984. doi:10.1590/1413-81232022278.06012022
- Spencer; A. J.; Morris; S.; Ulaszewska; M.; Powers; C.; Kailath; R.; Bissett; C.; . . . Lambe; T. (2022). The ChAdOx1 vectored vaccine; AZD2816; induces strong immunogenicity against SARS-CoV-2 beta (B.1.351) and other variants of concern in preclinical studies. *Ebiomedicine*; 77; 14 pages. doi:10.1016/j.ebiom.2022.103902
- van Doremalen; N.; Schulz; J. E.; Adney; D. R.; Saturday; T. A.; Fischer; R. J.; Yinda; C. K.; . . . Munster; V. J. (2022). ChAdOx1 nCoV-19 (AZD1222) or nCoV-19-Beta (AZD2816) protect Syrian hamsters against Beta Delta and Omicron variants. *Nature Communications*; 13(1); 12 pages. doi:10.1038/s41467-022-32248-6
- Noe; A.; Dattoo; M. S.; Flaxman; A.; Husainy; M. A.; Jenkin; D.; Bellamy; D.; . . . Spencer; A. J. (2022). Deep immune phenotyping and single-cell transcriptomics allow identification of circulating TRM-like cells which correlate with liver-stage immunity and vaccine-induced protection from malaria. *Frontiers in Immunology*; 13; 16 pages. doi:10.3389/fimmu.2022.795463
- Rosadas C; Khan M; Parker E; Marchesin F; Katsanovskaja K; Sureda-Vives; M.; . . . Tedder; R. S. (2022). Detection and quantification of antibody to SARS CoV 2 receptor binding domain provides enhanced sensitivity; specificity and utility. *Journal of Virological Methods*; 302; 11 pages. doi:10.1016/j.jviromet.2022.114475
- Ferguson; J. J. A.; Oldmeadow; C.; Bentley; D.; & Garg; M. L. (2022). Antioxidant effects of a polyphenol-rich dietary supplement incorporating pinus massoniana bark extract in healthy older adults: a two-arm; parallel group; randomized placebo-controlled trial. *Antioxidants*; 11(8); 16 pages. doi:10.3390/antiox11081560
- Bukhari; I.; Iqbal; F.; & Thorne; R. F. (2022). Research advances in gestational; neonatal diabetes mellitus and metabolic disorders. *Frontiers in Endocrinology*; 13; 3 pages. doi:10.3389/fendo.2022.969952
- Ewans; L. J.; Minoche; A. E.; Schofield; D.; Shrestha; R.; Puttick; C.; Zhu; Y.; . . . Roscioli; T. (2022). Whole exome and genome sequencing in mendelian disorders: a diagnostic and health economic analysis. *European Journal of Human Genetics*; 30(10); 1121-1131. doi:10.1038/s41431-022-01162-2
- Liu; X.; Netto; K. G.; Sokulsky; L. A.; Zhou; L.; Xu; H.; Liu; C.; . . . Yang; M. (2022). Single-cell RNA transcriptomic analysis identifies Creb5 and CD11b-DCs as regulator of asthma exacerbations. *Mucosal Immunology*; 12 pages. doi:10.1038/s41385-022-00556-1
- Wang; Y.; Feng; Y. C.; Gan; Y.; Teng; L.; Wang; L.; La; T.; . . . Shao; F. -M. (2022). LncRNA MILIP links YBX1 to translational activation of Snai1 and promotes metastasis in clear cell renal cell carcinoma. *Journal of Experimental and Clinical Cancer Research*; 41(1); 15 pages. doi:10.1186/s13046-022-02452-9
- Tolhurst; T.; Princehorn; E.; Loxton; D.; Mishra; G.; Mate; K.; & Byles; J. (2022). Changes in the food and drink consumption patterns of Australian women during the COVID-19 pandemic. *Australian and New Zealand Journal of Public Health*; 46(5); 704-709. doi:10.1111/1753-6405.13295
- Distefano R; Tomasello L; Vinciguerra GLR; Gasparini P; Xiang Y; Bagnoli; M.; . . . Croce; C. M. (2022). Pan-cancer analysis of canonical and modified miRNAs enhances the resolution of the functional miRNAome in cancer. *Cancer Research*; 82(20); 3687-3700. doi:10.1158/0008-5472.CAN-22-0240
- Reay; W. R.; Geaghan; M. P.; Atkins; J. R.; Carr; V. J.; Green; M. J.; & Cairns; M. J. (2022). Genetics-informed precision treatment formulation in schizophrenia and bipolar disorder. *American Journal of Human Genetics*; 109(9); 1620-1637. doi:10.1016/j.ajhg.2022.07.011
- Padron-Regalado; E.; Ulaszewska; M.; Douglas; A. D.; Hill; A. V. S.; & Spencer; A. J. (2022). STING-pathway modulation to enhance the immunogenicity of adenoviral-vectored vaccines. *Scientific Reports*; 12(1); 11 pages. doi:10.1038/s41598-022-18750-3

- Zhang; B.; Thorne; R. F.; Zhang; P.; Wu; M.; & Liu; L. (2022). Vanguard is a glucose deprivation-responsive long non-coding RNA essential for chromatin remodeling -reliant DNA repair. *Advanced Science*; 9(30). doi:10.1002/adv.202201210
- Jalewa; J.; Todd; J.; Michie; P. T.; Hodgson; D. M.; & Harms; L. (2022). The effect of schizophrenia risk factors on mismatch responses in a rat model. *Psychophysiology*; 18 pages. doi:10.1111/psyp.14175
- Goraya; M. U.; Li; R.; Mannan; A.; Gu; L.; Deng; H.; & Wang; G. (2022). Human circulating bacteria and dysbiosis in non-infectious diseases. *Frontiers in Cellular and Infection Microbiology*; 12; 13 pages. doi:10.3389/fcimb.2022.932702
- Kiltschewskij; D. J.; Reay; W. R.; & Cairns; M. J. (2022). Evidence of genetic overlap and causal relationships between blood-based biochemical traits and human cortical anatomy. *Translational Psychiatry*; 12(1); 14 pages. doi:10.1038/s41398-022-02141-3
- Frost; E. R.; Ford; E. A.; Peters; A. E.; Lovell-Badge; R.; Taylor; G.; McLaughlin; E. A.; & Sutherland; J. M. (2022). A new understanding; guided by single-cell sequencing; of the establishment and maintenance of the ovarian reserve in mammals. *Sexual Development*; 11 pages. doi:10.1159/000526426
- Jamaluddin MF, Ko YA; Ghosh A; Syed SM; Lus Y; O'Sullivan R;...Tanwar P. S. (2022). Proteomic and functional characterization of intra-tumor heterogeneity in human endometrial cancer. *Cell Reports Medicine*; 3(9). doi:10.1016/j.xcrm.2022.100738
- Dowling; L. R.; Strazzari; M. R.; Keely; S.; & Kaiko; G. E. (2022). Enteric nervous system and intestinal epithelial regulation of the gut-brain axis. *Journal of Allergy and Clinical Immunology*; 150(3); 513-522. doi:10.1016/j.jaci.2022.07.015
- Dyason; K. M.; Farrell; L. J.; Manning; E. E.; Grisham; J. R.; & Perkes; I. E. (2022). Falling through the cracks in science and clinical service - A call to action for people with OCD. *Australian and New Zealand Journal of Psychiatry*; 56(10); 1213-1216. doi:10.1177/00048674221125595
- Santhanes; D.; Wilkins; A.; Zhang; H.; Aitken; R. J.; & Liang; M. (2022). Microfluidic formulation of lipid/polymer hybrid nanoparticles for plasmid DNA (pDNA) delivery. *International Journal of Pharmaceutics*; 627; 12 pages. doi:10.1016/j.ijpharm.2022.122223
- Greco; L. A.; Reay; W. R.; Dayas; C.; & Cairns; M. J. (2022). Pairwise genetic meta-analyses between schizophrenia and substance dependence phenotypes reveals novel association signals with pharmacological significance. *Translational Psychiatry*; 12(1); 9 pages. doi:10.1038/s41398-022-02186-4
- Cooper GE; Mayall J; Donovan C; Haw TJ; Budden KF; Hansbro NG;... Staples; K. J. (2022). Anti-viral responses of tissue-resident CD49a+ lung NK cells are dysregulated in COPD. *American Journal of Respiratory and Critical Care Medicine*. doi:10.1164/rccm.202205-0848oc
- Yusof; K. M.; Groen; K.; Rosli; R.; Abdullah; M.; Mahmud; R.; & Avery-Kiejda; K. A. (2022). Evaluation of circulating MicroRNAs and adipokines in breast cancer survivors with arm lymphedema. *International Journal of Molecular Sciences*; 23(19); 21 pages. doi:10.3390/ijms231911359
- Shanahan; E. R.; Kang; S.; Staudacher; H.; Shah; A.; Do; A.; Burns; G.; . . . Holtmann; G. J. (2022). Alterations to the duodenal microbiota are linked to gastric emptying and symptoms in functional dyspepsia. *Gut*; 10 pages. doi:10.1136/gutjnl-2021-326158
- Goodall; S.; Viney; R.; Street; D.; Waller; D. S.; & Zhao; F. L. (2022). Responses to direct-to-consumer advertising in Australia: comparing experience. *Health Marketing Quarterly*; 39(4); 398-409. doi:10.1080/07359683.2022.2124052
- Golledge; J.; Jenkins; J.; Bourke; M.; Bourke; B.; & Singh; T. P. (2022). Association of oral anticoagulation prescription with clinical events in patients with an asymptomatic unrepaired abdominal aortic aneurysm. *Biomedicine*; 10(9). doi:10.3390/biomedicine10092112
- Thomas Manapurathe; D.; Moxon; J. V.; Krishna; S. M.; Quigley; F.; Bourke; M.; Bourke; B.; . . . Golledge; J. (2022). Cohort study examining the association of optimal blood pressure control at entry with infrarenal abdominal aortic aneurysm growth. *Frontiers in Cardiovascular Medicine*; 9. doi:10.3389/fcvm.2022.868889
- Singh; T. P.; Moxon; J. V.; Gasser; T. C.; Dalman; R. L.; Bourke; M.; Bourke; B.; . . . Golledge; J. (2022). Effect of telmisartan on the peak wall stress and peak wall rupture index of small abdominal aortic aneurysms: an exploratory analysis of the TEDY Trial. *European Journal of Vascular and Endovascular Surgery*; 64(4); 396-404. doi:10.1016/j.ejvs.2022.07.042
- Baleato; C. L.; Ferguson; J. J. A.; Oldmeadow; C.; Mishra; GD; & Garg ML. (2022). Plant-based dietary patterns versus meat consumption and prevalence of impaired glucose intolerance and diabetes mellitus: a cross-sectional study in Australian women. *Nutrients*; 14(19); 15 pages. doi:10.3390/nu1419152
- Azarpeykan; S.; Gee; E. K.; Thompson; K. G.; & Dittmer; K. E. (2022). Undetectable vitamin D3 in equine skin irradiated with ultraviolet light. *Journal of Equine Science*; 33(3); 45-49. doi:10.1294/jes.33.45
- Geaghan; M. P.; Reay; W. R.; & Cairns; M. J. (2022). MicroRNA binding site variation is enriched in psychiatric disorders. *Human Mutation*; 17 pages. doi:10.1002/humu.24481
- Gabriel; A. C. D. S. A. G.; Atkins; J. R.; Penha; R. C. C.; Smith-Byrne; K.; Gaborieau; V.; Voegelé; C.; . . . McKay; J. D. (2022). Genetic analysis of lung cancer and the germline impact on somatic mutation burden. *Journal of the National Cancer Institute*; 114(8); 1159-1166. doi:10.1093/jnci/djac087
- Onyiba; C. I.; Scarlett; C. J.; & Weidenhofer; J. (2022). The mechanistic roles of Sirtuins in breast and prostate cancer. *Cancers*; 14(20); 30 pages. doi:10.3390/cancers14205118
- Jamaluddin; M. B. F.; Ghosh; A.; Ingle; A.; Mohammed; R.; Ali; A.; Bahrami; M.; . . . Tanwar; P. S. (2022). Bovine and human endometrium-derived hydrogels support organoid culture from healthy and cancerous tissues. *Proceedings of the National Academy of Sciences of the United States of America*; 119(44). doi:10.1073/pnas.2208040119
- Kluge; M. G.; Maltby; S.; Kuhne; C.; Evans; D. J. R.; & Walker; F. R. (2022). Comparing approaches for selection; development; and deployment of extended reality (XR) teaching applications: A case study at The University of Newcastle Australia. *Education and Information Technologies*; 32 pages. doi:10.1007/s10639-022-11364-2
- Lai; T-H.; Ozer; H. G.; Gasparini; P.; Nigita; G.; Distefano; R.; Yu; L.; . . . Sampath; D. (2022). HDAC1 regulates the chromatin landscape to control transcriptional dependencies in chronic lymphocytic leukemia. *Blood Advances*; doi:10.1182/bloodadvances.2022007998
- Ferguson; J. J. A.; Oldmeadow; C.; Bentley; D.; Eslick; S.; & Garg; M. L. (2022). Effect of a polyphenol-rich dietary supplement containing Pinus Massoniana bark extract on blood pressure in healthy adults: A parallel; randomized placebo-controlled trial. *Complementary Therapies in Medicine*; 71; 11 pages. doi:10.1016/j.ctim.2022.102896
- McDiarmid; K. P.; Wood; L. G.; Upham; J. W.; MacDonald-Wicks; L. K.; Shivappa; N.; Hebert; J. R.; & Scott; H. A. (2022). The impact of meal dietary inflammatory index on exercise-induced changes in airway inflammation in adults with asthma. *Nutrients*; 14(20); 11 pages. doi:10.3390/nu14204392
- Reinhardt; L. S.; Zhang; X.; Groen; K.; Morten; B. C.; De Iulius; G. N.; Braithwaite; A. W.; . . . Avery-Kiejda; K. A. (2022). Alterations in the p53 isoform ratio govern breast cancer cell fate in response to DNA damage. *Cell Death & Disease*; 13(10); 18 pages. doi:10.1038/s41419-022-05349-9
- Thanigaimani; S.; Phie; J.; Quigley; F.; Bourke; M.; Bourke; B.; Velu; R.; . . . Golledge; J. (2022). Immunosuppressive drugs for nontransplant comorbidities are not associated with abdominal aortic aneurysm growth. *JVS-Vascular Science*; 3; 306-313. doi:10.1016/j.jvssci.2022.07.002
- Viegas; R.; Dineen-Griffin; S.; Söderlund; L. -Å.; Acosta-Gómez; J.; & Guiu; J. M. (2022). Telepharmacy and pharmaceutical care: A narrative review by International Pharmaceutical Federation. *Farmacia Hospitalaria*; 46(1); 86-91.
- Bukhari; I.; Iqbal; F.; & Thorne; R. F. (2022). Editorial: Relationship between gestational and neonatal diabetes mellitus. *Frontiers in Endocrinology*; 13; 3 pages. doi:10.3389/fendo.2022.1060147
- Cheng; F.; Li; M.; Thorne; R. F.; Liu; G.; Zhang; Y.; Wu; M.; & Liu; L. (2022). P21-activated Kinase 4 Pak4 maintains embryonic stem cell pluripotency via Akt activation. *Stem Cells (Dayton; Ohio)*; 40(10); 892-905. doi:10.1093/stmcls/sxac050
- Bukhari; I.; Zhang; Y.; Thorne; R. F.; & Mi; Y. (2022). Editorial: Complexity of tumor microenvironment: A major culprit in cancer development. *Frontiers in Endocrinology*; 13; 4 pages. doi:10.3389/fendo.2022.1059885
- Royce; S. G.; Licciardi; P. V.; Beh; R. C.; Bourke; J. E.; Donovan; C.; Hung; A.; . . . Karagiannis; T. C. (2022). Sulforaphane prevents and reverses allergic airways disease in mice via anti-inflammatory; antioxidant; and epigenetic mechanisms. *Cellular and Molecular Life Sciences*; 79(11); 22 pages. doi:10.1007/s00018-022-04609-3
- Blokland; K. E. C.; Nizamoglu; M.; Habibie; H.; Borghuis; T.; Schuliga; M.; Melgert; B. N.; . . . Burgess; J. K. (2022). Substrate stiffness engineered to replicate disease conditions influence senescence and fibrotic responses in primary lung fibroblasts. *Frontiers in Pharmacology*; 13; 17 pages. doi:10.3389/fphar.2022.989169
- Siddall; N. A.; Casagrande; F.; Johanson; T. M.; Dominado; N.; Heaney; J.; Sutherland; J. M.; . . . Hime; G. R. (2022). MiMIC analysis reveals an isoform specific role for Drosophila Musashi in follicle stem cell maintenance and escort cell function. *Cell Death Discovery*; 8(1); 10 pages. doi:10.1038/s41420-022-01245-5
- Hudson BU; Foreman J; Rind G; Manning EE; Jones NC; & van den Buuse M. M. (2022). Differential effects of chronic methamphetamine treatment on high-frequency oscillations and responses to acute methamphetamine and NMDA

- receptor blockade in conscious mice. *Brain Sciences*; 12(11); 14 pages. doi:10.3390/brainsci12111503
- George; P. M.; Reed; A.; Desai; S. R.; Devaraj; A.; Faiez; T. S.; Lavery; S.; . . . Singanayagam; A. (2022). A persistent neutrophil-associated immune signature characterizes post-COVID-19 pulmonary sequelae. *Science Translational Medicine*; 14(671); 16 pages. doi:10.1126/scitranslmed.abo5795
- Valkenborghs; S. R.; Dent; P. C.; & Stillman; C. M. (2022). The intergenerational effects of parental physical activity on offspring brain and neurocognition in humans: A scoping review. *Neuroscience and Biobehavioral Reviews*; 143. doi:10.1016/j.neubiorev.2022.104953
- Li; Q.; Yao; H.; Wang; Y.; Wu; Y.; Thorne; R. F.; Zhu; Y.; . . . Liu; L. (2022). circPRKAA1 activates a Ku80/Ku70/SREBP-1 axis driving de novo fatty acid synthesis in cancer cells. *Cell Reports*; 41(8). doi:10.1016/j.celrep.2022.111707
- Wang; P. L.; Teng; L.; Feng; Y. C.; Yue; Y. M.; Han; M. M.; Yan; Q.; . . . Zhang; X. D. (2022). The N-Myc-responsive lncRNA MILIP promotes DNA double-Strand break repair through non-homologous end joining. *Proceedings of the National Academy of Sciences of the United States of America*; 119(49); e2208904119. doi:10.1073/pnas.2208904119
- Cooper; J.; Duffull; S. B.; & Isbister; G. K. (2022). Predicting serotonin toxicity in serotonin reuptake inhibitor overdose. *Clinical Toxicology*; 7 pages. doi:10.1080/15563650.2022.2151455
- Alshehri; A.; Al-Iedani; O.; Koussis; N.; Khormi; I.; Lea; R.; Lechner-Scott; J.; & Ramadan; S. (2022). Stability of longitudinal DTI metrics in MS with treatment of injectables; fingolimod and dimethyl fumarate. *Multiple Sclerosis Journal*; 28(3_SUPPL); 376.
- Maundu; J.; Galbraith; K.; Croft; H.; Clark; B.; Kirsas; S.; Wilkinson; G.; & Abeyaratne; C. (2022). Development of workplace-based assessment tools To support postgraduate training of provisionally registered pharmacists in Australia. *JACCP Journal of the American College of Clinical Pharmacy*. doi:10.1002/jac5.1714
- Francis; D. I.; Stark; Z.; Scheffer; I. E.; Tan; T. Y.; Murali; K.; Gallacher; L.; . . . Wall; M. (2022). Comparing saliva and blood for the detection of mosaic genomic abnormalities that cause syndromic intellectual disability. *European Journal of Human Genetics*. doi:10.1038/s41431-022-01232-5
- Tan; N. S.; Mukherjee; M.; Lim; S. Y.; Rouers; A.; Hwang; Y. Y.; Thiam; C. H.; . . . Lim; H. F. (2022). A unique CD27IgD B cell population in the sputum of severe eosinophilic asthma associated with airway autoimmunity. *American Journal of Respiratory Cell and Molecular Biology*; 67(4); 506-511. doi:10.1165/rcmb.2022-0137LE
- Garofalo; M.; Di Leva; G.; Romano; G.; Nuovo; G.; Suh; S. S.; Ngankeu; A.; . . . Croce; C. M. (2022). Retraction notice to: miR-221&222 regulate TRAIL resistance and enhance tumorigenicity through PTEN and TIMP3 down-regulation (miR-221&222 regulate TRAIL resistance and enhance tumorigenicity through PTEN and TIMP3 downregulation (2009) 16(6) (498-509); (S1535610809003833); (10.1016/j.ccr.2009.10.014)). *Cancer Cell*; 40(11); 1440. doi:10.1016/j.ccell.2022.10.005
- Jacques; C. E. D.; Lopes; F. F.; Poletto; E.; Vera; L. N. P.; Vianna; P.; Reinhardt; L. S.; . . . Vargas; C. R. (2022). Evaluation of oxidative stress and mitochondrial function in a type II mucopolysaccharidosis cellular model: in vitro effects of genistein and coenzyme Q10. *Metabolic Brain Disease*; 11 pages. doi:10.1007/s11011-022-01062-w
- Gauthier; M. F.; de Andrade; A. A.; Fisch; J.; Feistauer; V.; Moras; A. M.; Reinhardt; L. S.; . . . Giovenardi; M. (2022). Dietary interventions in mice affect oxidative stress and gene expression of the PRLR and ESR1 in the adipose tissue and hypothalamus of dams and their offspring. *Journal of Physiology and Biochemistry*; 78(1); 271-282. doi:10.1007/s13105-021-00862-5
- Hammerschmidt; T. G.; Donida; B.; Raabe; M.; Faverzani; J. L.; de Fátima Lopes; F.; Machado; A. Z.; . . . Vargas; C. R. (n.d.). Evidence of redox imbalance and mitochondrial dysfunction in Niemann-Pick type C 1 patients: the in vitro effect of combined therapy with antioxidants and β -cyclodextrin nanoparticles. *Metabolic Brain Disease*. doi:10.1007/s11011-022-01128-9
- Kalo; E.; Sherif; N.; Isaac; M.; Baig; A.; Read; S.; & Ahlenstiel; G. (n.d.). A call for implementation of an evidence-based; quality improvement; decompensated cirrhosis discharge care bundle in Australia. *Livers*; 2(2); 97-104. doi:10.3390/livers2020007.
- Kalo; E.; Read; S.; & Ahlenstiel; G. (2022). Reprogramming-evolving path to functional surrogate beta-cells. *Cells*; 11(18); 16 pages. doi:10.3390/cells11182813
- Bournazos; A. M.; Riley; L. G.; Bommireddipalli; S.; Ades; L.; Akesson; L. S.; Al-Shinnag; M.; . . . Cooper; S. T. (2022). Standardized practices for RNA diagnostics using clinically accessible specimens reclassifies 75% of putative splicing variants. *Genetics In Medicine*; 24(1); 130-145. doi:10.1016/j.gim.2021.09.001
- Thavanesan; N.; White; S.; Lee; S.; Ratnayake; B.; Oppong; K. W.; Nayar; M. K.; . . . Pandanaboyana; S. (2022). Analgesia in the initial management of acute pancreatitis: a systematic review and meta-analysis of randomised controlled trials. *World Journal of Surgery*; 46(4); 878-890. doi:10.1007/s00268-021-06420-w
- Kamarajah; S.; Sutandi; N.; Sen; G.; Hammond; J.; Manas; D.; French; J.; & White; S. (2022). Comparative analysis of open; laparoscopic and robotic distal pancreatic resection: The United Kingdom's first single-centre experience. *Journal of Minimal Access Surgery*; 18(1); 77-83. doi:10.4103/jmas.JMAS-163-20
- Peterson; B.; Hawke; F.; Spink; M.; Sadler; S.; Hawes; M.; Callister; R.; & Chuter; V. (2022). Biomechanical and musculoskeletal measurements as risk factors for running-related injury in non-elite runners: a systematic review and meta-analysis of prospective studies. *Sports Medicine-Open*; 8(1); 26 pages. doi:10.1186/s40798-022-00416-z
- Ahmed; W. U. R.; Bhatia; S.; McLean; K. A.; Khaw; R.; Baker; D.; Kamarajah; S. K.; . . . Eftychiou; S. (2022). Validation of the OAKS prognostic model for acute kidney injury after gastrointestinal surgery. *BJS Open*; 6(1); 17 pages. doi:10.1093/bjsopen/zrab150
- Clancy; B.; Bonevski; B.; English; C.; Baker; A. L.; Turner; A.; Magin; P.; . . . Guillaumier; A. (2022). Access to and use of internet and social media by low-morbidity stroke survivors participating in a national web-based secondary stroke prevention trial: cross-sectional survey. *Journal of Medical Internet Research*; 24(5); 13 pages. doi:10.2196/33291
- Kamarajah; S. K.; Al-Rawashdeh; W.; White; S. A.; Abu Hilal; M.; Salti; G. I.; & Dahdaleh; F. S. (2022). Adjuvant radiotherapy improves long-term survival after resection for gallbladder cancer A population-based cohort study. *European Journal of Surgical Oncology*; 48(2); 425-434. doi:10.1016/j.ejso.2021.09.002
- Derman; W.; Badenhorst; M.; Eken; M. M.; Ezeiza-Gomez; J.; Fitzpatrick; J.; Gleeson; M.; . . . Schwellnus; M. (2022). Incidence of acute respiratory illnesses in athletes: a systematic review and meta-analysis by a subgroup of the IOC consensus on 'acute respiratory illness in the athlete. *British Journal of Sports Medicine*; 56(11); 630+. doi:10.1136/bjsports-2021-104737
- Taylor; R.; Rollo; M. E.; Baldwin; J. N.; Hutchesson; M.; Aguiar; E. J.; Wynne; K.; . . . Collins; C. E. (2022). Evaluation of a Type 2 diabetes risk reduction online program for women with recent gestational diabetes: a randomised trial. *International Journal of Behavioral Nutrition and Physical Activity*; 19(1); 13 pages. doi:10.1186/s12966-022-01275-3
- Hazan; S.; Dave; S.; Gunaratne; A. W.; Dolai; S.; Clancy; R. L.; McCullough; P. A.; & Borody; T. J. (2022). Effectiveness of ivermectin-based multidrug therapy in severely hypoxic; ambulatory COVID-19 patients. *Future Microbiology*; 17(5); 339-350. doi:10.2217/fmb-2022-0014
- Guillaumier; A.; Spratt; N.; Pollack; M.; Baker; A.; Magin; P.; Turner; A.; . . . Bonevski; B. (2022). Evaluation of an online intervention for improving stroke survivors' health-related quality of life: A randomised controlled trial. *PLOS Medicine*; 19(4); 17 pages. doi:10.1371/journal.pmed.1003966
- Dzator; J. S. A.; Howe; P. R. C.; Coupland; K. G.; & Wong; R. H. X. (2022). A randomised; double-blind; placebo-controlled crossover trial of Resveratrol supplementation for prophylaxis of hormonal migraine. *Nutrients*; 14(9); 10 pages. doi:10.3390/nu14091763
- Baldwin; J. N.; Haslam; R. L.; Clarke; E.; Attia; J.; Hutchesson; M. J.; Rollo; M. E.; . . . Collins; C. E. (2022). Eating behaviors and diet quality: A national survey of Australian young adults. *Journal of Nutrition Education and Behavior*; 54(5); 397-405. doi:10.1016/j.jneb.2021.12.001
- Hedley; K. E.; Callister; R. J.; Callister; R.; Horvat; J. C.; & Tadros; M. A. (2022). Alterations in brainstem respiratory centers following peripheral inflammation: A systematic review. *Journal of Neuroimmunology*; 369; 12 pages. doi:10.1016/j.jneuroim.2022.577903
- Bliss; E. S.; Wong; R. H. X.; Howe; P. R. C.; & Mills; D. E. (2022). The effects of aerobic exercise training on cerebrovascular and cognitive function in sedentary; obese; older adults. *Frontiers in Aging Neuroscience*; 14; 15 pages. doi:10.3389/fnagi.2022.892343
- Peterson; B.; Withers; B.; Hawke; F.; Spink; M.; Callister; R.; & Chuter; V. (2022). Outcomes of participation in parkrun; and factors influencing why and how often individuals participate: A systematic review of quantitative studies. *Journal of Sports Sciences*; 40(13); 1486-1499. doi:10.1080/02640414.2022.2086522
- Valkenborghs; S. R.; Anderson; S. L.; Scott; H. A.; & Callister; R. (2022). Exercise training programs improve cardiorespiratory and functional fitness in adults with asthma. A systematic review and meta-analysis. *Journal of Cardiopulmonary Rehabilitation and Prevention*; 42(6); 423-433. doi:10.1097/HCR.0000000000000698
- Borody; T. J.; Dolai; S.; Gunaratne; A. W.; & Clancy; R. L. (2022). Targeting the microbiome in Crohn's disease. *Expert Review of Clinical Immunology*; 18(9); 873-877. doi:10.1080/1744666X.2022.2093186

- Peterson; B.; Searle; A.; Spink; M.; Hawke; F.; Callister; R.; & Chuter; V. (2022). Going their own way-male recreational runners and running-related injuries: A qualitative thematic analysis. *PLoS One*; 17(8 August). doi:10.1371/journal.pone.0273401
- Bruce JK; Burns GL; Soh WS; Nair PM; Sherwin S; Fan K;...Keely S. (2022). Defects in NLRP6; autophagy and goblet cell homeostasis are associated with reduced duodenal CRH receptor 2 expression in patients with functional dyspepsia. *Brain Behavior and Immunity*; 101; 335-345. doi:10.1016/j.bbi.2022.01.019
- Iredale; J. A.; Stoddard; J. G.; Drury; H. R.; Browne; T. J.; Elton; A.; Madden JFF;...Graham; B. A. (2022). Recording network activity in spinal nociceptive circuits using microelectrode arrays. *Journal of Visualized Experiments*; (180). doi:10.3791/62920
- Lorincz D; Poppi LA; Holt JC; Drury HR; Lim R; & Brichta AM. (2022) The long and winding road-vestibular efferent anatomy in mice. *Frontiers in Neural Circuits*; 15; 18 pages. doi:10.3389/fncir.2021.751850
- Liu; X.; Li; X.; Chen; L.; Hsu; A. C. -Y.; Asquith; K. L.; Liu; C.;...Yang; M. (2022) Proteomic analysis reveals a novel therapeutic strategy using fludarabine for steroid-resistant asthma exacerbation. *Frontiers in Immunology*; 13; 13 pages. doi:10.3389/fimmu.2022.805558
- Williams; E. J.; Berthon; B. S.; Stoodley; I.; Williams; L. M.; & Wood; L. G. (2022). Nutrition in asthma. *Seminars in Respiratory and Critical Care Medicine*; 43(05); 646-661. doi:10.1055/s-0042-1742385
- Reinhardt; L. S.; Moras; A. M.; Henn; J. G.; Arantes; P. R.; Ferro; M. B.; Braganhol; E.; . . . Moura; D. J. (2022). Nek1-inhibitor and temozolomide-loaded microfibers as a co-therapy strategy for glioblastoma treatment. *International Journal of Pharmaceutics*; 617; 14 pages. doi:10.1016/j.ijpharm.2022.121584
- Fan; K.; Eslick; G. D.; Nair; P. M.; Burns; G. L.; Walker; M. M.; Hoedt; E. C.; . Talley; N. J. (2022). Human intestinal spirochetosis; irritable bowel syndrome; and colonic polyps: A systematic review and meta-analysis. *Journal of Gastroenterology and Hepatology*; 37(7); 1222-1234. doi:10.1111/jgh.15851
- Berthon; B. S.; Williams; L. M.; Williams; E. J.; & Wood; L. G. (2022). Effect of lactoferrin supplementation on inflammation; immune function; and prevention of respiratory tract infections in humans: a systematic review and meta-analysis. *Advances in Nutrition*; 13(5); 1799-1819. doi:10.1093/advances/nmac047
- Dzator; J. S. A.; Howe; P. R. C.; Coupland; K. G.; & Wong; R. H. X. (2022). A randomised; double-blind; placebo-controlled crossover trial of resveratrol supplementation for prophylaxis of hormonal migraine. *Nutrients*; 14(9); 10 pages. doi:10.3390/nu14091763
- Hammerschmidt TG; Donida B; Faverzani JL; Moura AP; dos Reis BG; Machado; A. Z.; . . . Vargas; C. R. (2022). Cytokine profile and cholesterol levels in patients with Niemann-Pick type C disease presenting neurological symptoms: in-vivo effect of Miglustat and in-vitro effect of N-acetylcysteine and coenzyme Q10. *Experimental Cell Research*; 416(2); 9 pages. doi:10.1016/j.yexcr.2022.113175
- Choo; Y. W.; Mohd Tahir; N. A.; Mohamed Said; M. S.; Li; S. C.; & Makmor Bakry; M. (2022). Cost-effectiveness of denosumab for the treatment of postmenopausal osteoporosis in Malaysia. *Osteoporosis International*; 33(9); 1909-1923. doi:10.1007/s00198-022-06444-5
- Hoedt; E. C.; Fan; K.; Burns; G. L.; Kang; S.; Morrison; M.; Talley; N. J.; & Keely; S. (2022). Functional dyspepsia duodenum mucosal associated microbiota: comparison between fresh biopsy and historical formalin-fixed paraffin embedded biopsies is viable (Withdrawal of Vol 36; 10.1096/FASEBJ.2022.36.S1.R4272; 2022). *FASEB Journal*; 36(6); 1 page. doi:10.1096/asebj.2022.36.S1.R4272
- Fan; K.; Gottstein; M.; Walker; M. M.; Hoedt; E. C.; Talley; N. J.; & Keely; S. (2022). Mucosal immune characterization of colonic spirochetosis (Withdrawal of Vol 36; 10.1096/FASEBJ.2022.36.S1.R4289; 2022). *FASEB Journal*; 36(6); 1 page. doi:10.1096/asebj.2022.36.S1.R4289
- Reinhardt; L. S.; Groen; K.; Morten; B. C.; Bourdon; J. -C.; & Avery-Kiejda; K. A. (2022). Cytoplasmic p53 beta isoforms are associated with worse disease-free survival in breast cancer. *International Journal of Molecular Sciences*; 23(12); 20 pages. doi:10.3390/ijms23126670
- Stitt; I. M.; Wellings; T. P.; Drury; H. R.; Jobling; P.; Callister; R. J.; Brichta; A. M.; & Lim; R. (2022). Properties of Deiters' neurons and inhibitory synaptic transmission in the mouse lateral vestibular nucleus. *Journal of Neurophysiology*; 128(1); 131-147. doi:10.1152/jn.00016.2022
- Venkata; V. D.; Jamaluddin; M. F. B.; Goad; J.; Drury; H. R.; Tadros; M. A.; Lim; R.; . . . Tanwar; P. S. (2022). Development and characterization of human fetal female reproductive tract organoids to understand Müllerian duct anomalies. *Proceedings of the National Academy of Sciences of the United States of America*; 119(30). doi:10.1073/pnas.2118054119
- Bagheri-Fam; S.; Alankarage; D.; Frost; E. R.; & Harley; V. R. (2022). Dataset of differentially expressed genes in mouse P12 testes in response to the loss of ATRX in Sertoli cells. *Data in Brief*; 42; 108230. doi:10.1016/j.dib.2022.108230
- Li; L.; Mac Aogáin; M.; Xu; T.; Jaggi; T. K.; Chan; L. L. Y.; Qu; J.; . Chotirmall; S. H. (2022). Neisseria species as pathobionts in bronchiectasis. *Cell Host and Microbe*; 30(9); 1311-1327.e8. doi:10.1016/j.chom.2022.08.005
- Frost; E. R.; Ford; E. A.; Peters; A. E.; Lovell-Badge; R.; Taylor; G.; McLaughlin; E. A.; & Sutherland; J. M. (2022). A new understanding; guided by single-cell sequencing; of the establishment and maintenance of the ovarian reserve in mammals. *Sexual Development*; 11 pages. doi:10.1159/000526426
- Greco; L. A.; Reay; W. R.; Dayas; C.; & Cairns; M. J. (2022). Pairwise genetic meta-analyses between schizophrenia and substance dependence phenotypes reveals novel association signals with pharmacological significance. *Translational Psychiatry*; 12(1); 9 pages. doi:10.1038/s41398-022-02186-4
- McLachlan; T.; Matthews; W. C.; Jackson; E. R.; Staudt; D. E.; Douglas; A. M.; Findlay; I. J.; . . . Dun; M. D. (2022). B-cell Lymphoma 6 (BCL6): From master regulator of humoral immunity to oncogenic driver in pediatric cancers. *Molecular Cancer Research: MCR*; 20(12); 1711-1723. doi:10.1158/1541-7786.MCR-22-0567
- Henry Basil; J.; Premakumar; C. M.; Mhd Ali; A.; Mohd Tahir; N. A.; & Mohamed Shah; N. (2022). Prevalence; causes and severity of medication administration errors in the neonatal intensive care unit: a systematic review and meta-analysis. *Drug Safety*; 45(12); 1457-1476. doi:10.1007/s40264-022-01236-6
- Antunes; K. H.; Singanayagam; A.; Williams; L.; Faiez; T. S.; Farias; A.; Jackson; M. M.; . . . Johnston; S. L. (2022). Airway-delivered short-chain fatty acid acetate boosts antiviral immunity during rhinovirus infection. *The Journal of Allergy and Clinical Immunology*; S0091-6749(22)01331-8. doi:10.1016/j.jaci.2022.09.026
- Reinhardt; L. S.; Zhang; X.; Groen; K.; Morten; B. C.; De Iulius; G. N.; Braithwaite; A. W.; . . . Avery-Kiejda; K. A. (2022). Alterations in the p53 isoform ratio govern breast cancer cell fate in response to DNA damage. *Cell Death & Disease*; 13(10); 18 pages. doi:10.1038/s41419-022-05349-9
- George; P. M.; Reed; A.; Desai; S. R.; Devaraj; A.; Faiez; T. S.; Laverty; S.; . . . Singanayagam; A. (2022). A persistent neutrophil-associated immune signature characterizes post-COVID-19 pulmonary sequelae. *Science Translational Medicine*; 14(671); 16 pages. doi:10.1126/scitranslmed.abo5795
- Wang; P. L.; Teng; L.; Feng; Y. C.; Yue; Y. M.; Han; M. M.; Yan; Q.; . . . Zhang; X. D. (2022). The N-Myc-responsive lncRNA MILIP promotes DNA double-strand break repair through non-homologous end joining. *Proceedings of the National Academy of Sciences of the United States of America*; 119(49); e2208904119. doi:10.1073/pnas.2208904119
- Jacques; C. E. D.; Lopes; F. F.; Poletto; E.; Vera; L. N. P.; Vianna; P.; Reinhardt; L. S.; . . . Vargas; C. R. (2022). Evaluation of oxidative stress and Mitochondrial function in a type II mucopolysaccharidosis cellular model: in vitro effects of genistein and coenzyme Q10. *Metabolic Brain Disease*; 11 pages. doi:10.1007/s11011-022-01062-w
- Gauthier; M. F.; de Andrade; A. A.; Fisch; J.; Feistauer; V.; Moras; A. M.; Reinhardt; L. S.; . . . Giovenardi; M. (2022). Dietary interventions in mice affect oxidative stress and gene expression of the PRLR and ESR1 in the adipose tissue and hypothalamus of dams and their offspring. *Journal of Physiology and Biochemistry*; 78(1); 271-282. doi:10.1007/s13105-021-00862-5
- Hammerschmidt; T. G.; Donida; B.; Raabe; M.; Faverzani; J. L.; de Fátima Lopes; F.; Machado; A. Z.; . . . Vargas; C. R. (n.d.). Evidence of redox imbalance and mitochondrial dysfunction in Niemann-Pick type C 1 patients: the in vitro effect of combined therapy with antioxidants and β -cyclodextrin nanoparticles. *Metabolic Brain Disease*. doi:10.1007/s11011-022-01128-9
- Gradwell; M. A.; Boyle; K. A.; Browne; T. J.; Bell; A. M.; Leonardo; J.; Reyes; F.S.P.; . . . Graham; B. A. (2022). Diversity of inhibitory and excitatory parvalbumin interneuron circuits in the dorsal horn. *Pain*; 163(3); E432-E452. doi:10.1097/j.pain.0000000000002422
- Liu; H.; Sun; W.; Zhou; Y.; Griffin; N.; Faulkner; S.; & Wang; L. (2022). iTRAQ-based quantitative proteomics analysis of Sprague-Dawley rats liver reveals perfluorooctanoic acid-induced lipid metabolism and urea cycle dysfunction. *Toxicology Letters*; 357; 20-32. doi:10.1016/j.toxlet.2021.12.016
- Shahandeh; A.; Bui; B. V.; Finkelstein; D. I.; & Nguyen; C. T. O. (2022). Effects of excess iron on the retina: insights from clinical cases and animal models of iron disorders. *Frontiers in Neuroscience*; 15; 13 pages. doi:10.3389/fnins.2021.794809
- Iredale; J. A.; Stoddard; J. G.; Drury; H. R.; Browne; T. J.; Elton; A.; Madden; J. F.; . . . Graham; B. A. (2022). Recording network activity in spinal nociceptive circuits using microelectrode arrays. *Journal of Visualized*

- Di Biase; M. A.; Geaghan; M. P.; Reay; W. R.; Seidlitz; J.; Weickert; C. S.; Pebay; A.; . . . Zalesky; A. (2022). Cell type-specific manifestations of cortical thickness heterogeneity in schizophrenia. *Molecular Psychiatry*; 27(4); 2052-2060. doi:10.1038/s41380-022-01460-7
- Skelding; K. A.; Barry; D. L.; Theron; D. Z.; Lincz; L. F. (2022). Targeting the two-pore channel 2 in cancer progression and metastasis. *Exploration of Targeted Anti-Tumor Therapy*; 3(1); 62-89. doi:10.37349/etat.2022.00072
- Liu; X.; Li; X.; Chen; L.; Hsu; A. C. -Y.; Asquith; K. L.; Liu; C.; . . . Yang; M. (2022) proteomic analysis reveals a novel therapeutic strategy using fludarabine for steroid-resistant asthma exacerbation. *Frontiers in Immunology*; 13; 13 pages. doi:10.3389/fimmu.2022.805558
- Thota; R. N.; Moughan; P. J.; Singh; H.; & Garg; M. L. (2022). Significance of postprandial Insulin and triglycerides to evaluate the metabolic response of composite meals differing in nutrient composition - a randomized cross-over trial. *Frontiers in Nutrition*; 9; 8 pages. doi:10.3389/fnut.2022.816755
- Lozinski; M.; Bowden; N. A.; Graves; M. C.; Fay; M.; Day; B. W.; Stringer BW; & Tooney; P. A. (2022). Transcriptomic Profiling of DNA damage response in patient-derived glioblastoma cells before and after radiation and Temozolomide Treatment. *Cells*; 11(7); 15 pages. doi:10.3390/cells11071215
- Reay; W. R.; Kiltschewskij; D. J.; Geaghan; M. P.; Atkins; J. R.; Carr; V. J.; Green; M. J.; & Cairns; M. J. (2022). Genetic estimates of correlation and causality between blood-based biomarkers and psychiatric disorders. *Science Advances*; 8(14); 17 pages. doi:10.1126/sciadv.abj8969
- Li; X.; Liu; H.; Dun; M. D.; Faulkner; S.; Liu; X.; Jiang; C. C.; & Hondermarck; H. (2022). Proteome and secretome analysis of pancreatic cancer cells. *Proteomics*; 22(13-14); 8 pages. doi:10.1002/pmic.202100320
- Kalagi; N. A.; Thota; R. N.; Stojanovski; E.; Alburikan; K. A.; & Garg ML. (2022) Association between Plasma Trimethylamine N-Oxide Levels and Type 2 Diabetes: A case control study. *Nutrients*; 14(10); 2093. doi:10.3390/nu14102093
- Reay; W. R.; Haslam; R.; Cairns; M. J.; Moschonis; G.; Clarke; E.; Attia; J.; & Collins; C. E. (2022). Variation in cardiovascular disease risk factors among older adults in the Hunter Community Study cohort: A comparison of diet quality versus polygenic risk score. *Journal of Human Nutrition and Dietetics*; 35(4); 675-688. doi:10.1111/jhn.13031
- Tran; K. K. N.; Wong; V. H. Y.; Lim; J. K. H.; Shahandeh; A.; Anh; H.; Finkelstein; D.; . Nguyen; C. T. O. (2022). Characterization of retinal function and structure in the MPTP murine model of Parkinson's disease. *Scientific Reports*; 12(1); 11 pages. doi:10.1038/s41598-022-11495-z
- Thota; R. N.; Chatterjee; P.; Pedrini; S.; Hone; E.; Ferguson; J. J. A.; Garg; M.L.; & Martins; R. N. (2022). Association of plasma neurofilament light chain with glycaemic control and insulin resistance in middle-aged adults. *Frontiers In Endocrinology*; 13; 8 pages. doi:10.3389/fendo.2022.915449
- Reay; W. R.; Geaghan; M. P.; & Cairns; M. J. (2022). The genetic architecture of pneumonia susceptibility implicates mucin biology and a relationship with psychiatric illness. *Nature Communications*; 13(1); 16 pages. doi:10.1038/s41467-022-31473-3
- Vanka; K. S.; Shukla; S.; Gomez; H. M.; James; C.; Palanisami; T.; Williams; K.; . Horvat; J. C. (2022). Understanding the pathogenesis of occupational coal and silica dust-associated lung disease. *European Respiratory Review*; 31(165); 17 pages. doi:10.1183/16000617.0250-2021
- Kuttykattil; A.; Raju; S.; Vanka; K. S.; Bhagwat; G.; Carbery; M.; Vincent; S.G.T.; . . . Palanisami; T. (2022). Consuming microplastics? Investigation of commercial salts as a source of microplastics (MPs) in diet. *Environmental Science and Pollution Research*; 13 pages. doi:10.1007/s11356-022-22101-0
- Chatterjee; P.; Pedrini; S.; Doecke; J. D.; Thota; R.; Villemagne; V. L.; Dore; V.; . . Martins; R. N. (2022). Plasma A beta 42/40 ratio; p-tau181; GFAP; and NFL across the Alzheimer's disease continuum: A cross-sectional and longitudinal study in the AIBL cohort. *Alzheimers & Dementia*; 18 pages. doi:10.1002/alz.12724
- Pedrini; S.; Doecke; J. D.; Hone; E.; Wang; P.; Thota; R.; Bush; A. I.; . . Martins; R. (2022). Plasma high-density lipoprotein cargo is altered in Alzheimer's disease and is associated with regional brain volume. *Journal of Neurochemistry*; 163(1); 53-67. doi:10.1111/jnc.15681
- Greco; L. A.; Reay; W. R.; Dayas; C.; & Cairns; M. J. (2022). Pairwise genetic meta-analyses between schizophrenia and substance dependence phenotypes reveals novel association signals with pharmacological significance. *Translational Psychiatry*; 12(1); 9 pages. doi:10.1038/s41398-022-02186-4
- Nasef; N. A.; Thota; R. N.; Mutukumira; A. N.; Rutherford-Markwick; K.; Dickens; M.; Gopal; P.; . . . Garg; M. L. (2022). Bioactive yoghurt containing curcumin and chlorogenic acid reduces inflammation in postmenopausal women. *Nutrients*; 14(21); 13 pages. doi:10.3390/nu14214619
- Blokland; K. E. C.; Nizamoglu; M.; Habibie; H.; Borghuis; T.; Schuliga; M.; Melgert; B. N.; . . . Burgess; J. K. (2022). Substrate stiffness engineered to replicate disease conditions influence senescence and fibrotic responses in primary lung fibroblasts. *Frontiers in Pharmacology*; 13; 17 pages. doi:10.3389/fphar.2022.989169
- Liu; I.; Jiang; L.; Samuelsson; E. R.; Marco Salas; S.; Beck; A.; Hack; O. A.; . . . Filbin; M. G. (2022). The landscape of tumor cell states and spatial organization in H3-K27M mutant diffuse midline glioma across age and location. *Nature Genetics*. doi:10.1038/s41588-022-01236-3
- Delahunt; B.; Steigler; A.; Atkinson; C.; Christie; D.; Duchesne; G.; Egevad; L.; . . . Denham; J. W. (2022). Percentage grade 4 tumour predicts outcome for prostate adenocarcinoma in needle biopsies from patients with advanced disease: 10-year data from the TROG 03.04 RADAR trial. *Pathology*; 54(1); 49-54. doi:10.1016/j.pathol.2021.11.004
- Kishan; A. U.; Steigler; A.; Denham; J. W.; Zapatero; A.; Guerrero; A.; Joseph; D.; . . . Romero; T. (2022). Interplay between duration of androgen deprivation therapy and external beam radiotherapy with or without a brachytherapy boost for optimal treatment of high-risk prostate cancer a patient-level data analysis of 3 cohorts. *JAMA Oncology*; 8(3); 10 pages. doi:10.1001/jamaoncol.2021.6871
- Kalagi; N. A.; Thota; R. N.; Stojanovski; E.; Alburikan; K. A.; & Garg; M. L. (2022). Association between plasma Trimethylamine N-Oxide levels and Type 2 Diabetes: a case control study. *Nutrients*; 14(10); 2093. doi:10.3390/nu14102093
- Ma; T. M.; Chu; F. I.; Sandler; H.; Feng; F. Y.; Efstathiou; J. A.; Jones; C. U.; . . Kishan; A. U. (2022). Local failure events in prostate cancer treated with radiotherapy: a pooled analysis of 18 randomized trials from the meta-analysis of randomized trials in cancer of the prostate consortium (Leviathan). *European Urology*; 82(5); 487-498. doi:10.1016/j.eururo.2022.07.011
- Yusof; K. M.; Groen; K.; Rosli; R.; Abdullah; M.; Mahmud; R.; & Avery-Kiejda; K. A. (2022). Evaluation of circulating microRNAs and adipokines in breast cancer survivors with arm lymphedema. *International Journal of Molecular Sciences*; 23(19); 21 pages. doi:10.3390/ijms231911359
- Cameron; R.; Walker; M. M.; Thuresson; M.; Roelstraete; B.; Skoldberg; F.; Olen; O.; . . . Ludvigsson; J. F. (2022). Mortality risk increased in colonic diverticular disease: a nationwide cohort study. *Annals of Epidemiology*; 76; 39-49. doi:10.1016/j.annepidem.2022.10.006
- George; P. M.; Reed; A.; Desai; S. R.; Devaraj; A.; Faiez; T. S.; Laverty; S.; . . . Singanayagam; A. (2022). A persistent neutrophil-associated immune signature characterizes post-COVID-19 pulmonary sequelae. *Science Translational Medicine*; 14(671); 16 pages. doi:10.1126/scitranslmed.abo5795
- Ren; S.; Hansbro; P. M.; Srikusalanukul; W.; Horvat; J. C.; Hunter; T.; Brown; A. C.; . . AUSPICE; I. (2022). Generation of cardio-protective antibodies after pneumococcal polysaccharide vaccine: Early results from a randomised controlled trial. *Atherosclerosis*; 346; 68-74. doi:10.1016/j.atherosclerosis.2022.02.011
- Prasad; S. S.; Walker; M. M.; Talley; N. J.; Keely; S.; Kairuz; T.; Jones; M. P.; & Duncanson; K. (2022). Healthcare needs and perceptions of people living with inflammatory bowel disease in australia: a mixed-methods study. *Crohn's and Colitis*; 360; 4(1). doi:10.1093/crocol/otab084
- Thiruchelvam; K.; Byles; J.; Hasan; S. S.; Egan; N.; & Kairuz; T. (2022). Impact of medication reviews on potentially inappropriate medications and associated costs among older women in aged care. *Research in Social & Administrative Pharmacy*; 18(10); 3758-3765. doi:10.1016/j.sapharm.2022.05.003
- Reinhardt; L. S.; Zhang; X.; Groen; K.; Morten; B. C.; De Iulius; GN; Braithwaite; A. W.; . . . Avery-Kiejda; K. A. (2022). Alterations in the p53 isoform ratio govern breast cancer cell fate in response to DNA damage. *Cell Death & Disease*; 13(10); 18 pages. doi:10.1038/s41419-022-05349-9
- Thomas; D.; McDonald; V. M.; Simpson; J. L.; Smith; A.; Gupta; S.; Majellano; E.; & Gibson; P. G. (2022). Patterns of azithromycin use in obstructive airway diseases: a real-world observational study. *Internal Medicine Journal*; 52(6); 1016-1023. doi:10.1111/imj.15216
- Gradwell; M. A.; Boyle; K. A.; Browne; T. J.; Bell; A. M.; Leonardo; J.; Reyes; F. S. P.; . . . Graham; B. A. (2022). Diversity of inhibitory and excitatory parvalbumin interneuron circuits in the dorsal horn. *Pain*; 163(3); E432-E452. doi:10.1097/j.pain.0000000000002422
- Ferguson; J. J. A.; Oldmeadow; C.; Mishra; G. D.; & Garg; M. L. (2022). Plant-based dietary patterns are associated with lower body weight; BMI and waist circumference in older Australian women. *Public Health Nutrition*; 25(1); 18-31. doi:10.1017/S1368980021003852
- Foster; P. S.; Barnes; J. L.; Tay; H. L.; & Gibson; P. G. (2022). Transcriptomic drug-response gene signatures are informative for the stratification of patients for clinical trials. *Journal of Allergy and Clinical Immunology*; 149(1); 55-57.

- Rigauts; C.; Aizawa; J.; Taylor; S. L.; Rogers; G. B.; Govaerts; M.; Cos; P.; Crabbe; A. (2022). *Rothia mucilaginosa* is an anti-inflammatory bacterium in the respiratory tract of patients with chronic lung disease. *European Respiratory Journal*; 59(5); 16 pages. doi:10.1183/13993003.01293-2021
- Dong; P. T. X.; Pham; V. T. T.; Nguyen; T. T.; Nguyen; H. T. L.; Hua; S.; & Li; S. C. (2022). Unintentional medication discrepancies at admission among elderly inpatients with chronic medical conditions in Vietnam: a single-centre observational study. *Drugs- Real World Outcomes*; 9(1); 141-151. doi:10.1007/s40801-021-00274-3
- Pinkerton JW; Kim RY; Brown AC; Rae BE; Donovan C; Mayall JR;.... Horvat; J. C. (2022). Relationship between type 2 cytokine and inflammasome responses in obesity-associated asthma. *Journal of Allergy and Clinical Immunology*; 149(4); 1270-1280. doi:10.1016/j.jaci.2021.10.003
- Tiotiu; A.; Badi; Y.; Kermani; N. Z.; Sanak; M.; Kolmert; J.; Wheelock; C. E.; . Chung; K. F. (2022). Association of differential mast cell activation with granulocytic inflammation in severe asthma. *American Journal of Respiratory and Critical Care Medicine*; 205(4); 397-+. doi:10.1164/rccm.202102-0355OC
- Brown; R. M.; Dayas; C.; James; M. H.; & Smith; R. J. (2022). New directions in modelling dysregulated reward seeking for food and drugs. *Neuroscience and Biobehavioral Reviews*; 132; 1037-1048. doi:10.1016/j.neubiorev.2021.10.043
- Griffin; C. P.; Paul; C. L.; Alexander; K. L.; Walker; M. M.; Hondermarck; H.; & Lynam; J. (2022). Postmortem brain donations vs premortem surgical resections for glioblastoma research: viewing the matter as a whole. *Neuro-Oncology Advances*; 4(1). doi:10.1093/naojnl/vdab168
- Hu; M. D.; Golovchenko; N. B.; Burns; G. L.; Nair; P. M.; Kelly; T. J.; Agos; J;... Edelblum; K. L. (2022). Gamma delta intraepithelial lymphocytes facilitate pathological epithelial cell shedding via CD103-mediated granzyme release. *Gastroenterology*; 162(3); 877-+. doi:10.1053/j.gastro.2021.11.028
- Bournazos; A. M.; Riley; L. G.; Bommireddipalli; S.; Ades; L.; Akesson; L. S.; Al-Shinnag; M.; . . . Cooper; S. T. (2022). Standardized practices for RNA Diagnostics using clinically accessible specimens reclassifies 75% of putative splicing variants. *Genetics in Medicine*; 24(1); 130-145. doi:10.1016/j.gim.2021.09.001
- Delahunt; B.; Steigler; A.; Atkinson; C.; Christie; D.; Duchesne; G.; Egevad L;... Denham; J. W. (2022). Percentage grade 4 tumour predicts outcome for prostate adenocarcinoma in needle biopsies from patients with advanced disease: 10-year data from the TROG 03.04 RADAR trial. *Pathology*; 54(1); 49-54. doi:10.1016/j.pathol.2021.11.004
- Chopra; N.; Menounos; S.; Choi; J. P.; Hansbro; P. M.; Diwan; A. D.; & Das; A. (n.d.). Blood-spinal cord barrier: its role in spinal disorders and emerging therapeutic strategies. *NeuroScience*; 3(1); 1-27. doi:10.3390/neurosci3010001
- Burnard; S. M.; Lea; R. A.; Benton; M.; Eccles; D.; Kennedy; D. W.; Lechner-Scott; J.; & Scott; R. J. (2022). Capturing SNP association across the NK receptor and HLA gene regions in Multiple Sclerosis by targeted penalised regression models. *Genes*; 13(1); 28 pages. doi:10.3390/genes13010087
- Khan; S.; Brichta; A. M.; & Migliaccio; A. A. (2022). a once-daily high dose of intra-peritoneal ascorbate improves vestibulo-ocular reflex compensation after unilateral labyrinthectomy in the mouse. *JARO-Journal of The Association for Research in Otolaryngology*; 23(1); 27-34. doi:10.1007/s10162-021-00831-1
- Ahearn; T. U.; Zhang; H.; Michailidou; K.; Milne; R. L.; Bolla; M. K.; Dennis J;.. Wilcken; N. (2022). Common variants in breast cancer risk loci predispose to distinct tumor subtypes. *Breast Cancer Research*; 24(1). doi:10.1186/s13058-021-01484-x
- Reichenbach A; Clarke RE; Stark R; Lockie SH; Mequinion M; Dempsey; H.; . . Andrews; Z. B. (2022). Metabolic sensing in AgRP neurons integrates homeostatic Star E with dopamine signalling in the striatum. *eLife*; 11; 24 pages. doi:10.7554/eLife.72668
- Lim; B. W. X.; Li; N.; Rowley; S. M.; Thompson; E. R.; McInerney; S.; Zethoven; M.; . . Campbell; I. G. (2022). Integration of tumour sequencing and case-control data to assess pathogenicity of RAD51C missense variants in familial breast cancer. *NPJ Breast Cancer*; 8(1); 6 pages. doi:10.1038/s41523-021-00373-y
- Manandhar; B.; Paudel; K. R.; Panth; N.; Hansbro; P.; Oliver; B. G.; & Dua; K. (2022). Applications of extracellular vesicles as a drug-delivery system for chronic respiratory diseases. *Nanomedicine*; 17(12); 817-820. doi:10.2217/nnm-2021-0384
- Dhanjal; D. S.; Sharma; P.; Mehta; M.; Tambuwala; M. M.; Prasher; P.; Paudel; K. R.; . . Satija; S. (2022). Concepts of advanced therapeutic delivery systems for the management of remodeling and inflammation in airway diseases. *Future Medicinal Chemistry*; 14(4); 271-288. doi:10.4155/fmc-2021-0081
- Paudel; K. R.; Mehta; M.; Shukla; S. D.; Panth; N.; Chellappan DK; Dua K; & Hansbro; P. (2022). Advancements in nanotherapeutics targeting senescence in chronic obstructive pulmonary disease. *Nanomedicine*; 4 pages. doi:10.2217/nnm-2021-0373
- Jarrott; B.; Head; R.; Pringle; K. G.; Lumbers; E. R.; & Martin; J. H. (2022). "Long COVID"-A hypothesis for understanding the biological basis and pharmacological treatment strategy. *Pharmacology Research & Perspectives*; 10(1); 10 pages. doi:10.1002/prp2.911
- Pardinas; A. F.; Smart; S. E.; Willcocks; I. R.; Holmans; P. A.; Dennison; C. A.; Lynham; A. J.; . . . Walters; J. T. R. (2022). Interaction testing and polygenic risk scoring to estimate the association of common genetic variants with treatment resistance in schizophrenia. *JAMA Psychiatry*; 79(3); 260-269. doi:10.1001/jamapsychiatry.2021.3799
- Boilly; B.; Hondermarck; H.; & Boilly-Marer; Y. (2022). Neural regulation of body polarities in nereid worm regeneration. *FASEB BioAdvances*; 4(1); 22-28. doi:10.1096/fba.2021-00116
- Ditton; E.; Knott; B.; Knott; B.; Hodyl; N.; Horton; G.; Walker; FR.; & Nilsson; M. (2022). Assessing the efficacy of an individualized psychological flexibility skills training intervention App for medical student burnout and well-being: protocol for a randomized controlled trial. *JMIR Research Protocols*; 11(2); e32992. doi:10.2196/32992
- Bruce; J. K.; Burns; G. L.; Soh; W. S.; Nair; P. M.; Sherwin; S.; Fan; K.; . . Keely; S. (2022). Defects in NLRP6; autophagy and goblet cell homeostasis are associated with reduced duodenal CRH receptor 2 expression in patients with functional dyspepsia. *Brain Behavior and Immunity*; 101; 335-345. doi:10.1016/j.bbi.2022.01.019
- Zhu; Y.; Jin; L.; Shi; R.; Li; J.; Wang; Y.; Zhang; L.; . . . Wu; M. (2022). The long noncoding RNA glycoLINC assembles a lower glycolytic metabolon to promote glycolysis. *Molecular Cell*; 82(3); 542-+. doi:10.1016/j.molcel.2021.11.017
- Janssen; H.; Bird; M. -L.; Luker; J.; Sellar; B.; Berndt; A.; Ashby; S.; . Spratt; N. J. (2022). Impairments; and physical design and culture of a rehabilitation unit influence stroke survivor activity: qualitative analysis of rehabilitation staff perceptions. *Disability and Rehabilitation*; 6 pages. doi:10.1080/09638288.2021.2019840
- Mullins; N.; Kang; J.; Campos; A.; Coleman; J. R.; Edwards; A. C.; Galfalvy; H.; . . . Ruderfer; D. M. (2021). Dissecting the shared genetic architecture of suicide attempt; psychiatric disorders; and known risk factors. *Biological Psychiatry*; 91(3); 313-327. doi:10.1016/j.biopsych.2021.05.029
- Lumbers; E. R.; Head; R.; Smith; G. R.; Delforce; S. J.; Jarrott; B.; Martin; J. H.; & Pringle; K. G. (2022). The interacting physiology of COVID-19 and the renin-angiotensin-aldosterone system: Key agents for treatment. *Pharmacology Research & Perspectives*; 10(1); 16 pages. doi:10.1002/prp2.917
- Head; R. J.; Lumbers; E. R.; Jarrott; B.; Tretter; F.; Smith; G.; Pringle; K. G.; . . . Martin; J. H. (2022). Systems analysis shows that thermodynamic physiological and pharmacological fundamentals drive COVID-19 and response to treatment. *Pharmacology Research & Perspectives*; 10(1); 22 pages. doi:10.1002/prp2.922
- Kashida; Y. T.; Lillcrap; T.; Walker; R.; Holliday; E.; Hasnain; M. G.; Tomari; S.; . . . Levi; C. (2022). Transition in incidence rate of hospitalised stroke and case fatality rate in the Hunter region; Australia; 2001-2019: A prospective hospital-based study. *Journal Of Stroke & Cerebrovascular Diseases*; 31(4); 10 pages. doi:10.1016/j.jstrokecerebrovasdis.2021.106266
- Jin; R.; He; S.; Black; K. A.; Clarke; O. B.; Wu; D.; Bolla; J. R.; . . . Gulbis; J. M. (2022). Ion currents through KIR potassium channels are gated by anionic lipids. *Nature Communications*; 13(1); 11 pages. doi:10.1038/s41467-022-28148-4
- Shah; A.; Thite; P.; Hansen; T. J.; Fairlie; T.; Jones; M. P.; Koloski; N. A.; . . . Holtmann; G. J. (2022). Small intestinal bacterial overgrowth in celiac disease: a systematic review and meta-analysis of case-control studies. *Gastroenterology*; 162(7); S866-S867.
- Jha; S. K.; Imran; M.; Paudel; K. R.; Mohammed; Y.; Hansbro; P.; & Dua; K. (2022). Treating primary lymphoma of the brain in AIDS patients via multi-functional oral nanoparticulate systems. *Nanomedicine*; 17(7); 425-429. doi:10.2217/nnm-2021-0444
- Ryan; A.; Paul; C. L.; Cox; M.; Whalen; O.; Bivard; A.; Attia; J.; . . . Levi; C. R. (2022). TACTICS-trial of advanced CT imaging and combined education support for Drip and Ship: evaluating the effectiveness of an 'implementation intervention' in providing better patient access to reperfusion therapies: protocol for a non-randomised controlled stepped wedge cluster trial in acute stroke. *BMJ Open*; 12(2); 12 pages. doi:10.1136/bmjopen-2021-055461
- Kan; S.; Grainge; C.; Nichol; K.; Reid; A.; Knight; D.; Sun; Y.; . . Liang; M. (2022). TLR7 agonist loaded airway epithelial targeting nanoparticles stimulate innate immunity and suppress viral replication in human bronchial epithelial cells. *International Journal of Pharmaceutics*; 617; 13 pages. doi:10.1016/j.ijpharm.2022.121586
- Mostafavi; H.; Tharmarajah; K.; Vider; J.; West; N. P.; Freitas; J R.; Cameron; B;

- ... Zaid; A. (2022). Interleukin-17 contributes to Ross River virus-induced arthritis and myositis. *PLOS Pathogens*; 18(2); 33 pages. doi:10.1371/journal.ppat.1010185
- Di Biase; M. A.; Geaghan; M. P.; Reay; W. R.; Seidltz; J.; Weickert; C. S.; Pebay; A.; ... Zalesky; A. (2022). Cell type-specific manifestations of cortical thickness heterogeneity in schizophrenia. *Molecular Psychiatry*; 27(4); 2052-2060. doi:10.1038/s41380-022-01460-7
- Donovan; C.; Kim; R. Y.; Galvao; I.; Jarnicki; A. G.; Brown; A. C.; Jones-Freeman; B.; ... Hansbro; P. M. (2022). Aim2 suppresses cigarette smoke-induced neutrophil recruitment; neutrophil caspase-1 activation and anti-Ly6G-mediated neutrophil depletion. *Immunology and Cell Biology*; 100(4); 235-249. doi:10.1111/imcb.12537
- Eslick; S.; Williams; E. J.; Berthon; B. S.; Wright; T.; Karihaloo; C.; Gately; M.; & Wood; L. G. (2022). Weight loss and short-chain fatty acids reduce systemic inflammation in monocytes and adipose tissue macrophages from obese subjects. *Nutrients*; 14(4); 17 pages. doi:10.3390/nu14040765
- Kenah; K.; Bernhardt; J.; Spratt; N. J.; Oldmeadow; C.; & Janssen; H. (2022). Depression and a lack of socialization are associated with high levels of boredom during stroke rehabilitation: An exploratory study using a new conceptual framework. *Neuropsychological Rehabilitation*; 31 pages. doi:10.1080/09602011.2022.2030761
- Tan; C. L.; Chan; Y.; Candasamy; M.; Chellian; J.; Madheswaran; T.; Sakthivel; L. P.; ... Chellappan; D. K. (2022). Unravelling the molecular mechanisms underlying chronic respiratory diseases for the development of novel therapeutics via in vitro experimental models. *European Journal of Pharmacology*; 919; 22 pages. doi:10.1016/j.ejphar.2022.174821
- Paudel; K. R.; Mehta; M.; Yin; G. H. S.; Yen; L. L.; Malya; V.; Patel; V. K.; ... Dua; K. (2022). Berberine-loaded liquid crystalline nanoparticles inhibit non-small cell lung cancer proliferation and migration in vitro. *Environmental Science and Pollution Research*; 29(31); 46830-46847. doi:10.1007/s11356-022-19158-2
- Liu; X.; Li; X.; Chen; L.; Hsu; A. C. -Y.; Asquith; K. L.; Liu; C.; ... Yang; M. (2022). Proteomic analysis reveals a novel therapeutic strategy using fludarabine for steroid-resistant asthma exacerbation. *Frontiers in Immunology*; 13; 13 pages. doi:10.3389/fimmu.2022.805558
- Ren; S.; Hansbro; P. M.; Sriksalanukul; W.; Horvat; J. C.; Hunter; T.; Brown; A. C.; ... AUSPICE; I. (2022). Generation of cardio-protective antibodies after pneumococcal polysaccharide vaccine: Early results from a randomised controlled trial. *Atherosclerosis*; 346; 68-74. doi:10.1016/j.atherosclerosis.2022.02.011
- Prasad; S. S.; Walker; M. M.; Talley; N. J.; Keely; S.; Kairuz; T.; Jones; M. P.; & Duncanson; K. (2022). Healthcare needs and perceptions of people living with inflammatory bowel disease in Australia: a mixed-methods study. *Crohn's and Colitis*; 36(4); 4(1). doi:10.1093/crocol/otab084
- Runtsch; M. C.; Angiari; S.; Hoofman; A.; Wadhwa; R.; Zhang Y; Zheng; Y; ... O'Neill; L. A. J. (2022). Itaconate and itaconate derivatives target JAK1 to suppress alternative activation of macrophages. *Cell Metabolism*; 34(3); 487-+. doi:10.1016/j.cmet.2022.02.002
- Zhang; Y.; Almazi; J. G.; Ong; H. X.; Johansen; M. D.; Ledger; S.; Traini; D.; Ahlenstiel; C. L. (2022). Nanoparticle delivery platforms for RNAi therapeutics targeting COVID-19 disease in the respiratory tract. *International Journal of Molecular Sciences*; 23(5). doi:10.3390/ijms23052408
- Williams; E. J.; Guilleminault; L.; Berthon; B. S.; Eslick; S.; Wright; T.; Karihaloo; C.; ... Wood; L. G. (2022). Sulforaphane reduces pro-inflammatory response to palmitic acid in monocytes and adipose tissue macrophages. *Journal of Nutritional Biochemistry*; 104; 10 pages. doi:10.1016/j.jnutbio.2022.108978
- Tamanna; S.; Morosin; SK; Delforce; S. J.; van Helden; D. F.; Lumbers; E. R.; & Pringle; K. G. (2022). Renin-angiotensin system (RAS) enzymes and placental trophoblast syncytialisation. *Molecular and Cellular Endocrinology*; 547; 9 pages. doi:10.1016/j.mce.2022.111609
- Alemseged; F.; Rocco; A.; Arba; F.; Schwabova; J. P.; Wu; T.; Cavicchia; L.; . Campbell; B. C. V. (2022). Posterior National Institutes of Health Stroke Scale improves prognostic accuracy in posterior circulation stroke. *Stroke*; 53(4); 1247-1255. doi:10.1161/STROKEAHA.120.034019
- Li; D.; Hu; L. N.; Zheng; S. M.; La; T.; Wei; L. Y.; Zhang; XJ; ... Gao; J. N. (2022) High nerve density in breast cancer is associated with poor patient outcome. *FASEB BioAdvances*; 4(6); 391-401. doi:10.1096/fba.2021-00147
- van Helden; D. F. (2022). Insights into permeability control of the fenestrated endothelium of the jejunal microvasculature. *Pflugers Archive-European Journal of Physiology*; 474(5); 485-486. doi:10.1007/s00424-022-02680-0
- Williams EJ; Berthon BS; Stoodley I; Williams LM & Wood LG. (2022). Nutrition in Asthma. *Seminars In Respiratory and Critical Care Medicine*; 43(05); 646-661. doi:10.1055/s-0042-1742385
- Janssen; H.; Bird; M.-L.; Luker; J.; McCluskey; A.; Blennerhassett; J.; Ada; L.; . Spratt; N. J. (2022). Stroke survivors' perceptions of the factors that influence engagement in activity outside dedicated therapy sessions in a rehabilitation unit: A qualitative study. *Clinical Rehabilitation*; 36(6); 822-830. doi:10.1177/02692155221087424
- Crombie GK; Palliser HK; Shaw JC; Hodgson DM; Walker DW & Hirst; J. J. (2022) Evaluating changes in GABAergic and glutamatergic pathways in early life following prenatal stress and postnatal neurosteroid supplementation. *Psychoneuroendocrinology*; 139; 13 pages. doi:10.1016/j.psyneuen.2022.105705
- Radhakrishnan; D.; Mohanan; S.; Choi; G.; Choy; J. -H.; Tiburcius; S.; Trinh; H. T.; ... Vinu; A. (2022). The emergence of nanoporous materials in lung cancer therapy. *Science and Technology of Advanced Materials*; 23(1); 225-274. doi:10.1080/14686996.2022.2052181
- Imran; M.; Jha; S. K.; Hasan; N.; Insaf; A.; Shrestha; J.; Shrestha; J.; ... Mohammed; Y. (2022). Overcoming multidrug resistance of antibiotics via nanodelivery systems. *Pharmaceutics*; 14(3); 25 pages. doi:10.3390/pharmaceutics14030586
- John; A. R.; Singh; A. K.; Do; T. -T. N.; Eidels; A.; Nalivaiko; E.; Gavvani; A. M.; . . Lin; C. -T. (2022). Unraveling the physiological correlates of mental work-load variations in tracking and collision prediction tasks. *IEEE Transactions on Neural Systems And Rehabilitation Engineering*; 30; 770-781. doi:10.1109/TNSRE.2022.3157446
- Khan; S.; Huebner; P. P.; Brichta; A. M.; & Migliaccio; A. A. (2022). Vestibulo-ocular reflex short-term adaptation is halved after compensation for unilateral labyrinthectomy. *JARO-Journal of The Association for Research in Otolaryngology*; 23(3); 457-466. doi:10.1007/s10162-022-00844-4
- Jayatunga; D. P. W.; Hone; E.; Fernando; W. M. A. D. B.; Garg; M. L.; Verdile; G.; & Martins; R. N. (2022). Mitoprotective effects of a synergistic nutraceutical combination: basis for a prevention strategy against Alzheimer's disease. *Frontiers in Aging Neuroscience*; 13; 16 pages. doi:10.3389/fnagi.2021.781468
- Patel; V. K.; Paudel; K. R.; Shukla; S. D.; Liu; G.; Oliver; B. G.; Hansbro; P. M.; & Dua; K. (2022). Toll-like receptors; innate immune system; and lung diseases: a vital trilateral association. *EXCLI Journal*; 21; 519-523. doi:10.17179/excli2022-4688
- Jayatunga; D. P. W.; Hone; E.; Fernando; W. M. A. D. B.; Garg; M. L.; Verdile; G.; & Martins; R. N. (2022). A synergistic combination of DHA; Luteolin; and Urolithin A against Alzheimer's disease. *Frontiers in Aging Neuroscience*; 14; 11 pages. doi:10.3389/fnagi.2022.780602
- Pariyar; M.; Thorne; R. F.; Scott; R. J.; & Avery-Kiejda; K. A. (2022). Verification and Validation of a Four-Gene Panel as a Prognostic Indicator in Triple Negative Breast Cancer. *Frontiers in Oncology*; 12; 11 pages. doi:10.3389/fonc.2022.821334
- Lim; H. K.; Hughes; C. O.; Lim; M. J. S.; Li; J. J.; Rakshit; M.; Yeo; C.; ... Smith; B. P. C. (2022). Development of reconstructed intestinal micronucleus cytome (RICyt) assay in 3D human gut model for genotoxicity assessment of orally ingested substances. *Archives of Toxicology*; 96(5); 1455-1471. doi:10.1007/s00204-022-03228-y
- Burns; G. L.; Talley; N. J.; & Keely; S. (2022). Immune responses in the irritable bowel syndromes: time to consider the small intestine. *BMC Medicine*; 20(1); 9 pages. doi:10.1186/s12916-022-02301-8
- Fowler; S.; Hoedt; E. C.; Talley; N. J.; Keely; S.; & Burns; G. L. (2022). Circadian rhythms and melatonin metabolism in patients with disorders of gut-brain interactions. *Frontiers in Neuroscience*; 16; 13 pages. doi:10.3389/fnins.2022.825246
- Khursheed; R.; Paudel; K. R.; Gulati; M.; Vishwas; S.; Jha; N. K.; Hansbro; P. M.; ... Singh; S. K. (2022). Expanding the arsenal against pulmonary diseases using surface-functionalized polymeric micelles: breakthroughs and bottle-necks. *Nanomedicine*; 17(12); 881-911. doi:10.2217/nnm-2021-0451
- Nucera; F.; Mumby; S.; Paudel; K. R.; Dharwal; V.; Di Stefano; A.; Casolaro; V.; ... Caramori; G. (2022). Role of oxidative stress in the pathogenesis of COPD. *Minerva Medica*; 113(3); 370-404. doi:10.23736/S0026-4806.22.07972-1
- Reay; W. R.; Kiltschewskij; D. J.; Geaghan; M. P.; Atkins; J. R.; Carr; VJ; Green; M. J.; & Cairns; M. J. (2022). Genetic estimates of correlation and causality between blood-based biomarkers and psychiatric disorders. *Science Advances*; 8(14); 17 pages. doi:10.1126/sciadv.abj8969
- Lao; J. C.; Bui; C. B.; Pang; M. A.; Cho; S. X.; Rudloff; I.; Elgass; K.; . Nold; M. F. (2022). Type 2 immune polarization is associated with cardiopulmonary disease in preterm infants. *Science Translational Medicine*; 14(639); 17 pages. doi:10.1126/scitranslmed.aaz8454
- Garcia-Esperon; C.; Chew; B. L. A.; Minett; F.; Cheah; J.; Rutherford; J.; Wilshire; B.; ... Spratt; N. J. (2022). Impact of an outpatient telestroke clinic on management of rural stroke patients. *Australian Journal of Rural Health*; 30(3); 337-342. doi:10.1111/ajr.12849
- Li; N.; Zethoven; M.; McInerney; S.; Healey; E.; DeSilva; D.; Devereux; L.; ... Campbell; I. G. (2022). Contribution of large genomic rearrangements in PALB2 to familial breast cancer: implications for genetic testing. *Journal of*

- Trubetskoy; V.; Pardinas; A. F.; Qi; T.; Panagiotaropoulou; G.; Awasthi; S.; Bigdeli; T. B.; . . . O'Donovan; M. C. (2022). Mapping genomic loci implicates genes and synaptic biology in schizophrenia. *Nature*; 604(7906); 502-+. doi:10.1038/s41586-022-04434-5
- Luan; L.; Hu; H.; Oldridge; N. B.; Zhao; F. L.; Gao; L.; Höfer; S.; . . . Li; S. C. (2022). Psychometric evaluation of the Mandarin HeartQoL Health-Related Quality of Life Questionnaire among patients with Ischemic Heart Disease in China. *Value in Health Regional Issues*; 31; 53-60. doi:10.1016/j.vhri.2022.03.001
- Baker; J. R.; Mahdi; M.; Nicolau; D. V.; Ramakrishnan; S.; Barnes; P. J.; Simpson; J. L.; . . . Bafadhel; M. (2022). Early Th2 inflammation in the upper respiratory mucosa as a predictor of severe COVID-19 and modulation by early treatment with inhaled corticosteroids: a mechanistic analysis. *Lancet Respiratory Medicine*; 10(6); 545-556. doi:10.1016/S2213-2600(22)00002-9
- Li; X.; Liu; H.; Dun; M. D.; Faulkner; S.; Liu; X.; Jiang; C. C.; & Hondermarck; H. (2022). Proteome and secretome analysis of pancreatic cancer cells. *Proteomics*; 22(13-14); 8 pages. doi:10.1002/pmic.202100320
- Fan; K.; Eslick; G. D.; Nair; P. M.; Burns; G. L.; Walker; M. M.; Hoedt; E. C.; . . . Talley; N. J. (2022). Human intestinal spirochetosis; irritable bowel syndrome; and colonic polyps: A systematic review and meta-analysis. *Journal of Gastroenterology and Hepatology*; 37(7); 1222-1234. doi:10.1111/jgh.15851
- Martin; J. H.; Mohammed; R.; Delforce; S. J.; Skerrett-Byrne; D. A.; de Meaumont; C. C.; Almazi; J. G.; . . . Pringle; K. G. (2022). Role of the prorenin receptor in endometrial cancer cell growth. *Oncotarget*; 13(1); 587-599. doi:10.18632/ONCOTARGET.28224
- Guillaumier; A.; Spratt; N.; Pollack; M.; Baker; A.; Magin; P.; Turner; A.; . . . Bonevski; B. (2022). Evaluation of an online intervention for improving stroke survivors' health-related quality of life: A randomised controlled trial. *PLOS Medicine*; 19(4); 17 pages. doi:10.1371/journal.pmed.1003966
- Marsland; M.; Dowdell; A.; Jiang; C. C.; Wilmott; J. S.; Scolyer; R. A.; Zhang; X. D.; . . . Faulkner; S. (2022). Expression of NGF/proNGF and their receptors TrkA; p75(NTR) and Sortilin in melanoma. *International Journal of Molecular Sciences*; 23(8); 15 pages. doi:10.3390/ijms23084260
- Brown; G.; Hoedt; E. C.; Keely; S.; Shah; A.; Walker; M. M.; Holtmann; G.; & Talley; N. J. (2022). Role of the duodenal microbiota in functional dyspepsia. *Neurogastroenterology and Motility*; 34(11); 16 pages. doi:10.1111/nmo.14372
- Sanchez-Bezanilla; S.; Beard; D. J.; Hood; R. J.; Aberg; N. D.; Crock; P.; Walker; F. R.; . . . Ong; L. K. (2022). Growth hormone Increases BDNF and mTOR expression in specific brain regions after photothrombotic stroke in mice. *Neural Plasticity*; 2022; 13 pages. doi:10.1155/2022/9983042
- Kluge; M. G.; Maltby; S.; Keynes; A.; Nalivaiko; E.; Evans; D. J. R.; & Walker; F. R. (2022). Current state and general perceptions of the use of extended reality (XR) Technology at the University of Newcastle: interviews and surveys from staff and students. *SAGE Open*; 12(2); 15 pages. doi:10.1177/21582440221093348
- Gao; H.; Kan; S.; Ye; Z.; Feng; Y.; Jin; L.; Zhang; X.; . . . Ouyang; D. (2022). Development of in silico methodology for siRNA lipid nanoparticle formulations. *Chemical Engineering Journal*; 442. doi:10.1016/j.cej.2022.136310
- Zlowocka-Perlowska; E.; van de Wetering; T.; Toloczko-Grabarek; A.; Scott; R. J.; & Lubinski; J. (2022). Bladder cancer survival in patients with NOD2 or CDKN2A variants. *Oncotarget*; 13(1); 628-640. doi:10.18632/ONCOTARGET.28226
- Patel; Y.; Shin; J.; Abe; C.; Agartz; I.; Alloza; C.; Alnaes; D.; . . . Paus; T. (2022). Virtual ontogeny of cortical growth preceding mental illness. *Biological Psychiatry*; 92(4); 299-313. doi:10.1016/j.biopsych.2022.02.959
- Ostman; C.; Garcia-Esperon; C.; Lillicrap; T.; Alanati; K.; Chew; B. L. A.; Pedler; J.; . . . Spratt; N. (2022). Comparison of two pre-hospital stroke scales to detect large vessel occlusion strokes in Australia: A prospective observational study. *Australasian Journal of Paramedicine*; 19. doi:10.33151/ajp.19.989
- Marin; F. R.; Davalos; A.; Kiltschewskij; D.; Crespo; M. C.; Cairns; M.; Andres-Leon; E.; & Soler-Rivas; C. (2022). RNA-Seq; bioinformatic identification of potential microRNA-like small rnas in the edible mushroom *Agaricus bisporus* and experimental approach for their validation. *International Journal of Molecular Sciences*; 23(9); 20 pages. doi:10.3390/ijms23094923
- Cuskelly; A.; Hoedt; E. C.; Harms; L.; Talley; N. J.; Tadros; M. A.; Keely; S.; & Hodgson DM. (2022) Neonatal immune challenge influences the microbiota and behaviour in a sexually dimorphic manner. *Brain Behavior and Immunity*; 103; 232-242. doi:10.1016/j.bbi.2022.04.023
- Khursheed; R.; Dua; K.; Vishwas; S.; Gulati; M.; Jha; N. K.; Aldhfeeri; G. M.; . . . Singh; S. K. (2022). Biomedical applications of metallic nanoparticles in cancer: Current status and future perspectives. *Biomedicine & Pharmacotherapy*; 150; 25 pages. doi:10.1016/j.biopha.2022.112951
- Imran; M.; Paudel; K. R.; Jha; S. K.; Hansbro; P. M.; Dua; K.; & Mohammed; Y. (2022). Dressing of multifunctional nanoparticles with natural cell-derived membranes for the superior chemotherapy. *Nanomedicine*; 17(10); 665-670. doi:10.2217/nmm-2022-0051
- Berthoin; B. S.; Williams; L. M.; Williams; E. J.; & Wood; L. G. (2022). Effect of lactoferrin supplementation on inflammation; immune function; and prevention of respiratory tract infections in humans: a systematic review and meta-analysis. *Advances in Nutrition*; 13(5); 1799-1819. doi:10.1093/advances/nmac047
- Paudel; K. R.; Panth; N.; Manandhar; B.; Singh; S. K.; Gupta; G.; Wich; P. R.; . . . Dua; K. (2022). Attenuation of cigarette-smoke-induced oxidative stress; senescence; and inflammation by berberine-loaded liquid crystalline nanoparticles: in vitro study in 16HBE and RAW264.7 cells. *Antioxidants*; 11(5); 18 pages. doi:10.3390/antiox11050873
- Hinwood; M.; Nyberg; J.; Leigh; L.; Gustavsson; S.; Attia; J.; Oldmeadow; C.; . . . Nilsson; P. M. (2022). Do P2Y12 receptor inhibitors prescribed poststroke modify the risk of cognitive disorder or dementia? Protocol for a target trial using multiple national Swedish registries. *BMJ Open*.
- Kalagi; N. A.; Thota; R. N.; Stojanovski; E.; Alburikan; K. A.; & Garg; M. L. (2022). Association between plasma Trimethylamine N-Oxide levels and Type 2 Diabetes: A case control study. *Nutrients*; 14(10); 2093. doi:10.3390/nu14102093
- Williams; T. C.; Loo; S. -L.; Nichol; K. S.; Reid; A. T.; Veerati; P. C.; Esneau; C.; . . . Bartlett; N. W. (2022). IL-25 blockade augments antiviral immunity during respiratory virus infection. *Communications Biology*; 5(1); 13 pages. doi:10.1038/s42003-022-03367-z
- Reay WR; Haslam R; Cairns MJ; Moschonis G; Clarke E; Attia J; & Collins CE. (2022) Variation in cardiovascular disease risk factors among older adults in the Hunter Community Study cohort: A comparison of diet quality versus polygenic risk score. *Journal of Human Nutrition and Dietetics*; 35(4); 675-688. doi:10.1111/jhn.13031
- Gharamaleki; M. V.; Habibbaghi; M.; Hooshmandi; E.; Tabrizi; R.; Arsang-Jang; S.; Barzegar; Z.; . . . Borhani-Haghighi; A. (2022). The hospitalization rate of cerebral venous sinus thrombosis before and during COVID-19 pandemic era: A single-center retrospective cohort study. *Journal of Stroke & Cerebrovascular Diseases*; 31(7); 9 pages. doi:10.1016/j.jstrokecerebrovasdis.2022.106468
- Shaw; J. C.; Dyson; R. M.; Palliser; H. K.; Sixtus; R. P.; Barnes; H.; Pavy; C. L.; . . . Hirst; J. J. (2022). Examining neurosteroid-analogue therapy in the preterm neonate for promoting hippocampal neurodevelopment. *Frontiers in Physiology*; 13; 15 pages. doi:10.3389/fphys.2022.871265
- Wille; M.; Grillo; V.; Ban de Gouvea Pedrosa; S.; Burgess; G. W.; Crawley; A.; Dickason; C.; . . . Wong; F. Y. K. (2022). Australia as a global sink for the genetic diversity of avian influenza A virus. *PLOS Pathogens*; 18(5); 26 pages. doi:10.1371/journal.ppat.1010150
- Chotirmall; S. H.; Bogaert; D.; Chalmers; J. D.; Cox; M. J.; Hansbro; P. M.; Huang; Y. J.; . . . Dickson; R. P. (2022). Therapeutic targeting of the respiratory microbiome. *American Journal of Respiratory and Critical Care Medicine*; 206(5); 535-544. doi:10.1164/rccm.202112-2704PP
- Johansen; M. D.; Mahbub; R. M.; Idrees; S.; Nguyen; D. H.; Miemczyk; S.; Pathinayake; P.; . . . Hansbro; P. M. (2022). Increased SARS-CoV-2 infection; protease; and inflammatory responses in Chronic Obstructive Pulmonary Disease primary bronchial epithelial cells defined with single-cell RNA Sequencing. *American Journal of Respiratory and Critical Care Medicine*; 206(6) 712-729. doi:10.1164/rccm.202108-1901OC
- Alamil; J. M. R.; Paudel; K. R.; Chan; Y.; Xenaki; D.; Panneerselvam; J.; Singh; S. K.; . . . Chellappan; D. K. (2022). Rediscovering the therapeutic potential of Agarwood in the management of Chronic Inflammatory Diseases. *Molecules*; 27(9); 22 pages. doi:10.3390/molecules27093038
- Cullen; M. B. R.; Meiser; B.; Barlow-Stewart; K.; Green; M.; Appelbaum; P. S.; Carr; V. J.; . . . Kaur; R. (2022). Perceptions of causal attribution and attitudes to genetic testing among people with schizophrenia and their first-degree relatives. *European Journal of Human Genetics*; 30(10); 1147-1154. doi:10.1038/s41431-022-01116-8
- Okbay; A.; Wu; Y.; Wang; N.; Jayashankar; H.; Bennett; M.; Nehzati; S. M.; . . . Pourcain; B. S. (2022). Polygenic prediction of educational attainment within and between families from genome-wide association analyses in 3 million individuals. *Nature Genetics*; 54(4); 437-449. doi:10.1038/s41588-022-01016-z
- White; C.; Scott; R. J.; Paul; C.; Ziolkowski; A.; Mossman; D.; Fox; S. B.; . . . Ackland; S. (2022). Dihydropyrimidine dehydrogenase deficiency and implementation of upfront DPYD genotyping. *Clinical Pharmacology & Therapeutics*; 12 pages. doi:10.1002/cpt.2667
- Tu; X.; Kim; R. Y.; Brown; A. C.; De Jong; E.; Jones-Freeman; B.; Ali; K.; . . . Donovan; C. (2022). Airway and parenchymal transcriptomics in a novel model of asthma and COPD overlap. *Journal of Allergy and Clinical Immunology*; 150(4); 817-+. doi:10.1016/j.jaci.2022.04.032

- Choo; Y. W.; Mohd Tahir; N. A.; Mohamed Said; M. S.; Li; S. C.; & Makmor Bakry; M. (2022). Cost-effectiveness of Denosumab for the Treatment of Postmenopausal Osteoporosis in Malaysia. *Osteoporosis International*; 33(9); 1909-1923. doi:10.1007/s00198-022-06444-5
- Foster; P. S.; Tay; H. L.; & Oliver; B. G. (2022). Deficiency in the zinc transporter ZIP8 impairs epithelia renewal and enhances lung fibrosis. *Journal of Clinical Investigation*; 132(11); 4 pages. doi:10.1172/JCI160595
- Alnuqaydan; A. M.; Almutary; A. G.; Azam; M.; Manandhar; B.; Yin; G. H. S.; Yen; L. L.; . . . Dua; K. (2022). Evaluation of the cytotoxic activity and anti-migratory effect of Berberine-Phytantriol liquid crystalline nanoparticle formulation on non-small-cell lung cancer In Vitro. *Pharmaceutics*; 14(6); 20 pages. doi:10.3390/pharmaceutics14061119
- Hortle; E.; Tran; V. L.; Wright; K.; Fontaine; A. R.; Pinello; N.; O'Rourke; M. B.; . . . Oehlers; S. H. (2022). OXSR1 inhibits inflammasome activation by limiting potassium efflux during mycobacterial infection. *Life Science Alliance*; 5(9); 12 pages. doi:10.26508/lsa.202201476
- Yang; Y.; Zhu; Y.; Zhou; S.; Tang; P.; Xu; R.; Zhang; Y.; . . . Chen; S. (2022). TRIM27 cooperates with STK38L to inhibit ULK1-mediated autophagy and promote tumorigenesis. *EMBO Journal*; 41(14); 17 pages. doi:10.15252/embj.2021109777
- Sanchez-Ovando; S.; Pavlidis; S.; Kermani; N. Z.; Baines; K. J.; Barker; D.; Gibson; P. G.; . . . Wark; P. A. B. (2022). Pathways linked to unresolved inflammation and airway remodelling characterize the transcriptome in two independent severe asthma cohorts. *Respirology*; 27(9); 730-738. doi:10.1111/resp.14302
- Morris; B. J.; Katelaris; A.; Blumenthal; N. J.; Hajoona; M.; Sheen; A. C.; Schrieber; L.; . . . Katelaris; P. (2022). Evidence-based circumcision policy for Australia. *Journal of Men's Health*; 18(6); 20 pages. doi:10.31083/j.jomh1806132
- Arora; K.; Gaekwad; A.; Evans; J.; O'Brien; W.; Ang; T.; Garcia-Esperon; C.; . . . Butcher; K. S. (2022). Diagnostic utility of Computed Tomography Perfusion in the Telestroke Setting. *Stroke*; 53(9); 2917-2925. doi:10.1161/STROKEAHA.122.038798
- Al Mamun; M. M.; Khan; M. R.; Zhu; Y.; Zhang; Y.; Zhou; S.; Xu; R.; . . . Song; X. (2022). Stub1 maintains proteostasis of master transcription factors in embryonic stem cells. *Cell Reports*; 39(10); 18 pages. doi:10.1016/j.celrep.2022.110919
- Darmarajan; T.; Paudel; K. R.; Candasamy; M.; Chellian; J.; Madheswaran; T.; Sakthivel; L. P.; . . . Chellappan; D. K. (2022). Autoantibodies and autoimmune disorders in SARS-CoV-2 infection: pathogenicity and immune regulation. *Environmental Science and Pollution Research*; 29(36); 54072-54087. doi:10.1007/s11356-022-20984-7
- Afrose; D.; Chen; H.; Ranashinghe; A.; Liu; C. -C.; Henessy; A.; Hansbro; P. M.; & McClements; L. (2022). The diagnostic potential of oxidative stress biomarkers for preeclampsia: systematic review and meta-analysis. *Biology of Sex Differences*; 13(1); 15 pages. doi:10.1186/s13293-022-00436-0
- Ramanunni AK; Wadhwa S; Kumar Singh S; Kumar B; Gulati M; Kumar A;... Kumar Chellappan D. (2022) Topical non-aqueous nanoemulsion of Alpinia galanga extract for effective treatment in psoriasis: In vitro and in vivo evaluation. *International Journal of Pharmaceutics*; 624. doi:10.1016/j.ijpharm.2022.121882
- Thompson D; Wood LG; Williams EJ; McLoughlin RF; Rastogi D. (2022) Endotyping pediatric obesity-related asthma: Contribution of anthropometrics; metabolism; nutrients; and CD4(+) lymphocytes to pulmonary function. *Journal of Allergy and Clinical Immunology*; 150(4); 861-871. doi:10.1016/j.jaci.2022.04.033
- Pertile RAN; Kiltschewskij D; Geaghan M; Barnett M; Cui X; Cairns MJ; Eyles D. (2022) Developmental vitamin D-deficiency increases the expression of microRNAs involved in dopamine neuron development. *Brain Research*; 1789; 8 pages. doi:10.1016/j.brainres.2022.147953
- Thota RN; Chatterjee P; Pedrini S; Hone E; Ferguson JJA; Garg ML; Martins RN. (2022) Association of plasma neurofilament light chain with Glycaemic control and Insulin resistance in middle-aged adults. *Frontiers in Endocrinology*; 13; 8 pages. doi:10.3389/fendo.2022.915449
- Zhang X; Deng K; Yuan Y; Liu L; Zhang S; Wang C;...Wang G. (2022) Body composition-specific asthma phenotypes: clinical implications. *Nutrients*; 14(12); 17 pages. doi:10.3390/nu14122525
- Stitt IM; Wellings TP; Drury HR; Jobling P; Callister RJ; Brichta AM; Lim R. (2022) Properties of Deiter's neurons and inhibitory synaptic transmission in the mouse lateral vestibular nucleus. *Journal of Neurophysiology*; 128(1); 131-147. doi:10.1152/jn.00016.2022
- Francis I; Shrestha J; Paudel KR; Hansbro PM; Warkiani ME; Saha SC. (2022). Recent advances in lung-on-a-chip models. *Drug Discovery Today*; 27(9); 2593-2602. doi:10.1016/j.drudis.2022.06.004
- Hari S; Burns GL; Hoedt EC; Keely S; Talley NJ. (2022) Eosinophils; hypoxia-inducible factors; and barrier dysfunction in functional dyspepsia. *Frontiers in Allergy*; 3; 851482. doi:10.3389/falgy.2022.851482
- Almeida KA; Andrade EDQ; Burns G; Hoedt EC; Mattes J; Keely S; Collison A. (2022) The microbiota in eosinophilic esophagitis: A systematic review. *Journal of Gastroenterology and Hepatology*; 37(9); 1673-1684. doi:10.1111/jgh.15921
- Quan DH; Kwong AJ; Hansbro PM; Britton WJ. (2022) No smoke without fire: The impact of cigarette smoking on the immune control of tuberculosis. *European Respiratory Review*; 31(164); 19 pages. doi:10.1183/16000617.0252-2021
- Satokar VV; Vickers MH; Reynolds CM; Ponnampalam AP; Firth EC; Garg ML; ...Albert BB. (2022) Toxicity of oxidized fish oil in pregnancy: a dose-response study in rats. *American Journal of Physiology-Regulatory Integrative and Comparative Physiology*; 323(2); R244-R254. doi:10.1152/ajpregu.00042.2022
- Reay WR; Geaghan MP; Cairns MJ. (2022) The genetic architecture of pneumonia susceptibility implicates mucin biology and a relationship with psychiatric illness. *Nature Communications*; 13(1); 16 pages. doi:10.1038/s41467-022-31473-3
- Liu G; Jarnicki AG; Paudel KR; Lu W; Wadhwa R; Philp AM;...Hansbro PM. (2022) Adverse roles of mast cell chymase-1 in chronic obstructive pulmonary disease. *European Respiratory Journal*; 60(1); 2101431. doi:10.1183/13993003.01431-2021
- Tomari S; Lillicrap T; Garcia-Esperon C; Kashida YT; Bivard A; Lin L;...Spratt NJ. (2022) Ischemic lesion growth in patients with a persistent target mismatch after large vessel occlusion. *Clinical Neuroradiology*; 8 pages. doi:10.1007/s00062-022-01180-z
- Garcia-Esperon C; Bivard A; Johns H; Chen C; Churilov L; Lin L;...Parsons MW. (2022) Association of endovascular thrombectomy with functional outcome in patients with acute stroke with a large ischemic core. *Neurology*; 99(13); e1345-e1355. doi:10.1212/wnl.0000000000200908
- Dong PTX; Trinh HT; Nguyen DH; Nguyen ST; Pham VTT; Ngo HB; .Nguyen HTL. (2022) Implementing clinical pharmacy activities in hospital setting in Vietnam: current status from a national survey. *BMC Health Services Research*; 22(1); 11 pages. doi:10.1186/s12913-022-08242-5
- Prêle CM; Miles T; Pearce DR; O'Donoghue RJ; Grainge C; Barrett L;...Mutsaers SE. (2022) Plasma cell but not CD20-mediated B-cell depletion protects from bleomycin-induced lung fibrosis. *European Respiratory Journal*; 60(5). doi:10.1183/13993003.01469-2021
- Scott HA; Wood LG; Williams EJ; Weaver N; Upham JW. (2022) Comparing the effect of acute moderate and vigorous exercise on inflammation in adults with asthma. *Annals of the American Thoracic Society*; 19(11); 1848-1855. doi:10.1513/AnnalsATS.202109-1053Oc
- Liebenberg A; Nie VM; Brichta AM; Ahmadi S; James CL. (2022) Pre-employment hearing threshold levels of 59;601 Australian male coal miners compared to an otologically normal international male population (ISO7029:2019). *International Journal of Audiology*; 9 pages. doi:10.1080/14992027.2022.2088625
- Ditton E; Knott B; Hodyl N; Horton G; Walker FR; Nilsson M. (2022) Correction: Assessing the efficacy of an individualized psychological flexibility skills training intervention app for medical student burnout and well-being: protocol for a randomized controlled trial. *JMIR Research Protocols*; 11(7) doi:10.2196/40684
- Mitchell PJ; Yan B; Churilov L; Dowling RJ; Bush SJ; Bivard A; . . . Davis SM. (2022) Endovascular thrombectomy versus standard bridging thrombolytic with endovascular thrombectomy within 4.5 h of stroke onset: an open label; blinded -endpoint; randomised non-inferiority trial. *Lancet*; 400(10346); 116-125
- Allam VSSRR; Paudel KR; Gupta G; Singh SK; Vishwas S; Gulati M;...Dua K. (2022) Nutraceuticals and mitochondrial oxidative stress: bridging the gap in the management of bronchial asthma. *Environmental Science and Pollution Research*; 29(42); 62733-62754. doi:10.1007/s11356-022-21454-w
- Quide Y; Watkeys OJ; Girshkin L; Kaur M; Carr VJ; Cairns MJ; Green MJ. (2022) Interactive effects of polygenic risk and cognitive subtype in brain morphology in schizophrenia spectrum and bipolar disorders. *European Archives of Psychiatry and Clinical Neuroscience*; 272(7); 1205-1218. doi:10.1007/s00406-022-01450-4
- Gupta M; Sharma V; Sharma K; Kumar A; Sharma A; Kazmi I; . . . Dua K. (2022) A kNGR peptide-tethered lipid-polymer hybrid nanocarrier-based synergistic approach for effective tumor therapy: development; characterization; Ex-Vivo; and In-Vivo Assessment. *Pharmaceutics*; 14(7); 18 pages. doi:10.3390/pharmaceutics14071401
- Vanka KS; Shukla S; Gomez HM; James C; Palanisami T; Williams K; . . . Horvat JC. (2022) Understanding the pathogenesis of occupational coal and silica dust-associated lung disease. *European Respiratory Review*; 31(165); 17 pages. doi:10.1183/16000617.0250-2021
- Zhen D; Liu J; Zhang XD; Song Z. (2022) Kynurenic acid acts as a signaling molecule regulating energy expenditure and is closely associated with metabolic diseases. *Frontiers in Endocrinology*; 13. doi:10.3389/fendo.2022.847611
- Liu Y; Zhang X; Zhang L; Oliver BG; Wang HG; Liu ZP;...Wang G. (2022) Sputum metabolomic profiling reveals metabolic pathways and signatures

- associated with inflammatory phenotypes in patients with asthma. *Allergy Asthma & Immunology Research*; 14(4); 393-411. doi:10.4168/air.2022.14.4.393
- Chen Q, Yang B, Liu X, Zhang XD; Zhang L; Liu T. (2022) Histone Acetyltransferases CBP/p300 in tumorigenesis and CBP/p300 inhibitors as promising novel anticancer agents. *Theranostics*; 12(11); 4935-4948. doi:10.7150/thno.73223
- Gradwell MA; Smith KM; Dayas CV; Smith DW Hughes DI; Callister RJ; Graham BA. (2022) Altered intrinsic properties and inhibitory connectivity in aged parvalbumin-expressing dorsal horn neurons. *Frontiers In Neural Circuits*; 16; 13 pages. doi:10.3389/fncir.2022.834173
- Kaur J; Gulati M; Famta P; Corrie L; Awasthi A; Saini S;...Singh SK. (2022) Polymeric micelles loaded with glyburide and vanillic acid: I. Formulation development; in-vitro characterization and bioavailability studies. *International Journal of Pharmaceutics*; 624. doi:10.1016/j.ijpharm.2022.121987
- Paudel KR; Dua K, Panth N, Hansbro PM; Chellappan DK. (2022) Advances in research with rutin-loaded nanoformulations in mitigating lung diseases. *Future Medicinal Chemistry*; 14(18); 1293-1295. doi:10.4155/fmc-2022-0088
- Venkata VD; Jamaluddin MFB; Goad J, Drury HR, Tados MA; Lim R;... Tanwar PS. (2022) Development and characterization of human fetal female reproductive tract organoids to understand Müllerian duct anomalies. *Proceedings of the National Academy of Sciences of the United States of America*; 119(30). doi:10.1073/pnas.2118054119
- Colarusso C; Terlizzi M; Maglio A; Molino A; Candia C;...Sorrentino R. (2022) Activation of the AIM2 receptor in circulating cells of post-COVID-19 patients with signs of lung fibrosis is associated with the release of IL-1 alpha; IFN-alpha and TGF-beta. *Frontiers In Immunology*; 13; 12 pages. doi:10.3389/fimmu.2022.934264
- Hosseini B; Berthon BS; Jensen ME; McLoughlin RF; Wark PAB; Nichol K; . . Wood LG. (2022) The effects of increasing fruit and vegetable intake in children with asthma on the modulation of innate immune responses *Nutrients*; 14(15); 3087. doi:10.3390/nu14153087
- Ramdas S; Judd J; Graham SE; Kanoni S; Wang Y; Surakka I; Brown CD. (2022) A multi-layer functional genomic analysis to understand noncoding genetic variation in lipids. *American Journal of Human Genetics*; 109(8); 1366-1387. doi:10.1016/j.ajhg.2022.06.012
- Phuong TXD; Van TTP; Chi TD; Anh VL; Ha THT; Huong TLN; . . Li SC. (2022) Implementation and evaluation of clinical pharmacy services on improving quality of prescribing in geriatric inpatients in Vietnam: An example in a low resources setting. *Clinical Interventions in Aging*; 17; 1127-1138. doi:10.2147/CIA.S368871
- Prasher P; Sharma M; Singh SK; Gulati M; Jha NK; Gupta PK; . . Dua K. (2022) Targeting mucus barrier in respiratory diseases by chemically modified advanced delivery systems. *Chemico-Biological Interactions*; 365; 14 pages. doi:10.1016/j.cbi.2022.110048
- Prasher P; Sharma M; Singh SK; Haghi M; MacLoughlin R; Chellappan DK; . . Dua K. (2022) Advances and applications of dextran-based nanomaterials targeting inflammatory respiratory diseases. *Journal of Drug Delivery Science and Technology*; 74; 11 pages. doi:10.1016/j.jddst.2022.103598
- Ferguson JJA; Oldmeadow C; Bentley D; Garg ML. (2022) Antioxidant effects of a polyphenol-rich dietary supplement incorporating pinus massoniana bark extract in healthy older adults: a two-arm; parallel group; randomized placebo-controlled trial. *Antioxidants*; 11(8); 16 pages. doi:10.3390/antiox11081560
- Lahti J; Tuomnen S, Yang Q; Pergola G; Ahmad S; Amin N; . .Raikonen K. (2022) Genome-wide meta-analyses reveal novel loci for verbal short-term memory and learning. *Molecular Psychiatry*; 13 pages. doi:10.1038/s41380-022-01710-8
- Revelas M; Thalamuthu A; Zettergren A; Oldmeadow C; Najjar J; Seidu NM; . . Mather KA. (2022) High polygenic risk score for exceptional longevity is associated with a healthy metabolic profile. *Geroscience*; 15 pages. doi:10.1007/s11357-022-00643-y
- Tonini E; Watkeys O; Quide Y; Whitford TJ; Cairns MJ; Green M J. (2022) Polygenic risk for schizophrenia as a moderator of associations between childhood trauma and schizotypy. *Progress In Neuro-Psychopharmacology and Biological Psychiatry*; 119; 8 pages. doi:10.1016/j.pnpbp.2022.110612
- Devkota HP; Paudel KR; Khanal S; Baral A; Panth N; Adhikari-Devkota A;... Hansbro PM. (2022) Stinging Nettle (*Urtica dioica* L.): Nutritional composition; bioactive compounds; and food functional properties. *Molecules*; 27(16); 14 pages. doi:10.3390/molecules27165219
- Liu X; Netto KG; Sokulsky LA; Zhou L; Xu H; Liu C;...Yang M. (2022) Single-cell RNA transcriptomic analysis identifies Creb5 and CD11b-DCs as regulator of asthma exacerbations. *Mucosal Immunology*; 12 pages. doi:10.1038/s41385-022-00556-1
- Wang Y, Feng YC, Gan Y, Teng L, Wang L; La T;...Shao F-M. (2022) LncRNA MILIP links YBX1 to translational activation of Snai1 and promotes metastasis in clear cell renal cell carcinoma. *Journal of Experimental & Clinical Cancer Research*; 41(1); 15 pages. doi:10.1186/s13046-022-02452-9
- Veerati PC; Nichol KS; Read JM; Bartlett NW; Wark PAB; Knight DA; . . Reid AT. (2022). Conditionally reprogrammed asthmatic bronchial epithelial cells express lower FOXJ1 at terminal differentiation and lower IFNs following RV-A1 infection. *American Journal of Physiology-Lung Cellular and Molecular Physiology*; 323(4); L495-L502. doi:10.1152/ajplung.00230.2022
- Garcia-Esperon C; Ostman C; Walker FR; Chew BLA; Edwards S; Emery J;... Spratt NJ. (2022) The Hunter-8 Scale prehospital triage workflow for identification of large vessel occlusion and brain haemorrhage. *Prehospital Emergency Care*; 7 pages. doi:10.1080/10903127.2022.2120134
- Arora K; Gaekwad A, Evans J, O'Brien W; Ang T; Garcia-Esperon C; . . Butcher KS. (2022) Diagnostic utility of Computed Tomography Perfusion in the Telestroke Setting (vol 53; pg 2917; 2022). *Stroke*; 53(9); E439. doi:10.1161/STR.0000000000000412
- Phuong TXD; Van TTP; Linh TN; Anh VL; Thao TN; Hoa DV;...Li SC. (2022) Impact of pharmacist-initiated educational interventions on improving medication reconciliation practice in geriatric inpatients during hospital admission in Vietnam. *Journal of Clinical Pharmacy and Therapeutics*; 8 pages. doi:10.1111/jcpt.13758
- Paudel KR; Chellappan DK; MacLoughlin R; Andreoli Pinto TDJ; Dua K; Hansbro PM. (2022) Advanced therapeutic delivery for the management of chronic respiratory diseases. *Frontiers In Medicine*; 9; 3 pages. doi:10.3389/fmed.2022.983583
- Verma N; Arora V; Awasthi R; Chan Y; Jha NK; Thapa K;... Dua K. (2022) Recent developments; challenges and future prospects in advanced drug delivery systems in the management of tuberculosis. *Journal of Drug Delivery Science and Technology*; 75. doi:10.1016/j.jddst.2022.103690
- Miller SL; Bennet L; Sutherland AE, Pham Y; McDonald C; Castillo-Melendez M; . . . Yawno; T. (2022) Ganaxolone versus Phenobarbital for neonatal seizure management. *Annals of Neurology*; 92(6); 1066-1079. doi:10.1002/ana.26493
- Reay WR, Geaghan MP, Atkins JR, Carr VJ; Green MJ; Cairns MJ. (2022) Genetics-informed precision treatment formulation in schizophrenia and bipolar disorder. *American Journal of Human Genetics*; 109(9); 1620-1637. doi:10.1016/j.ajhg.2022.07.011
- Moheimani F, Shahdab N; Cummings S; Hansbro PM; Ward C. (2022) Key role of dysregulated airway epithelium in response to respiratory viral infections in asthma. *ERJ Open Research*; 8(3); 3 pages. doi:10.1183/23120541.00314-2022
- Scott RJ. (2022) Modifier genes and Lynch syndrome: some considerations. *Hereditary Cancer in Clinical Practice*; 20(1); 4 pages. doi:10.1186/s13053-022-00240-2
- Mathers JC; Elliott F; Macrae F; Mecklin JP; Möslin G; McDonald FE; . . Bacon A. (2022) Cancer prevention with resistant starch in Lynch Syndrome patients in the CAPP2-randomized placebo-controlled trial: planned 10-year follow-up. *Cancer Prevention Research*; 15(9); 623-634. doi:10.1158/1940-6207.CAPR-22-0044
- Kiltschewskij DJ; Reay WR; Cairns MJ. (2022) Evidence of genetic overlap and causal relationships between blood-based biochemical traits and human cortical anatomy. *Translational Psychiatry*; 12(1); 14 pages. doi:10.1038/s41398-022-02141-3
- Jamaluddin MFB; Ko YA; Ghosh A; Syed SM; Ius Y; O'Sullivan R; . . .Tanwar PS. (2022) Proteomic and functional characterization of intra-tumor heterogeneity in human endometrial cancer. *Cell Reports Medicine*; 3(9). doi:10.1016/j.xcrm.2022.100738
- Dowling LR; Strazzari MR; Keely S; Kaiko GE. (2022). Enteric nervous system and intestinal epithelial regulation of the gut-brain axis. *Journal of Allergy and Clinical Immunology*; 150(3); 513-522. doi:10.1016/j.jaci.2022.07.015
- Stolz D; Mkorombindo T; Schumann DM; Agusti A; Ash SY; Bafadhel M;... Dransfield MT. (2022) Towards the elimination of chronic obstructive pulmonary disease: a Lancet Commission. *The Lancet*; 400(10356); 921-972. doi:10.1016/S0140-6736(22)01273-9
- Satkar VV; Vickers MH; Reynolds CM; Ponnampalam AP; Firth EC; Garg ML;... Albert BB. (2022) Fish oil supplementation of rats fed a high fat diet during pregnancy improves offspring insulin sensitivity. *Frontiers in Nutrition*; 9; 17 pages. doi:10.3389/fnut.2022.968443
- O'Rourke MB; Roediger BR; Jolly CJ; Crossett B; Padula MP; & Hansbro PM. (2022) Viral biomarker detection and validation using MALDI Mass Spectrometry Imaging (MSI). *Proteomes*; 10(3). doi:10.3390/proteomes10030033
- Clarence; D. D.; Paudel; K. R.; Manandhar; B.; Singh; S. K.; Devkota; H. P.; Panneerselvam J; . . . Chellappan DK. (2022) Unravelling the therapeutic potential of nano-delivered functional foods in chronic respiratory diseases.

- Greco LA; Reay WR, Dayas CV; & Cairns MJ. (2022) Pairwise genetic meta-analyses between schizophrenia and substance dependence phenotypes reveals novel association signals with pharmacological significance. *Translational Psychiatry*; 12(1); 9 pages. doi:10.1038/s41398-022-02186-4
- Moller P; Seppala T; Dowty JG; Haupt S; Dominguez-Valentin M; Sunde L; . . . Jenkins MA. (2022) Colorectal cancer incidences in Lynch syndrome: a comparison of results from the prospective lynch syndrome database and the international mismatch repair consortium. *Hereditary Cancer in Clinical Practice*; 20(1); 11 pages. doi:10.1186/s13053-022-00241-1
- Tan SH; Chua DAC; Tang JRJ; Bonnard C; Leavesley D; & Liang K. (2022) Design of hydrogel-based scaffolds for in vitro three-dimensional human skin model reconstruction. *Acta Biomaterialia*; 153; 13-37. doi:10.1016/j.actbio.2022.09.068
- Shanahan ER; Kang S; Staudacher H; Shah A; Do A; Burns G; . . . Holtmann GJ. (2022) Alterations to the duodenal microbiota are linked to gastric emptying and symptoms in functional dyspepsia. *Gut*; 10 pages. doi:10.1136/gutjnl-2021-326158
- Chellappan DK; Paudel KR; Tan NW; Cheong KS; Khoo SSQ; Seow SM; . . . Dua K. (2022) Targeting the mitochondria in chronic respiratory diseases. *Mitochondrion*; 67; 15-37. doi:10.1016/j.mito.2022.09.003
- Sethi V; Garg M; Herve M; & Mobasher A. (2022) Potential complementary and/or synergistic effects of curcumin and boswellic acids for management of osteoarthritis. *Therapeutic Advances in Musculoskeletal Disease*; 14; 22 pages. doi:10.1177/1759720X221124545
- Baleato CL; Ferguson JJA; Oldmeadow C; Mishra GD; & Garg ML. (2022) Plant-based dietary patterns versus meat consumption and prevalence of impaired glucose intolerance and diabetes mellitus: a cross-sectional study in Australian women. *Nutrients*, 14(19); 15 pages. doi:10.3390/nu14194152
- Yengo L; Vedantam S; Marouli E; Sidorenko J; Bartell E; Sakaue S; . . . Hirschhorn JN. (2022) A saturated map of common genetic variants associated with human height. *Nature*; 610(7933); 704-+. doi:10.1038/s41586-022-05275-y
- Gaddis N; Mathur R; Marks J; Zhou L; Quach B; Waldrop A;...Johnson EO. (2022) Multi-trait genome-wide association study of opioid addiction: OPRM1 and beyond. *Scientific Reports*; 12(1); 16 pages. doi:10.1038/s41598-022-21003-y
- White C; Scott R; Paul CL; & Ackland SP. (2022) Pharmacogenomics in the era of personalised medicine. *Medical Journal of Australia*; 217(10); 510-513. doi:10.5694/mja2.51759
- Paudel KR; Patel V; Vishwas S; Gupta S; Sharma S; Chan Y;...Dua K. (2022) Nutraceuticals and COVID-19: A mechanistic approach toward attenuating the disease complications. *Journal of Food Biochemistry*; 21 pages. doi:10.1111/jfbc.14445
- Sharma K; Zhang Y; Paudel KR; Kachelmeier A; Hansbro PM; & Shi X. (2022) The emerging role of pericyte-derived extracellular vesicles in vascular and neurological health. *Cells*; 11(19); 23 pages. doi:10.3390/cells11193108
- Antunes KH; Singanayagam A; Williams L; Faiez TS; Farias A; Jackson MM; . . . Johnston SL. (2022) Airway-delivered short-chain fatty acid acetate boosts antiviral immunity during rhinovirus infection. *The Journal of Allergy and Clinical Immunology*; S0091-6749(22)01331-8. doi:10.1016/j.jaci.2022.09.026
- Flood RL; Danzenbaker M; Hansbro PM; Rogers C; Tanoi H; & Tanoi S. (2022) More New Zealand storm petrels Fregetta maoriana off Gau Island; Fiji; in May 2022. *Bulletin of the British Ornithologists' Club*; 142(3); 380-382. doi:10.25226/bboc.v142i3.2022.a11
- Geaghan MP; Reay WR; & Cairns MJ. (2022) MicroRNA binding site variation is enriched in psychiatric disorders. *Human Mutation*; 17 pages. doi:10.1002/humu.24481
- Jamaluddin MBF; Ghosh A; Ingle A; Mohammed R; Ali A; Bahrami M;...Tanwar PS. (2022) Bovine and human endometrium-derived hydrogels support organoid culture from healthy and cancerous tissues. *Proceedings of the National Academy of Sciences of the USA*; 119(44). doi:10.1073/pnas.2208040119
- Kluge MG; Maltby S; Kuhne C; Evans DJR; & Walker FR. (2022) Comparing approaches for selection; development; and deployment of extended reality (XR) teaching applications: A case study at The University of Newcastle Australia. *Education & Information Technologies*; 32 pages. doi:10.1007/s10639-022-11364-2
- Rostamihosseinkhani M; Hooshmandi E; Ostovan VR; Bazrafshan H; Bahrami Z; Borhani-Haghighi A; . . . Levi C. (2022) True mycotic aneurysms: A report of Three patients with internal carotid artery aneurysm and mucormycosis and Literature review. *Shiraz E Medical Journal*; 23(9). doi:10.5812/semj-127071
- Shah A; Kang S; Talley NJ; Anh D; Walker MM; Shanahan ER;...Holtmann GJ. (2022) The duodenal mucosa associated microbiome; visceral sensory function; immune activation and psychological comorbidities in functional gastrointestinal disorders with and without self-reported non-celiac wheat sensitivity. *Gut Microbes*; 14(1); 21 pages. doi:10.1080/19490976.2022.2132078
- Ferguson JJA; Oldmeadow C; Bentley D; Eslick S; & Garg ML. (2022) Effect of a polyphenol-rich dietary supplement containing Pinus massoniana bark extract on blood pressure in healthy adults: A parallel; randomized placebo-controlled trial. *Complementary Therapies in Medicine*; 71; 11 pages. doi:10.1016/j.ctim.2022.102896
- Ashique SD; Gupta G; Mishra N; Singh S; Wadhwa S; . . . Dua K. (2022) Vitamin D—A prominent immunomodulator to prevent COVID-19 infection. *International Journal of Rheumatic Diseases*. doi:10.1111/1756-185X.14477
- Ashique S; De Rubis G; Sirohi E; Mishra N; Rihan M; Garg A; . . . Dua K. (2022) Short chain fatty acids: fundamental mediators of the gut-lung axis and their involvement in pulmonary diseases. *Chemico-Biological Interactions*; 368. doi:10.1016/j.cbi.2022.110231
- Lim BWX; Li N; Mahale S; Mcinerny S; Zethoven M; Rowley SM; . . . Campbell IG. (2022) Somatic inactivation of breast cancer predisposition genes in tumours associated with pathogenic germline variants. *Journal of the National Cancer Institute*; djac196. doi:10.1093/jnci/djac196
- McDiarmid KP; Wood LG; Upham JW; Macdonald-Wicks LK; Shivappa N; Hebert JR; & Scott HA. (2022) The impact of meal dietary inflammatory index on exercise-induced changes in airway inflammation in adults with asthma. *Nutrients*; 14(20); 11 pages. doi:10.3390/nu14204392
- Paudel KR; De Rubis G; Panth N; Singh SK; Chellappan DK; Hansbro PM; & Dua; K. (2022). Letter to the editor: Nanomedicine and medicinal plants: emerging symbiosis in managing lung diseases and associated infections. *EXCLI Journal*; 21; 1299-1303. doi:10.17179/excli2022-5376
- Majumder R; Alam MB; Paudel KR; Ahmed KA; Devkota HP; Lee SH; . . . Park YH. (2022). Anti-influenza virus potential of probiotic strain lactoplantibacillus plantarum YML015 isolated from Korean fermented vegetable. *Fermentation*, 8(11). doi:10.3390/fermentation8110572
- Nasef NA; Thota RN; Mutukumira AN; Rutherford-Markwick K; Dickens M; Gopal P; . . . Garg ML. (2022) Bioactive yoghurt containing curcumin and chlorogenic acid reduces inflammation in postmenopausal women. *Nutrients*; 14(21); 13 pages. doi:10.3390/nu14214619
- Blokland KEC; Nizamoglu M; Habibie H; Borghuis T; Schuliga; M; Melgert BN; . . . Burgess JK. (2022) Substrate stiffness engineered to replicate disease conditions influence senescence and fibrotic responses in primary lung fibroblasts. *Frontiers In Pharmacology*; 13; 17 pages. doi:10.3389/fphar.2022.989169
- Vysma M; Welsh JS; & Laver D. (2022) Computationally efficient simulation of calcium signaling in cardiomyocytes. *IEEE Transactions on Biomedical Engineering*; doi:10.1109/TBME.2022.3215169
- Gangadharan S; Tomari S; Levi CR; Weaver N; Holliday E; Bajorek B; . . . Magin P. (2022) Rural versus metropolitan comparison of processes of care in the community-based management of TIA and minor stroke in Australia (an analysis from the INSIST study). *Australian Journal of Rural Health*; 11 pages. doi:10.1111/ajr.12950
- Garcia-Esperon C; Wu TY; Carraro do Nascimento V; Yan B; Kurunawai C; Kleinig T; . . . ANZ Ultra-Long EVT Transfer Group. (2022) Ultra-long transfers for endovascular thrombectomy-mission impossible? The Australia-New Zealand experience. *Stroke*; doi:10.1161/strokeaha.122.040480
- Wang PL; Teng L; Feng YC; Yue YM; Han MM; Yan Q; . . . Zhang XD. (2022). The N-Myc-responsive lncRNA MILIP promotes DNA double-strand break repair through non-homologous end joining. *Proceedings of the National Academy of Sciences of the United States of America*; 119(49); e2208904119. doi:10.1073/pnas.2208904119
- Rathnayake SNH; Ditz B; van Nijnatten J; Sadaf T; Hansbro PM; Brandsma CA; . . . Faiz A. (2022) Smoking induces shifts in cellular composition and transcriptome within the bronchial mucus barrier. *Respirology*; 11 pages. doi:10.1111/resp.14401
- Stewart EL; Counoupas C; Johansen MD; Nguyen DH; Miemczyk S; Hansbro NG; . . . Triccas JA. (2022) Mucosal immunization with a delta-inulin adjuvanted recombinant spike vaccine elicits lung-resident immune memory and protects mice against SARS-CoV-2. *Mucosal Immunology*; 15(6); 1405-1415. doi:10.1038/s41385-022-00578-9
- Ashhurst AS; Johansen MD; Maxwell JWC; Stockdale S; Ashley CL; Aggarwal A; . . . Britton WJ. (2022) Mucosal TLR2-activating protein-based vaccination induces potent pulmonary immunity and protection against SARS-CoV-2 in mice. *Nature Communications*; 13(1). doi:10.1038/s41467-022-34297-3
- Constantinides C; Han LKM; Alloza C; Antonucci LA; Arango C; Ayesa-Arriola R; . . . Walton E. (2022) Brain ageing in schizophrenia: evidence

from 26 international cohorts via the ENIGMA Schizophrenia consortium. *Molecular Psychiatry*; doi:10.1038/s41380-022-01897-w

Su M; Pan T; Chen QZ; Zhou WW; Gong Y; Xu G; . . . Li; Y. S. (2022) Data analysis guidelines for single-cell RNA-seq in biomedical studies and clinical applications. *Military Medical Research*; 9(1). doi:10.1186/s40779-022-00434-8

Alnuqaydan AM; Almutary AG; Azam M; Manandhar B; De Rubis G; Madheswaran T; . . . Dua K. (2022) Phytantriol-based Berberine-loaded liquid crystalline nanoparticles attenuate inflammation and oxidative stress in lipopolysaccharide-induced RAW264.7 macrophages. *Nanomaterials (Basel; Switzerland)*; 12(23); 4312. doi:10.3390/nano12234312

Shrestha J; Razavi Bazaz S; Ding L; Vasilescu S; Idrees S; Söderström B; . . . Ebrahimi Warkiani M. (2022) Rapid separation of bacteria from primary nasal samples using inertial microfluidics. *Lab on a chip*; doi:10.1039/d2lc00794k

Zhang S; Zhang X; Deng K; Wang C; Wood LG; Wan H; . . . Wang G. (2022) Reduced skeletal muscle mass is associated with an increased risk of Asthma control and exacerbation. *Journal of Clinical Medicine*; 11(23). doi:10.3390/jcm11237241

Silk AW; O'Day SJ; Kaufman HL; Bryan J; Norrell JT; Imbergamo C; . . . Mehnert JM. (2022) A phase 1b single-arm trial of intratumoral oncolytic virus V937 in combination with pembrolizumab in patients with advanced melanoma: results from the CAPRA study. *Cancer Immunology; Immunotherapy*. doi:10.1007/s00262-022-03314-1

Liu L; Liu Y; Zhang X; Yuan YL; Chen ZH; Chen-Yu Hsu A;...Wood LG. (2022) Dyslipidemia is associated with worse asthma clinical outcomes: a prospective cohort study. *Journal of Allergy and Clinical Immunology Practice*. doi:10.1016/j.jaip.2022.11.037

Saifullah M; Akanbi TO; McCullum R; & Vuong QV. (2022) Optimization of commercial microwave assisted-extraction conditions for recovery of phenolics from lemon-scented tea tree (*Leptospermum petersonii*) and comparison with other extraction techniques. *Foods*; 11(1); 13 pages. doi:10.3390/foods11010050

Saifullah M; McCullum R; & Quan VV. (2022) Phytochemicals and Bio-activities of Australian Native Lemon Myrtle (*Backhousia citriodora*) and Lemon-Scented Tea Tree (*Leptospermum petersonii*): A Comprehensive Review. *Food Reviews International*; 21 pages. doi:10.1080/87559129.2022.2130353

PRE-PRINT

Germon ZP; Sillar JR; Mannan A; Duchatel RJ; Staudt D; Murray HC;. . . Dun MD. (n.d.) Blockade of redox second messengers inhibits JAK/STAT and MEK/ERK signaling sensitizing FLT3-mutant acute myeloid leukemia to targeted therapies. doi:10.1101/2022.03.09.483687

Chen L; Hoefel GA; Pathinayake PS; Reid A; Kelly C; HuiYing T; . . . Kaiko GE. (n.d.) Single cell RNA-seq identifies inflammation-induced loss of CFTR-expressing airway ionocytes in non-eosinophilic asthma. doi:10.1101/2022.04.26.489055

Frost ER; Taylor G; Boeing S; Galichet C; Baker MA; Sutherland JM; & Lovell-Badge; R. (n.d.). The identification of a gene expression signature of primordial follicle activation in mouse pregranulosa cells. doi:10.1101/2022.10.24.513438

Distefano R; Tomasello L; Vinciguerra GLR; Gasparini P; Xiang Y; Bagnoli M; . . . Croce C. (2021) A concurrent canonical and modified miRNAome pan-cancer study on TCGA and TARGET cohorts leads to an enhanced resolution in cancer. doi:10.1101/2021.05.18.444694

Piantadosi S; Manning E; Chamberlain B; Hyde J; LaPalombara Z; Bannon N; . . . Ahmari S. (2022) Hyperactivity of indirect pathway-projecting spiny projection neurons drives compulsive behavior. doi:10.1101/2022.02.17.480966

Zheluk A; Dineen-Griffin S; & Anderson J. (n.d.) Analysis of #Backpain on Tiktok in September 2021: an exploratory study. doi:10.2139/ssrn.3977927

Germon ZP; Sillar JR; Mannan A; Duchatel RJ; Staudt D; Murray HC;. . . Dun MD. (n.d.) Blockade of redox second messengers inhibits JAK/STAT and MEK/ERK signaling sensitizing FLT3-mutant acute myeloid leukemia to targeted therapies. doi:10.1101/2022.03.09.483687

Reay W; Geaghan M; Atkins JR; Carr V; Green M; & Cairns M. (2022) Directional anchor genes refine polygenic informed treatment selection in schizophrenia and bipolar disorder. doi:10.1101/2022.03.20.22272666

Chen L; Hoefel GA; Pathinayake PS; Reid A; Kelly C; HuiYing T; . . . Kaiko GE. (n.d.) Single cell RNA-seq identifies inflammation-induced loss of CFTR-expressing airway ionocytes in non-eosinophilic asthma. doi:10.1101/2022.04.26.489055

Adams DM; Reay WR; & Cairns MJ. (n.d.) Multiomic prioritisation of risk genes for anorexia nervosa. doi:10.1101/2022.06.04.22275898

Oliveira DV; Coupland KG; Jin S; Del Gaudio F; Wang S; Fox R; . . . Karlström H. (n.d.) NOTCH3 active immunotherapy reduces NOTCH3 deposition in brain capillaries in a CADASIL mouse model. doi:10.1101/2022.07.11.499563

Valkenborghs SR; Dent PC; & Stillman CM. (n.d.) The inter-generational effects of parental physical activity on offspring brain and neurocognition in humans: a scoping review. doi:10.1101/2022.09.12.22279883

Frost ER; Taylor G; Boeing S; Galichet C; Baker MA; Sutherland JM; Lovell-Badge R. (n.d.) The identification of a gene expression signature of primordial follicle activation in mouse pregranulosa cells. doi:10.1101/2022.10.24.513438

Stanton LM; Price AJ; & Manning E. (n.d.) Hypothalamic CRH neurons in stress induced psychopathology: revaluation of endocrine and neural mechanisms. doi:10.31234/osf.io/2z9gw

Hunt KV; Burnard SM; Bond DR; & Lee HJ. (n.d.) Protocol for targeted analysis of transposable element methylation levels and transcriptome e in single cells using scTEM-seq. doi:10.21203/rs.3.pev-2075/v1

Clancy B; Bonevski B; English C; Baker AL; Turner A; Magin P; . . . Guillaumier A. (n.d.) Access to and use of internet and social media by low-morbidity stroke survivors participating in a national web-based secondary stroke prevention trial: cross-sectional survey. doi:10.2196/preprints.33291

Staudt DE; Murray HC; Skerrett-Byrne DA; Smith ND; Jamaluddin MF; Kahl RGS;... Dun MD. (n.d.) High-throughput global phosphoproteomic profiling using phospho heavy-labeled-spikeptide FAIMS stepped-CV DDA (pHASED). doi:10.1101/2022.04.22.489124

Germon ZP; Sillar JR; Mannan A; Duchatel RJ; Staudt D; Murray HC; Dun MD. (n.d.) Blockade of redox second messengers inhibits JAK/STAT and MEK/ERK signaling sensitizing FLT3-mutant acute myeloid leukemia to targeted therapies. doi:10.1101/2022.03.09.483687

Reay W; Geaghan M; Atkins JR; Carr V; Green M; & Cairns M. (2022) Directional anchor genes refine polygenic informed treatment selection in schizophrenia and bipolar disorder. doi:10.1101/2022.03.20.22272666

Adams DM; Reay WR; & Cairns MJ. (n.d.) Multiomic prioritisation of risk genes for anorexia nervosa. doi:10.1101/2022.06.04.22275898

Blokland KEC; Nizamoglu M; Habibie H; Borghuis T; Schuliga M; Melgert BN;... Burgess JK. (n.d.) Substrate stiffness engineered to replicate disease conditions influence senescence and fibrotic responses in primary lung fibroblasts. doi:10.1101/2022.09.27.509806

Ashhurst A; Johansen M; Maxwell J; Ashley C; Aggarwal A; Siddiquee R;... Britton W. (n.d.) Mucosal TLR2-activating protein-based vaccination induces potent pulmonary immunity and protection against SARS-CoV-2 in mice. doi:10.21203/rs.3.rs-1179181/v1

Gantier M; Ullah T; Johansen M; Balka K; Ambrose R; Gearing L; . . . Kumar N. (n.d.) Pharmacological inhibition of TBK1/IKKe blunts COVID-19 immunopathology. doi:10.21203/rs.3.rs-1336801/v1

Ditton E; Knott B; Hodyl N; Horton G; Walker FR; & Nilsson M. (n.d.) Reay WR; Geaghan M; Atkins JR; Carr V; Green M; & Cairns MJ. (2022) Directional anchor genes refine polygenic informed treatment selection in schizophrenia and bipolar disorder. doi:10.1101/2022.03.20.22272666

Chen L; Hoefel GA; Pathinayake PS; Reid A; Kelly C; HuiYing T; . . . Kaiko GE. (n.d.) Single cell RNA-seq identifies inflammation-induced loss of CFTR-expressing airway ionocytes in non-eosinophilic asthma. doi:10.1101/2022.04.26.489055

Ditton E; Knott B; Hodyl N; Horton G; Walker FR & Nilsson M. (n.d.) Correction: Assessing the efficacy of an individualized psychological flexibility skills training Intervention app for medical student burnout and well-being: protocol for a Randomized controlled trial. Doi: 10.2196/preprints.40684

Paudel KR; Mehta M; Yin GHS; Yen LL; Malya V; Patel V K; . . . Dua K. (n.d.) Berberine-loaded liquid crystalline nanoparticles inhibit non-small cell lung cancer proliferation and migration in vitro. doi:10.21203/rs.3.rs-926601/v1

PRESENTATION

Dineen-Griffin S. (2022) Empowering self-care through pharmacy. Guidelines and resources for pharmacists (Virtual Panel).

Dineen-Griffin S. (2022) Top three clinical presentations in pharmacy (Oral Presentation).

Dineen-Griffin S. (2022) Clinical assessment skills workshop (Oral Presentation).

Dineen-Griffin S. (2022) Early career pharmacists making waves influencing Change (Virtual Panel).

Dineen-Griffin S. (2022) Reinventing primary health care; reinventing pharmacy. The role of community pharmacy in a reinvented primary health care system.

Dineen-Griffin S. (2022) Insight board on women's intimate wellness.

Dineen-Griffin S. (2022) Current and future potential for increased scope of the role of the pharmacist facilitated by digital transformation.

Dineen-Griffin S. (2022) The role of community pharmacy in a reinvented primary health care system.

Dineen-Griffin S. (2022) Consumer behaviour related to the access and use of online health information and impact on self-care: a systematic review of systematic reviews.

Dineen-Griffin S. (2022) Primary health care transformation: a model of care to improve efficiency and effectiveness and reduce the pressure on Australian emergency departments.

Dineen-Griffin S. (2022) Mental health training programs for community pharmacists; pharmacy staff and students: a systematic review.

Dineen-Griffin S. (2022) A qualitative exploration of mental health services provided in community pharmacies.