

Summary of Successful Future Fellowships Proposals for Funding Commencing in 2013 by State and Organisation

The University of Newcastle

FT130100543 **Fleming, Dr Andrew J**

2013	\$94,165.00
2014	\$188,430.00
2015	\$188,180.00
2016	\$186,530.00
2017	\$92,615.00
Total	\$749,920.00

Primary FOR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

Funded Participants:

FT1 Fleming, Dr Andrew J

Administering Organisation The University of Newcastle

Project Summary

Piezoelectric transducers provide the highest positioning accuracy of any known actuator and the highest dynamic force resolution of any known sensor. However, these capabilities are limited to macro scale applications since piezoelectric materials are not compatible with integrated circuit (IC) or Micro-Electro-Mechanical Systems fabrication processes. This project aims to extend the use of piezoelectric materials to the meso- and micro-scale by fabricating miniature piezoelectric positioning and sensor systems. These devices will include six-axis nano-positioners and ultra-high resolution accelerometers and gyroscopes. This technology will create a new market for devices that are lower cost than macro-scale systems but provide higher performance than silicon based microsystems.

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FT130100481	Kieser, Prof Dr Hans L	
2013	\$108,917.00	
2014	\$210,369.50	
2015	\$190,740.00	
2016	\$185,012.50	
2017	\$95,725.00	
Total	\$790,764.00	
Primary FOR	2103	HISTORICAL STUDIES

Funded Participants:

FT2	Kieser, Prof Dr Hans L
Administering Organisation	The University of Newcastle

Project Summary

This project considers the Young Turk Revolution of 1908, the Ottoman entry into the First World War on the side of the Axis powers, and the subsequent demise of the Ottoman Empire in a broad international context. It addresses matters of deep analytical import - state formation, political violence, and genocide - and the relationship between these elements. It focuses in particular on the Grand Vizir, Talat Pasha, the founder of the modern Turkish nation-state, and the architect of the Armenian genocide. This history is essential for a contemporary understanding of the most controversial problems - the Kurdish conflict, the Armenian question, Palestine - facing Turkey and the Middle East today.

FT130101337	Sonar, Dr Prashant	
2013	\$94,415.00	
2014	\$188,830.00	
2015	\$188,830.00	
2016	\$188,830.00	
2017	\$94,415.00	
Total	\$755,320.00	
Primary FOR	0303	MACROMOLECULAR AND MATERIALS CHEMISTRY

Funded Participants:

FT1	Sonar, Dr Prashant
Administering Organisation	The University of Newcastle

Project Summary

Natural dyes and pigments are well known for their bright colours, photochemical and thermal stability, and cheap cost. Recently, the necessity of high performing materials in the organic electronics has stimulated a renaissance of these historical molecules and their subsequent derivatives into new families of π -conjugated building blocks used to construct new donor-acceptor semiconductors. The aim of this project is to explore various novel dyes, pigments and their derivatives for constructing outstanding materials for future organic electronics.

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FT130101289 **Tanwar, Dr Pradeep**

2013	\$93,918.00
2014	\$187,984.50
2015	\$186,922.50
2016	\$186,922.50
2017	\$94,066.50
Total	\$749,814.00

Primary FOR 1112 ONCOLOGY AND CARCINOGENESIS

Funded Participants:

FT1 Tanwar, Dr Pradeep

Administering Organisation The University of Newcastle

Project Summary

Serous ovarian cancer is the most aggressive and lethal gynaecological cancer in Australian women. Activation of Mammalian Target of Rapamycin (mTOR) is frequently observed and associated with poor prognosis in ovarian cancer patients. However, the mechanisms dysregulating mTOR in the pathogenesis of ovarian cancer are unknown. In preliminary studies, deletion of genes regulating mTOR signalling in up to 60 per cent of human serous ovarian cancer patients was observed. This project will provide mechanistic details of involvement of mTOR signalling in pathogenesis of the serous ovarian carcinoma, and develop a rationale for targeting mTOR pathway in these patients.