

Rapid Fire Posters

- P1** Understanding circadian disturbances in neurodegenerative diseases using hypothalamic organoids
Aswathi Gopalakrishnan, Cecilia Gomez Inclan, Stefan Thor
- P2** NR2F2/COUP-TFII haploinsufficiency may lead to 46,XX ovotesticular DSD through the impaired regulation of bipotential gonad factors
Lucas Ferreira, Svenja Pachernegg, Antonia Zech, Mauricio Cabral-da-Silva, Gorjana Robevska, Jocelyn van den Bergen, Elizabeth Ng, David Elliott, Magnus Dias-da-Silva, Andrew Sinclair, Katie Ayers
- P3** AATD reshapes infection responses in human stem-cell models
Sahel Amoozadeh, Declan Turner, Katelyn Patatsos, Tanya Labonne, Ed Stanley, Rhiannon Werder
- P4** Pathogenic E. coli infections: Studying interactions using human intestinal organoids
Eva Chan, Cristina Giogha, Garrett Ng, Ruo Wang, Paul Hertzog, Elizabeth Hartland
- P5** Deconstructing the impacts of CLN3 disease on the blood-brain barrier
Adelene Chiam, Sueanne Chear, Natalie E King, Jana Talbot, Elizabeth Read, Emma Wilkinson, Richard Wilson, Brad A Sutherland, Anthony L Cook
- P6** Characterisation of the purinergic P2X7 receptor in iPSC-derived astrocytes and microglia-like cells from ALS & AD donors
Andre McKenzie, Eryn Werry, Michael Kassiou

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- P8** Investigating the crosstalk between inflammation and regeneration in inflammatory bowel disease
Khanh Ha Do, Diana Micati, Lucy Porter, Andrew Pattison, Anne Fletcher, Edward Giles, Helen Abud
- P9** Scaling up cell production of iPSC-derived haematopoietic stem cells: challenges, advantages, and a gateway to resource sharing
Mauricio e Castro Cabral-da-Silva, Jacky Li, Hasindu Edirisinghe, Gulcan Sarila, Chantelle Inguanti, Ed Stanley, Andrew Elefanty, Elizabeth Ng
- P10** From human placenta to vascular organoids: investigating endothelial plasticity and SOX9's role in endothelial progenitor cells
Haiming Li, Laura Sormani, Seen Ling Sim, Mitchell Mostina, Edwige Roy, Abbas Shaffie, Kiarash Khosrotehrani
- P11** Embryonically derived endothelial-macrophage progenitors promote reparative neovascularisation in skeletal muscle after ischaemia
Sanuri Liyanage, Anna Williamson, Dang Tran, Khalia Primer, Thalia Salagaras, Vashe Chandrakanthan, Joanne Tan, Alex Pinto, Claudine Bonder, Christina Bursill, Shiwani Sharma, Peter Psaltis
- P12** Heparan sulfate proteoglycan: the pivotal regulators for neurogenesis and pathogenesis in the fight against Alzheimer's Disease
Duy Nguyen, Lyn Griffith, Rachel Okolicsanyi, Larisa Haupt
- P13** Unveiling the neural potential of human mesenchymal stem cells in 3D differentiation models
Sofia Petersen, Tayla Elliott, Rachel Okolicsanyi, Larisa Haupt
- P14** New insights into links between the microtubule cytoskeleton and pluripotent cell identity
Oliver Anderson, Jessica Greaney, Israa Hameed, Asma Aberkane, Sue Mei Lim, Jose M Polo, Jennifer Zenker
- P15** Harnessing the plasticity of enteric glia for cell and gene therapy for Hirschsprung Disease
David Lai, Jing Zhao, Gunes Yildiz, Annette Bergner, Marlene Hao, Lincon Stamp
- P16** Inflammatory cytokines trigger the activation of the kynurenine pathway of tryptophan metabolism: Effects on embryonic mouse neural stem cell proliferation, health and NAD state
Michael Lovelace, Ben Summers, Kazuo Suzuki, Bruce Brew

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- P17** Spatially charting the developing fat-tailed dunnart
Monika Mohenska, Kellie Wise, Elly D Walters, Ning Liu, Michael J Roach, Owen JL Rackham, Anja S Knaupp, Fernando J Rossello, Luciano G Martelotto, Oliver Griffith, Jose M Polo
- P18** A 2D in-vitro model of early-stage placental development
German Atzin Mora Roldan, Alexa Mae Gill, Dulce Medina, Karoline Swiatczak, Jose Polo
- P19** Investigation of transcription factor Tead1 in hydrocephalus and neural development
Alexandra Pelenyi, Michael Piper
- P20** WITHDRAWN
- P21** Derivation of cynomolgus monkey induced trophoblast stem cells via nuclear reprogramming
Elly Walters, Jia Tan, Naiara Bediaga, Sue Mei Lim, Monika Mohenska, Guizhi Sun, Yu Bo Yang Sun, Joseph Chen, Qiaoyu Chen, Xiaodong Liu, Jose Polo
- P22** Applying stomics to pluripotent stem cell derived organoids
Maria Rosaria Nucera, Natalie Charitakis, Ryan Leung, Anna Leichter, Emma Scully, Ritika Saxena, Alexander Maytum, Michelle Scurr, Gulcan Sarila, Rebecca Sutton, Lynn Rowley, Natasha Tuano, Holly Voges, F Ahmad, Denis Bienroth, Hieu Nim, Micheal See, X Sun, Ka Leung Li, B Yang, Vallari Sawant, Merzena Walkiewicz, David Eisenstat, Andrew Elefanty, David Elliot, Alejandro Hidalgo-Gonzales, Marie Faux, Melissa Little, S Lamande, Richard Millis, E Ng Enzo Porrello, Fernando Rossello, Ed Stanley, J Vanslambrouck, R Werder, S Velasco, Mirana Ramialison
- P23** RUNX1 expression tracks human haematopoiesis from haemogenic endothelium to haematopoietic stem cell
Ritika Saxena, Alexander Maytum, Tanya Labonne, Gulcan Sarila, Chantelle Inguanti, Hasindu Edirisinghe, Ed Stanley, Elizabeth Ng, Andrew Elefanty
- P24** Blood vessel networks generated from human stem cells
Connor Sherwood, Tony Pang
- P25** Harnessing germline stem cells as tools for marsupial conservation
Gerard Tarulli, Dorteia Hansen, Christina Alsterberg, Patrick Tatt, Nicola Kolaitis, Sara Ord, Stephen Frankenberg, Andrew Pask
- P26** Developing a platform of quality-controlled, validated stem cell models for researchers within a multi-user facility
Johana Tello Velasquez, Robyn Yeh, Renee M Whan, Alison Ferguson
- P27** A dual-reporter human pluripotent stem cell line for live-cell imaging of human immune responses
Zhengqi Cheng, ***Christine Wells***
- P28** Macrophages influence epithelial responses to respiratory viral infections in human stem cell models of the lung
Hannah Baric, Katelyn Patatsos, Declan Turner, Sahel Amoozadeh, Kathleen Strumila, Tanya Labonne, Ed Stanley, ***Rhiannon Werder***
- P29** Accessing cord blood units for research: expanded consent options and pathways towards cellular therapies
Keren Abberton, Junann Wish-Wilson, Tricia McDonald, Ngaire Elwood
- P30** Transient reduction of electrophysiological activity enhances energy reserves for cellular repair and protecting human midbrain neurons
Robert Adams, Bridget Milky, Paris Mazzachi, Amal Abdisharid Ali, Glenda Halliday, Glenn King, Tim Sargeant, Cedric Bardy
- P31** Gene editing for usher syndrome type 2A: Unravelling photoreceptor degeneration mechanisms and exploring therapeutic potential using retinal organoids
Deborah Aubin, Hani J Kim, Pengyi Yang, Mark Graham, Leszek Lisowski Anai Gonzalez-Cordero

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- P32** Vascular phenotype switching in induced pluripotent stem cell-derived models of spontaneous coronary artery dissection
Monique Bax, Keerat Junday, Muhammad Alsherbiny, Stephanie Hesselton, Emily Hurley, David Muller, Ingrid Tarr, Lucy McGrath-Cadell, Siiri E Iismaa, Eleni Giannoulatou, Robert M Graham
- P33** Modelling Rubinstein-Taybi Epigenetic Neurodevelopmental Disorder to Test and Develop New Therapeutic Strategies
Rudrarup Bhattacharjee, Suzan de Boer, Dulce Medina Garcia, German A Mora-Roldan, Joseph Chen, Sue Mei Lim, Stefan White, Jose M Polo
- P34** Bioengineering functional skeletal muscle derived from pluripotent stem cells
Kaitlyn Bibby, Rebecca McElroy, Richard Mills
- P35** An automated protocol for generating microglia-containing cortical organoids
Jordan Elli Clarke, Angela Connelly, Maciej Daniszewski, Yumiko Hirokawa, Alice Pébay, Murray Cairns, Maria Di Biase
- P36** Generation of iPSC-derived adipocytes to investigate the role of epicardial adipose tissue in atrial fibrillation
Lauren Cook, Jordan Thorpe, Matthew D Perry, Adam P Hill
- P37** Betacellulin is a central target for Schizophrenia
Agustin Cota-Coronado, Rachel Hill, Andrew Gibbons, Joseph Rosenbluh, Suresh Sundram
- P38** Making mature muscle: Investigating metabolic and developmental pathways for improving the maturation of bioengineered muscle
Callum Dark, Kaitlyn Bibby, Natasha Tuano, Rebecca McElroy, Tabitha Cree, Richard Mills
- P39** WITHDRAWN
- P40** Understanding the cellular environment of the heart to advance the development of cardiac therapies
Sebastian Bass-Stringer, Yinghan She, Hayley Pointer, Adam Piers, Kevin Watt, James Hudson, David Elliott, Enzo Porrello
- P41** Stem cell modelling of mitochondrial disease-linked cardiomyopathy
Ann Frazier, Yau Chung Low, Cameron McKnight, David Stroud, David Elliott, Diana Stojanovski, David Thorburn
- P42** Preclinical iPSC drug screen and machine learning predict neuroprotective agents for a form of childhood dementia
Zarina Greenberg, Ella McDonald, Alejandra Noreña Puerta, Manam Inushi De Silva, Cade Christensen, Robert Adams, Jenne Tran, Paris Mazzachi, Sebastian Loskarn, Siti Mubarakah, Megan Maack, Kris Elvidge, Mark Hutchinson, Kim Hemsley, Lisa Melton, Nicholas Smith, Cedric Bardy
- P43** Creating a micro-exon splicing map of early human brain development with genetically engineered pluripotent stem cell derived brain organoids
Pallavi Gupta, Hannah Leeson, Ishaan Gupta, Ernst Wolvetang
- P44** Optimizing the *in vitro* neuron microenvironment to mitigate phototoxicity in live-cell imaging
Cassandra Hoffmann, Simon Maksour, Jordan Clarke, Maciej Daniszewski, Alice Pébay, Paul Gleeson, Mirella Dottori, Ellie Cho, Andrew Zalesky, Maria Di Biase
- P45** Using patient-derived stem cell models to study childhood onset Facioscapulohumeral muscular dystrophy (FSHD)
Peter Houweling, Vanessa Crossman, Kathrin Mattes, Natasha Tuano, Rebecca McElroy, Chantal Coles, Katy de Valle, Peter Jones, Richard Mills, Ian Woodcock
- P46** What makes us breathe? Uncovering the neural rhythm generators for involuntary breathing using human pluripotent stem cells
Kevin Law, Clare Parish, Lachlan Thompson

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- P47** The PSEN1 H163R mutation in an iPSC-retinal model of Alzheimer's disease causes detectable disease-associated features involving β -amyloid pathways.
Grace Lidgerwood, *Damián Hernández, Jenna Hall, Anne Senabouth, Mehdi Mirzaei, Allison van de Meene, Celeste Karch, Alison Goate, Joseph Powell, Alice Pébay*
- P48** Developing a model of incomplete penetrance in arrhythmogenic cardiomyopathy using patient-derived induced pluripotent stem cells
Serena Li, *Matisse Fox, Samantha B Ross, Mira Holliday, Richard D Bagnall, Seakcheng Lim, Christopher Semsarian*
- P49** Reduced connexin-43 expression, slow conduction, and repolarisation dispersion in a model of hypertrophic cardiomyopathy.
Seakcheng Lim, *Melissa Mangala, Mira Holliday, Henrietta Cserne Szappanos, Samantha B. Ross, Serena Li, Jordan Thorp, Whitney Liang, Ginell N. Ranpura, Jamie I. Vandenberg, Christopher Semsarian, Adam P. Hill, Livia C. Hool*
- P50** Exploring cell senescence in iAstrocytes from C9orf72 ALS patients
Alexandra Maximova, *Michael Sullivan, Eryn Werry, Michael Kassiou*
- P51** Hyperactive synaptic circuits in neurons derived from children with a form of dementia
Paris Mazzachi, *Ella McDonald, Zarina Greenberg, Alejandra Noreña Puearta, Jenne Tran, Manam Inushi De Silva, Cade Christensen, Robert Adams, Sebastian Loskarn, Helen Beard, Michael Zablocki, Meera Elmasri, Megan Maack, Kris Elvidge, Mark R. Hutchinson, Cara O'Neill, Kim Hemsley, Lisa Melton, Nicholas Smith, Cedric Bardy*
- P52** Identifying new therapies for Facioscapulohumeral muscular dystrophy using a phenotypic screening approach
Rebecca McElroy, *Natasha Tuano, Kaitlyn Bibby, Timothy Johanssen, Henry Beetham, Alejandro Hidalgo-Gonzalez, Peter Houling, Kevin Watt, Sara Howden, Richard Mills*
- P53** Phosphoproteomic analysis of the signalling networks controlling human cardiomyocyte proliferation
Yulia Mitina, *Yi Sing Gee, Hannah Huckstep, Rosie Hyslop, Hayley Pointer, Benjamin Parker, Sean Humphrey, Jonathan Baell, Paul Stupple, Kevin Watt, David Elliott, Enzo Porrello*
- P54** Transcriptome analysis of ADHD dopaminergic neuron derived from iPSC: Evidence of signalling disruption and maturation delay
Atefeh Namipashaki, *Mark Bellgrove, Ziarh Hawi*
- P55** Using human stem cell-derived macrophages to examine the effects of platinum dissolution from cochlear implants
Bryony Nayagam, *Steven Iem, Jackie Ogier, Ulises Aregueta Robles, Dhyey Shah, Marnie Maddock, Mirella Dottori, Laura Poole-Warren*
- P56** Single cell transcriptomics elucidates intra-cellular signalling networks involved in donor-host interactions following transplantation of hPSC-derived photoreceptor cells to restore visual function
Michelle Sophie O'Hara-Wright, *Hani Kim, Pengyi Yang, Anai Gonzalez-Cordero*
- P57** Modelling the influence of the autonomic nervous system in atrial fibrillation using induced pluripotent stem cell models
Sutapa Saha, *Azadeh Zahabi, Jordan Thorpe, Shiang Lim, Adam Hill*
- P58** Innovative stem cell-based disease modeling: pioneering discoveries and future directions in RP11, ADOA and PMS disease
Priyanka Sain, *Caitlyn Richworth, Wissam Chiha, Sudhanshu Gupta, Resmi Menon, Maria Hoyos Carmona, Suzy Juraja, Richard Francis, Bridget Flis, Laura Florez, Anna Mills, Clarissa McDonagh, Danie Champaign, Dean De Alvis, Abbie Francis, Tenielle George, Janya Grainok, Jessica Nichols, Carla Jackson (née Mellough)*

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- P59** Modelling SETBP1 Haploinsufficiency Disorder using CRISPR gene editing and neural differentiation of iPSCs
Nicole Shaw, Kevin Chen, Kathryn Farley, Mitchell Hedges, Gareth Baynam, Timo Lassmann, Vanessa Fear
- P60** TRAPPC4 disorder: neuronal models of disease for therapeutic validation studies
Nicole Van Bergen, Riley Hall, Vallari Sawant, Jinchao Gu, Tim Sikora, Ben Rollo, Silvia Velasco, Jinkuk Kim, John Christodoulou
- P61** Bioengineering complex, functional kidney tissue with spatially organised proximal nephrons
Jessica Vanslambrouck, Ker Sin Tan, Sophia Mah, Kathleen Dominic, Melissa Little
- P62** Characterization of a novel human Amyotrophic lateral sclerosis (ALS) three- dimensional (3D) Neurovascular Unit (NVU) *in vitro* cell model
Stephani Viljoen, Juliana C. S. Chaves, Ian Peall, Anthony R White, Lotta Oikari
- P63** Investigating the cell biology of childhood dementia using high-content imaging of organelles and macromolecules
Emma Wilkinson, Elizabeth Read, Sueanne Chear, Adelene Chaim, Alex Hewitt, Jana Talbot, Anthony L Cook
- P64** Multicellular stem cell-derived human heart valve organoids to model Rheumatic Heart Disease
Serene Yeow, Jessica Durrant-Whyte, Adam Piers, Hannah Frost, Andrew Steer, Enzo Porrello, Holly Voges
- P65** Investigating the Role of Hypoxia-Immune Tumour Microenvironment in Colorectal Cancer Using Patient-derived Organoids
Ruobing Zhang, Wing-Hei Chan, Rebekah Engel, Zhengqi Cheng, Andrew D. Pattison, Thierry Jardé, Paul J. McMurrick, Lochlan Fennell, Christine A. Wells, Helen E. Abud
- P66** Don't call me "iPSC1". Addressing identity and provenance in Australian Stem Cell Research
Suzanne Butcher, Noel Faux, Stuart Lee, Mengqi Hu, Daniel Russo-Batterham, Priyanka Nair-Turkich, Masoud Kamali, Thao Nguyen, Christine Wells
- P67** How FAIR are hPSCs?
Mengqi Hu, Christine. A Wells
- P68** The research-teaching nexus
Julia Young, Sonja McKeown
- P69** Targeting colon cancer stem cells as new therapeutic approach in the treatment of colorectal cancer
Reem ALHulais, Stephen Ralph
- P70** Identifying genomic drivers of *in vitro* human mesenchymal stem cells proliferation via targeted transcriptome sequencing
Nghia Nguyen, Sofia Petersen, Duy Nguyen, Martina Gyimesi, Rachel Okolicsanyi, Larisa Haupt