

## Selected Publications

### Chris Grof

Noyce PW, Offler CE, Steel CC, **Grof CPL**. 2019. [Timing of floral evocation in the grapevine \(\*Vitis vinifera\* L. cv. Chardonnay\) is identified by cyto-histological changes in the vegetative shoot apical meristem](#). Australian Journal of Grape and Wine Research **25**: 252-265.

**Grof CPL**. 2018. [Cannabis, from plant to pill](#). British Journal of Clinical Pharmacology **84**: 2463-2467.

Milne RJ, Perroux JM, Rae AL, Reinders A, Ward JM, Offler CE, Patrick JW, **Grof CPL**. 2017. [Sucrose transporter localization and function in phloem unloading in developing stems](#). Plant Physiology **173**: 1330-1341.

McGaughey SA, Osborn HL, Chen L, Pegler JL, Tyerman SD, Furbank RT, Byrt CS, **Grof CPL**. 2016. [Roles of aquaporins in \*Setaria viridis\* stem development and sugar storage](#). Frontiers in Plant Science **7**, <https://doi.org/10.3389/fpls.2016.01815>

Martin AP, Palmer WM, Brown CW, Abel C, Lunn JE, Furbank RT, **Grof CPL**. 2016. [A developing \*Setaria viridis\* internode: An experimental system for the study of biomass generation in a C<sub>4</sub> model species](#). Biotechnology for Biofuels **9**: 45. <https://doi.org/10.1186/s13068-016-0457-6>

Milne RJ, Offler CE, Patrick JW, **Grof CPL**. 2015. [Cellular pathways of source leaf phloem loading and phloem unloading in developing stems of \*Sorghum bicolor\* in relation to stem sucrose storage](#). Functional Plant Biology **42**: 957-970. <http://dx.doi.org/10.1071/FP15133>

Palmer WM, Martin AP, Flynn JR, Reed SL, White RG, Furbank RT, **Grof CPL**. 2015. [PEA-CLARITY: 3D molecular imaging of whole plant organs](#). Scientific Reports **5**: 13492; doi: 10.1038/srep13492

Martin AP, Palmer WM, Byrt CS, Furbank RT, **Grof CPL**. 2013. [A holistic high-throughput screening framework for biofuel feedstock assessment that characterises variations in soluble sugars and cell wall composition in \*Sorghum bicolor\*](#). Biotechnology for Biofuels doi: 10.1186/1754-6834-6-186.

Byrt CS, **Grof CPL**, Furbank RT. 2011. [C<sub>4</sub> plants as biofuel feedstocks: Optimising biomass production and feedstock quality from a lignocellulosic perspective](#). Journal of Integrative Plant Biology **53**: 120-

135.

Kühn C, Grof CPL. 2010. [Sucrose transporters of higher plants](#). *Current Opinion in Plant Biology* **13**: 287-298.

## Yong-Ling Ruan

Wan HJ, Wu LM, Yang YJ, Zhou GZ, Ruan Y-L. 2018. [Evolution of sucrose metabolism: The dichotomy of invertases](#). *Trends in Plant Science* **23**: 163-177.

Ruan Y-L<sup>#</sup>, Zhang Z<sup>#</sup>, Zhou N, Wang F, Guan X, Fang L, Shang X, Guo W, Zhu S, Tianzhen Zhang TZ. 2017. [Suppression of a putative sterol carrier gene reduces plasmodesmal permeability and activates expression of sucrose transporter gene during cotton fiber elongation](#). *Plant Cell* **29**: 2027–2046 (# Equal first authors).

Liu Y-H, Offler, CE, Ruan Y-L. 2016. [Cell wall invertase promotes fruit set under heat stress by suppressing ROS-independent cell death](#). *Plant Physiology* **172**: 163-180.

Ruan Y-L. 2014. [Sucrose metabolism: Gateway to diverse carbon use and sugar signalling](#). *Annual Review of Plant Biology* **65**: 33-67.

Ruan Y-L, Patrick JW, Bouzayen M, Osorio S, Fernie AR. 2012. [Molecular regulation of seed and fruit set](#). *Trends in Plant Science* **17**: 656- 665.

Wang L, Ruan Y-L. 2012. [New insights into roles of cell wall invertase in early seed development revealed by comprehensive spatial and temporal expression patterns of GhCWIN1 in cotton](#). *Plant Physiology* **160**: 777-787.

Wang L, Li XR, Lian, H, Ni DA, He Y, Chen XY, Ruan Y-L. 2010. [Evidence that high activity of vacuolar invertase is required for cotton fibre and Arabidopsis root elongation through osmotic dependent and independent pathway, respectively](#). *Plant Physiology* **154**: 744-756.

Jin Y, Ni DA, **Ruan Y-L**. 2009. [Posttranslational elevation of cell wall invertase activity by silencing its inhibitor in tomato delays leaf senescence and increases seed weight and fruit hexose level](#). *Plant Cell* **21**: 2072-2089.

**Ruan Y-L**, Llewellyn DJ, Furbank RT. 2003. [Suppression of sucrose synthase gene expression represses cotton fibre cell initiation, elongation and seed development](#). *Plant Cell* **15**: 952-964.

**Ruan Y-L**, Llewellyn DJ, Furbank RT. 2001. [Control of cotton fibre elongation by developmentally reversible gating of plasmodesmata and coordinated expression of sucrose and potassium transporters and expansin](#). *Plant Cell* **13**: 47-60.

## **David McCurdy**

Aleamotu'a M, McCurdy DW, Collings DA. 2019 [Phi thickenings in roots: novel secondary wall structures responsive to biotic and abiotic stresses](#). *Journal of Experimental Botany* **70**: 4631-4641.

Wu Y, Hou J, Yu F, Nguyen STT, **McCurdy DW**. 2018. [Transcript profiling identifies NAC-domain genes involved in regulating wall ingrowth deposition in phloem parenchyma transfer cells of \*Arabidopsis thaliana\*](#). *Frontiers Plant Science* **9**: 341. doi: 10.3389/fpls.2018.00341

Nguyen STT, Greaves T, **McCurdy DW**. 2017. [Heteroblastic development of transfer cells in \*Arabidopsis\* is controlled by the miR156/SPL module](#). *Plant Physiology* **173**: 1676-1691.

Nguyen STT, McCurdy DW. 2015. [High-resolution confocal imaging of wall ingrowths in transfer cells enables semi-quantitative assessment of phloem parenchyma transfer cell development in leaf veins of \*Arabidopsis\*](#). *BMC Plant Biology* **15**:109.

**McCurdy DW**. 2014. [Transfer cells – novel cell types with unique wall ingrowth architecture designed for optimized nutrient transport](#). In: *Plant Cell Wall Patterning and Cell Shape*, Fukuda H, ed. Wiley-Blackwell Publishers, London. pp. 287-317.

Dibley SJ, Zhou Y, Andriunas FA, Talbot MJ, Offler CE, Patrick JW, **McCurdy DW**. 2009. [Early gene expression programs accompanying \*trans\*-differentiation of epidermal cells of \*Vicia faba\* cotyledons](#)

into transfer cells. *New Phytologist* **182**: 863-877.

Staiger CJ, Sheahan MB, Khurana P, Wang X, **McCurdy DW**, Blanchoin L. 2009. Actin filament dynamics are dominated by rapid growth and severing activity in the *Arabidopsis* cortical array. *Journal of Cell Biology* **184**: 269-280.

**McCurdy DW**, Patrick JW, Offler CE. 2008. Wall ingrowth formation in transfer cells: novel examples of localized wall deposition in plant cells. *Current Opinion in Plant Biology* **11**: 653-661.

Sheahan MB, Staiger CJ, Rose RJ, **McCurdy DW**. 2004. A green fluorescent protein fusion to actin binding domain 2 of *Arabidopsis thaliana* fimbrin highlights new features of a dynamic actin cytoskeleton in live plant cells. *Plant Physiology* **136**: 3968-3978.

Offler CE, **McCurdy DW**, Patrick JW, Talbot MJ. 2003. Transfer cells: cells specialized for a special purpose. *Annual Review of Plant Biology* **54**: 431-454.

## **Andrew Eamens**

Pegler JL, Oultram JMJ, **Grof CPL**, **Eamens AL**. 2019. DRB1, DRB2 and DRB4 Are Required for Appropriate Regulation of the microRNA399/*PHOSPHATE2* Expression Module in *Arabidopsis thaliana*. *Plants (Basel)* **13**: 8.

Pegler JL, Oultram JMJ, **Grof CPL**, **Eamens AL**. 2019. Profiling the Abiotic Stress Responsive microRNA Landscape of *Arabidopsis thaliana*. *Plants (Basel)*. **10**: 8.

Pegler JL, **Grof CPL**, **Eamens AL**. 2018. Profiling of the Differential Abundance of Drought and Salt Stress-Responsive MicroRNAs Across Grass Crop and Genetic Model Plant Species. *Agronomy (Basel)*. 8.

Litholdo CG, **Eamens AL**, Waterhouse PM. 2018. The phenotypic and molecular assessment of the non-conserved *Arabidopsis* *MICRORNA163/S-ADENOSYL-METHYLTRANSFERASE* regulatory module during biotic stress. *Molecular Genetics and Genomics*. **293**: 503-523.

Curtin SJ, Xiong Y, Michno JM, Campbell BW, Stec AO, Čermák T, Starker C, Voytas DF, **Eamens AL**, Stupar RM. 2018. [CRISPR/Cas9 and TALENs generate heritable mutations for genes involved in small RNA processing of \*Glycine max\* and \*Medicago truncatula\*](#). *Plant Biotechnology Journal*. **16**: 1125-1137

Nguyen DQ, **Eamens AL**, Grof CPL. 2018. [Reference gene identification for reliable normalisation of quantitative RT-PCR data in \*Setaria viridis\*](#). *Plant Methods*. **14**.

Litholdo CG, Parker BL, **Eamens AL**, Larsen MR, Cordwell SJ, Waterhouse PM. 2016. [Proteomic identification of putative MicroRNA394 target genes in \*Arabidopsis thaliana\* identifies major latex protein family members critical for normal development](#). *Molecular and Cellular Proteomics*. **15**: 2033-2047.

Reis RS, Hart-Smith G, **Eamens AL**, Wilkins MR, Waterhouse PM. 2015. [Gene regulation by translational inhibition is determined by Dicer partnering proteins](#). *Nature Plants*. **1**.

Reis RS, Hart-Smith G, **Eamens AL**, Wilkins MR, Waterhouse PM. 2015. [MicroRNA regulatory mechanisms play different roles in \*Arabidopsis\*](#). *Journal of Proteome Research*. **14**: 4743-4751.

**Eamens AL**, Kim KW, Curtin SJ, Waterhouse PM. 2012. [DRB2 Is Required for MicroRNA Biogenesis in \*Arabidopsis thaliana\*](#). *PLoS One*. **7**.

## John Patrick

Zhang HM, Devine LB, Xia X, Offler CE, **Patrick JW**. 2019. [Ethylene and hydrogen peroxide regulate formation of a sterol-enriched domain essential for wall labyrinth assembly in transfer cells](#). *Journal of Experimental Botany* **70**: 1469-1482.

Milne RJ, Grof CPL, **Patrick JW**. 2018. [Mechanisms of phloem unloading: shaped by cellular pathways, their conductances and sink function](#). *Current Opinion in Plant Biology* **43**: 8-15.

Zhang HM, Wheeler S, Xia X, Radchuk R, Weber H, Offler CE, **Patrick JW**. 2015. [Differential transcriptional networks associated with key phases of ingrowth wall construction in \*trans\*-differentiating epidermal transfer cells of \*Vicia faba\* cotyledons](#). *BMC Plant Biology* **15**: 103.

Andriunas FA, Zhang H-M, Weber H, McCurdy DW, Offler CE, **Patrick JW**. 2011. [Glucose and ethylene signalling pathways converge to regulate \*trans\*-differentiation of epidermal cells in \*Vicia narbonensis\* cotyledons](#). *Plant Journal* **68**: 987-998.

Zhou Y, Qu H, Dibley KE, Offler CE, **Patrick JW**. 2007. [A suite of sucrose transporters expressed in coats of developing legume seeds includes novel pH-independent facilitators](#). *Plant Journal* **49**: 750-764.

Zhang W-H, Zhou Y, Dibley KE, Tyerman SD, Furbank RT, **Patrick JW**. 2007. [Nutrient loading of developing seeds](#). *Functional Plant Biology*, **34**: 314-331.

Rosche E, Blackmore D, Tegeder M, Richardson T, Schroeder H, Higgins TJV, Frommer WB, Offler CE, **Patrick JW**. 2002. [Seed-specific expression of a potato sucrose transporter increases sucrose uptake and growth rates of developing pea cotyledons](#). *Plant Journal* **30**: 165-175.

Farley SJ, **Patrick JW**, Offler CE. 2000. [Functional transfer cells differentiate in cultured cotyledons of \*Vicia faba\* L. seeds](#). *Protoplasma* **214**: 102-117.

Tegeder M, Wang X-D, Frommer WB, Offler CE, **Patrick JW**. 1999. [Sucrose transport into developing seeds of \*Pisum sativum\* L.](#) *Plant Journal* **18**: 151-161.

**Patrick JW**. 1997. [Phloem unloading: Sieve element unloading and post-sieve element transport](#). *Annual Review of Plant Physiology & Plant Molecular Biology* **48**: 191 - 222.

### **Christina (Tina) Offler**

Xia X, Zhang HM, **Offler CE**, Patrick JW. 2020. [Enzymes contributing to the hydrogen peroxide signal dynamics that regulate wall labyrinth formation in transfer cells](#). *Journal of Experimental Botany* **71**: 219-233.

Zhang HM, Colyvas K, Patrick JW, **Offler CE**. 2017. [A Ca<sup>2+</sup>-dependent remodelled actin network directs vesicle trafficking to build wall ingrowth papillae in transfer cells](#). *Journal of Experimental Botany* **68**: 4749-4764.

Xia X, Zhang H-M, **Offler CE**, Patrick JW. 2017. [A structurally specialized uniform wall layer is essential for constructing wall ingrowth papillae in transfer cells](#). *Frontiers in Plant Biology* **8**: 2035.

Zhang HM, Wheeler S, Xia X, Radchuk R, Weber H, **Offler CE**, Patrick JW. 2015. [Differential transcriptional networks associated with key phases of ingrowth wall construction in trans-differentiating epidermal transfer cells of \*Vicia faba\* cotyledons](#). *BMC Plant Biology* **15**: 103.

Andriunas FA, Zhang HM, Xia X, Patrick JW, **Offler CE**. 2013. [Intersection of transfer cells with phloem biology-broad evolutionary trends, function, and induction](#). *Frontiers in Plant Science* **4**: 221.

Wardini T, Wang X-D, **Offler CE**, Patrick JW. 2007. [Induction of wall ingrowths of transfer cells occurs rapidly and depends upon gene expression in cotyledons of developing \*Vicia faba\* seeds](#). *Protoplasma* **213**: 155 - 23.

**Offler CE**, McCurdy DW, Patrick JW, Talbot MJ. 2003. [Transfer cells: Cells specialized for a special purpose](#). *Annual Review of Plant Biology* **54**: 431- 453.

Talbot MJ, Franceschi VR, McCurdy DW, **Offler CE**. 2001. [Wall ingrowth architecture in epidermal transfer cells of \*Vicia faba\* cotyledons](#). *Protoplasma* **215**: 191 - 203.

**Offler CE**, Liet E, Sutton EG. 1997. [Transfer cell induction in cotyledons of \*Vicia faba\* L](#). *Protoplasma* **200**: 51 - 64.

**Offler CE**, Patrick JW. 1993. [Pathway of photosynthate transfer in the developing seed of \*Vicia faba\* L. A structural assessment of the role of transfer cells in unloading from the seed coat](#). *Journal of Experimental Botany* **44**: 711 - 724.

## David Collings

Aleamotu'a M, McCurdy DW, **Collings DA**. 2018. [Developmental biology and induction of phi thickenings by abiotic stress in roots of the Brassicaceae](#). *Plants* **7**: 47.

Tayagui A, Sun YL, **Collings DA**, Garrill A, Nock V. 2017. [An elastomeric micropillar platform for the study of protrusive forces in hyphal invasion](#). *Lab on a Chip* **17**: 3643-3653.

Thomas J, Idris NA, **Collings DA**. 2017. [Pontamine fast scarlet 4B bifuorescence, and measurements of cellulose microfibril angles](#). *Journal of Microscopy* **268**: 13-27.

**Collings DA**. 2015. [Optimisation approaches for concurrent transmitted light imaging during confocal microscopy](#). *Plant Methods* **11**: 40.

Idris NA, **Collings DA**. 2015. [The Life of Phi: the development of phi thickenings in roots of the orchids of the genus \*Miltoniopsis\*](#). *Planta* **241**: 489-506.

Lechner B, Rashbrooke MC, **Collings DA**, Eng RC, Kawamura E, Whittington AT, Wasteneys GO. 2012. [The N-terminal TOG domain of \*Arabidopsis\* MOR1 modulates affinity for microtubule polymers](#). *Journal of Cell Science* **125**: 3812-4821.

Keown DA, **Collings DA**, Keenan JI. 2012. [Uptake and persistence of \*Mycobacterium avium\* subspecies \*paratuberculosis\* in human monocytes](#). *Infection & Immunity* **80**: 3768-3775.

Barton DA, Cole L, **Collings DA**, Liu DYT, Smith PMC, Day DA, Overall RL. 2011. [Cell-to-cell transport via the lumen of the endoplasmic reticulum](#). *Plant Journal* **66**: 806-817.

**Collings DA**, Gebbie L, Howles PA, Hurley UA, Birch RC, Cork AC, Hocart C, Arioli T, Williamson RE. 2008. [\*Arabidopsis\* dynamin-like protein DRP1A: a null mutant with widespread defects in endocytosis, cellulose synthesis, cytokinesis and cell expansion](#). *Journal of Experimental Botany* **59**: 361-376.

**Collings DA**, Lill AW, Himmelspach R, Wasteneys GO. 2006. [Hypersensitivity to cytoskeletal antagonists demonstrates microtubule–microfilament cross-talk in the control of root elongation in \*Arabidopsis thaliana\*](#). *New Phytologist* **170**: 275–290.



## Stephen Bell

Fensham RJ, Laffineur B, Collingwood TD, Beech E, **Bell S**, Hopper SD, Phillips G, Rivers MC, Walsh N, White M. (in press). [Rarity or decline: Key concepts for the Red List of Australian eucalypts](#). *Biological Conservation* **in press**

**Bell SAJ**. (2019). [Macrozamia flexuosa](#) C. Moore (Zamiaceae): a review of distribution, habitat and conservation status of an endemic cycad from the Hunter Region of New South Wales. *Cunninghamia* **19**: 7-27.

**Bell SAJ**. (2018). [Fate of a rare flowering event in an endangered population of Acacia pendula \(Weeping Myall\) from the Hunter Valley, New South Wales](#). *Cunninghamia* **18**: 79-88.

**Bell S**, Sims R. (2018). [Extensive populations of Dracophyllum macranthum \(Ericaceae\) in Coorabakh National Park suggest a review of threat status](#). *Australasian Plant Conservation* **27**: 11-14.

**Bell SAJ**, Driscoll C. (2017). [Acacia wollarensis \(Fabaceae, Mimosoideae sect. Botrycephalae\), a distinctive new species endemic to the Hunter Valley of New South Wales, Australia](#). *Telopea* **20**: 125-136.

**Bell SAJ**, Walsh NG. (2015). [Leionema lamprophyllum subsp. fractum \(Rutaceae\); a new and highly restricted taxon from the Hunter Valley of New South Wales](#). *Telopea* **18**: 505-512.

**Bell SAJ**, Stables M. (2012). [Floristic variability, distribution and an extension of range for the endangered Pittwater Spotted Gum Forest, Central Coast, New South Wales](#). *Cunninghamia* **12**: 143-152.

**Bell SAJ**, Nicolle D. (2012). [Eucalyptus expressa \(Myrtaceae\): a distinctive new stringybark from the sandstone ranges north-west of Sydney, New South Wales](#). *Telopea* **14**: 69-76.

**Bell SAJ**. (2009). [Vegetation and floristics of Columbey National Park, lower Hunter Valley, New South Wales](#). *Cunninghamia* **11**: 241-275.

**Bell SAJ**. (2002). [Habitat of the endangered Hibbertia procumbens \(Labill.\) DC \(Dilleniaceae\) from the Central Coast of New South Wales](#). *The Victorian Naturalist* **119**: 69-74.