

Annual Report

2014

stemcellsaustralia.edu.au

“OUR RESEARCH, DRIVEN BY OUR INTERNATIONAL PARTNERSHIPS AND COLLABORATIONS, IS GENERATING NEW KNOWLEDGE ABOUT STEM CELLS FASTER THAN EVER BEFORE”

Professor David de Kretser
Chairman, Governance Committee

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Cover image: Mouse femur showing the expression of two factors required to regulate hemopoietic stem cells, Osteopontin and Prothrombin (Courtesy of C. Heazlewood, CSIRO)

Vision statement

To discover how to regulate stem cells in order to harness their potential for therapeutic purposes and to generate economically valuable biotechnologies.

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Dr Anna Michalska in the Stemcore lab

Message From The Chairman

Into its third year, further significant advances have been made by scientists from Stem Cells Australia; a Special Research Initiative in Stem Cell Science funded by the Australian Research Council.

These advances highlight the value of a high level of cooperation and sharing of knowledge between Australian experts in the field, thereby enhancing their impact on stem cell research at both national and international levels.

Heart disease, stroke and multiple sclerosis are common medical problems that require research-based solutions to save lives and improve the quality of life, and ease the burden on our economy. The exploration of the fundamental mechanisms involved in stem cell regulation and differentiation are required to enable the use of this knowledge in innovative biotechnological and therapeutic applications. Not only will this initiative support excellence in stem cell research, but we will also lead public debate and discussion about the important ethical, legal and societal issues associated with stem cell science. The unique multidisciplinary approach of this initiative will also nurture and train the next generation of Australian stem cell scientists, strengthening Australia's future position in the field.

During 2014, our interdisciplinary research program enhanced our understanding of the potential roles of stem cells in a range of conditions arising from cell damage such as brain injury and the regeneration of neurons, to the effects of a heart attack which damages cardiac muscle requiring healing of the damaged tissue and the growth of new cardiac muscle cells. Our researchers were also part of global teams, through project "Grandiose", working on understanding what happens inside a cell as it reverts to an artificial stem cell through reprogramming. Such projects

add data to "FANTOM (Functional Annotation of the Mammalian Genome)" which aims to understand what is written in our DNA.

2014 was also highlighted by our mid-term Australian Research Council (ARC) review where researchers were able to discuss their research with members of ARC and independent reviewers. To promote interactions and information sharing between researchers and participating members, Stem Cells Australia (SCA) held theme workshops which resulted in further cross-disciplinary collaboration and greater research focus.

SCA's core researchers were in research teams that secured over \$11 million in research funding in 2014 from various funding sources including ARC, National Health and Medical Research Council (NHMRC) and other national and international sources. The consolidation of a relationship with Canada's Centre for Commercialisation of Regenerative Medicine (CCRM) via a Memorandum of Understanding (MOU) was a key highlight of this year's activities, and will facilitate protection of intellectual property and open possibilities of future commercial developments.

In 2014, SCA used strategic funds to foster further collaboration between partners and provide the opportunity to bring in new collaborators to join our research community. The second round of strategic funding provided support to four new projects that fit within our existing research themes and further information about these can be found on our website.

The expansion of our network progressed steadily in 2014 with a number of staff relocations. In 2014,



we welcomed Professor Anton Middelberg from the University of Queensland (UQ) to the Governance Committee, and Professor Hideyuki Okano from Keio University, Japan, to the Scientific Advisory Committee in place of Professor Max Lu and Professor Shin-ichi Nishikawa respectively. Two of our former affiliate members took on the role of Chief Investigators while two new affiliate members were welcomed into the initiative. We look forward to announcing new affiliate memberships over the coming year, as well as welcoming more visiting international fellows.

Stem cell science is an extremely fast moving field of research with new breakthroughs being reported on an almost daily basis, increasing the likelihood of therapeutic developments. Our 2014 research publications have provided impact to the broader community through knowledge transfer in a number of key areas as we gain further understanding of cell differentiation. The collaborative effort of scientists in SCA places the Australian scientific community at the world's leading edge of research in this important field.

In 2014 we continued to impact the broader community through knowledge transfer in a number of key areas as we gain further understanding of cell differentiation. The collaborative effort of scientists in SCA places the Australian scientific community at the world's leading edge of research in this important field. I would like to congratulate all members of SCA for their contribution.

Professor David de Kretser
Chairman, Governance Committee

Message From The Program Leader

In 2014, as Stem Cells Australia completed the third year of its research program and prepared for its Interim Review by the Australian Research Council, we could look back on a series of impressive discoveries from our scientific teams that kept us at the forefront of international activity in the field.

SCA scientists played important roles in major international consortia including FANTOM, which utilised our stem cell and bioinformatics platforms to uncover striking new aspects of gene regulation in mammalian cells, and Project Grandiose, which provided the most detailed picture yet of the molecular milestones and timelines for cellular reprogramming to pluripotency.

Melissa Little used reporter lines developed by the team of Elefanty and Stanley to build for the first time the key components of the human embryonic kidney in a laboratory dish, a study that featured stunning images of cells undergoing self-assembly to form the elements of the nephron. Reporter cell lines built by Elefanty and Stanley also figured in groundbreaking international studies on the production of human interneurons (with potential application in epilepsy) and endoderm cells (cells that can form liver, pancreas and other cell types).

Bob Graham was part of an international group that made the remarkable discovery that adult cardiomyocytes can still divide in a narrow time window to produce new heart muscle.

In another surprising advance, Trevor Kilpatrick and Toby Merson showed that adult neural progenitors can actually contribute significantly to remyelination in the Central Nervous System (CNS) after injury, a critical process for recovery in a number of disorders including multiple sclerosis. SCA postdoctoral student Kathryn Potts and team leader Samir Taoudi (joined by veterans Warren Alexander and

Doug Hilton) uncovered a totally new pathway for generating platelets in the early embryo.

All of these outstanding works involved collaboration of SCA scientists with one another and/or with colleagues internationally, illustrating the importance of the network connections SCA has established.

SCA scientists received a number of awards and honors this year, including three ARC Future Fellowships (Mirella Dottori, Alice Pebay, and Robin Hobbs), NHMRC Fellowships (Ed Stanley and James Bourne), and a prestigious National Stem Cell Foundation of Australia (NSCFA) Metcalf Award to Jose Polo. Our colleague Perry Bartlett was the recipient of the Australian Neuroscience Society Distinguished Achievement Award.

We continue to reach out to colleagues across the Australian stem cell science community. For the first time, our Annual Retreat was run in conjunction with the annual meeting of the Australasian Society for Stem Cell Research (ASSCR). The joint meeting was highly successful, and the two groups will come together again in 2015.

We also worked hard with the ASSCR to put forward a bid to bring the 2018 meeting of the International Society for Stem Cell Research (ISSCR) to Melbourne. The bid was well-received and we await the outcome of their decision.

Megan Munsie has continued to lead our efforts to curb the expansion of clinics offering unproven stem cell treatments in Australia. The public campaign has

been accelerated as the growth of these clinics continues unabated. Our efforts here are beginning to have real impact but the campaign to rectify this situation has only just begun.

Finally, the ARC undertook its Interim Review of Stem Cells Australia in November. The Review provided our leadership with an opportunity to tell the great stories outlined above and many more. We had fantastic support on the day of the site visit from our students, postdocs, investigators, Scientific Advisory Committee (SAC), and members of our Governance Committee (GC). We look forward to building on the excellent start we have made over the next four years.

Professor Martin Pera
Program Leader



Program Highlights

SCA researchers continued to advance the field of stem cell science in 2014 through world leading research and collaborations, high impact journal publications and securing additional external funding.

An important highlight for 2014 was the mid-term ARC review in November, where researchers were able to discuss their research with members of ARC and independent reviewers.

Research Performance

Heart Regeneration

Scientists at the Victor Chang Cardiac Research Institute (VCCRI), in collaboration with colleagues at Emory University in the United States, have discovered for the first time that heart muscle cells retain the ability to replicate long after birth.

In a study published in *Cell*, the scientists have overturned more than a century of scientific dogma, which proposed that heart muscle cells in mammals stopped replicating just after birth, limiting the organ's ability to repair itself after injury.

Professor Robert Graham, Executive Director, VCCRI and Des Renford Professor of Medicine, University of NSW, with colleague Professor Ahsan Husain at Emory University, led the study.

<http://www.stemcellsaustralia.edu.au/News---Events/News/Scientists-discover-the-heart-can-regenerate-itself.aspx>



Professor Robert Graham
(Courtesy of VCCRI)



Professor Melissa Little, Minister Ian Walker and Professor Justin Cooper-White at the announcement that UniQuest has signed an agreement with Organovo to print kidney tissue (Courtesy of Queensland Government)

Printed Kidney Tissue Closer to Reality

UQ, via its commercialisation company *UniQuest*, has signed an agreement with San Diego-based Organovo, which specialises in the 3D printing of human tissues.

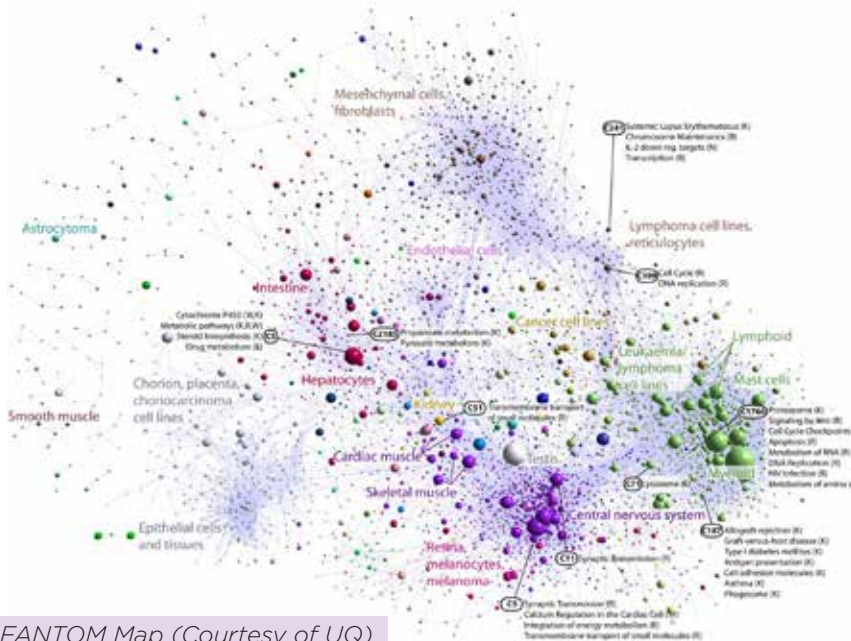
Under the agreement, *Organovo* will work with researchers Professor Melissa Little and Professor Justin Cooper-White to ultimately produce 3D printed mini-kidneys.

<http://www.uq.edu.au/news/article/2014/05/printed-kidney-tissue-closer-reality>

Artificial Stem Cells

As a part of a global team consisting of 50 researchers from across four continents, SCA researcher Associate Professor Christine Wells at UQ, together with SCA Scientific Advisory Committee members Professor Andras Nagy and Professor Peter Zandstra, have identified a new type of artificial stem cell. Project Grandiose is a large scale research effort to understand what happens inside a cell as it reverts to an artificial stem cell through reprogramming. The findings will enable researchers to explore pathways to arrive at new cell types with important applications for regenerative medicine and stem cell science.

<http://www.aibn.uq.edu.au/project-grandiose>



FANTOM Map (Courtesy of UQ)

FANTOM DNA

Associate Professors Christine Wells and Ernst Wolvetang are part of a large international collaboration that has documented the complex pattern of genes expressed in the body's normal cells. The library – published in the prestigious *Nature* scientific journal – provides unprecedented insight into health, development and human behavior.

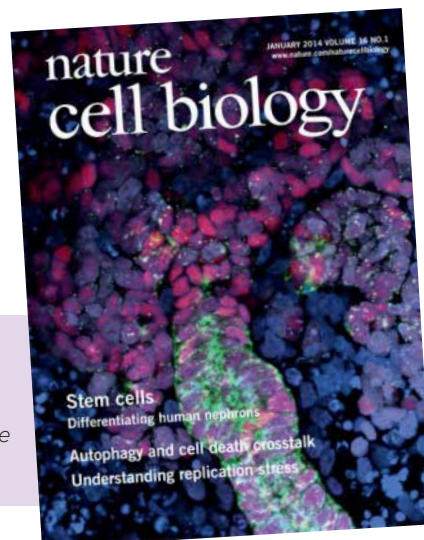
Understanding what is written in our DNA has been the quest of an international consortium *FANTOM*. This initiative involves scientists from more than 20 countries and is providing new ways to read and understand the 'DNA book'.

FANTOM Associate Professor Wells has accepted a joint appointment as Reader at the University of Glasgow's Institute of Infection, Immunity and Inflammation, enabling her to establish translational linkages for her Australian Institute of Bioengineering and Nanotechnology (AIBN) research into cellular differentiation and activation.

Front cover image of work by M. Takasato, P. X. Er, M. Becroft, J. M. Vanslambrouck, E. G. Stanley, A. G. Elefanty. Front Cover Reprinted by permission from Macmillan Publishers Ltd: *Nature Cell Biology*, (Volume 16, No 1, 2014), ©(2015).<http://www.nature.com/ncb/index.html>

Breakthrough in Renal Disease Research

A paper highlighting the potential for pluripotent stem cell based renal regeneration was published in *Nature Cell Biology* by Professor Melissa Little's group at UQ, also producing the front cover image of that issue. The results herald a potential blockbuster weapon in the fight against renal disease. This breakthrough is an exciting step forward on the path of bioengineering, i.e. growing new organs, and could also be a powerful tool in identifying drugs harmful to the kidneys before the drugs reach the clinical trial stage.



Down Syndrome Success

SCA researchers Associate Professors Ernst Wolvetang and Christine Wells at UQ have recorded a world first in identifying the moment of altered brain development in Down Syndrome.

They reprogrammed skin cells from people with Down Syndrome into induced pluripotent stem cells, to study the first month of foetal brain development in a lab dish.

This work builds on the Nobel Prize winning work of Professor Shinya Yamanaka, and is a big step forward in Down Syndrome research and towards treatments to improve the lives of children with the disease.

<http://www.aibn.uq.edu.au/down-syndrome-success>

Heart Repair

SCA affiliate researcher Dr James Chong, a clinician-scientist at Sydney's Westmead Millennium Institute for Medical Research, and US colleagues have successfully grown heart muscle cells in sufficient numbers to repair the damaged heart of primates.

The significant breakthrough, published in the scientific journal *Nature*, is being described as a "bold new step" towards solving the growing epidemic of chronic heart failure, which kills more than 20,000 Australians each year. For the first time researchers were able to grow stem cell-derived heart muscle at a sufficiently large scale to treat large animals. Injecting the cells into the animals' infarcted hearts resulted in large-scale re-muscularisation and regeneration of the failing organ.

<http://www.stemcellsaustralia.edu.au/News---Events/News/Australian-researcher-part-of-stem-cell-breakthrough-to-rep.aspx>

Canadian Co-operation

CCRM and SCA consortium have entered into an MoU to work together to increase the translation of stem cell research in the two countries. Exploring the potential of stem cells and their regenerative capacity has been a core focus of medical research in Canada and Australia for many years.

Recognizing the need to accelerate the translation of such findings into real benefits has led to CCRM joining forces with Australian researchers, from leading universities and research organizations across the country, through the Stem Cells Australia consortium. The purpose is to build an international cluster of scientific excellence.

<http://www.stemcellsaustralia.edu.au/News--Events/News/Canadian-CCRM-and-Stem-Cells-Australia-Agree-to-Collaborate.aspx>

Reputation Building

Researchers continued an impressive publication record, publishing 141 articles in open access and peer reviewed journals in 2014; exceeding the 2014 ARC target of 90 journal publications. Articles were published in high impact factor (IF) journals such as:

- *Nature*
- *Nature Cell Biology*
- *Cell Stem Cell* and
- *Cell*

Of the published articles:

- 117 articles were published in peer reviewed journals
- 6% of articles published in journals with an IF ≥ 40
- 20% of articles published in journals with an IF > 10,
- Over 60% articles were published with collaboration with another partner organisation, national or international organisation

The work carried out by SCA researchers, including students, have been once again acknowledged and showcased globally with:

- Over 96 invited presentations at international conferences/meetings
- Over 19 oral presentations and 25 poster presentations at conferences/meetings

Other SCA work at a global level included our researchers

Network Genes

An international, interdisciplinary research team involving UQ has identified specific networks of genes that regulate stem cell behaviour and may aid in controlling stem cell fate. A paper outlining their findings has been published in *Stem Cell Reports* with AIBN's PhD student Elizabeth Mason as lead author.

<http://www.aibn.uq.edu.au/stem-cells-reports>

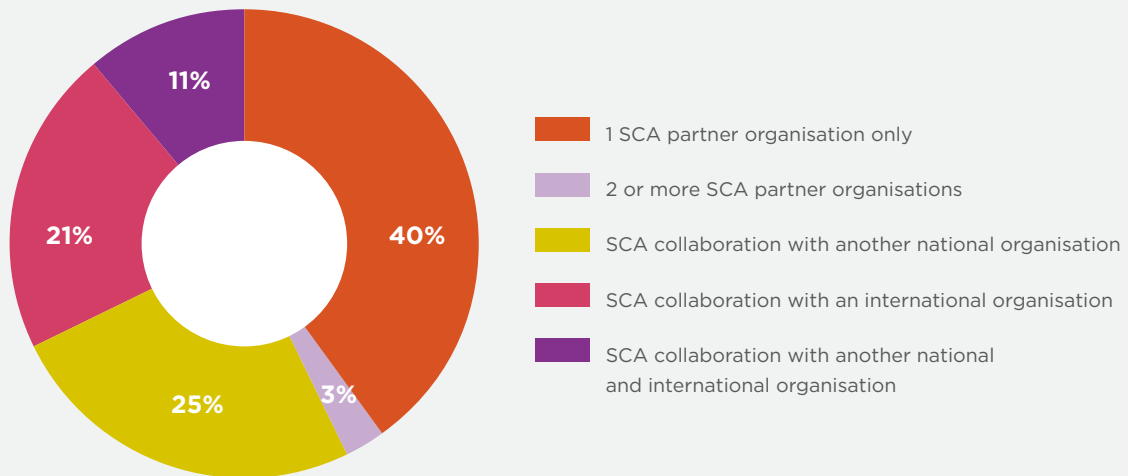


A collection of 2014 papers

participating as advisory board members, committee members, panellists, session chairs, organisers and presenters at public lectures.

In 2014 SCA researchers were part of teams that managed to

successfully secure multi-year grants of over \$11.9 million through various ARC, NHMRC and other national and international funding sources, out of which over \$4.7 million was allocated for 2014 alone.



Collaborative distribution of 2014 journal publications

Fellowships and Awards

SCA researchers received fellowships and other prestigious awards in recognition of their excellence.

Fellowships

Mirella Dottori (UoM) – ARC Future Fellowship

Robin Hobbs (Monash) – ARC Future Fellowship

Alice Pebay (UoM) – ARC Future Fellowship

Ed Stanley (MCRI) – NHMRC Future Fellowship

James Bourne (Monash) – NHMRC Research Fellowship



Metcalf Prize-winning researcher Associate Professor Jose Polo with late Professor Donald Metcalf (Courtesy of NSCFA)

Awards

Perry Bartlett (UQ) – Distinguished achievement award by the Australian Neuroscience Society. The occasional award is granted in honour of an outstanding contribution by an individual to neuroscience in Australia, and to the Australian Neuroscience Society (ANS).

Jose Polo (Monash) – The NSCSFA Metcalf prize in recognition of his contribution to stem cell science.

Ernst Wolvetang (UQ) – Aon Risk Solutions Regenerative Medicine Award from Life Sciences Queensland Limited for enhancing the potential of Bioengineering and Nanotechnology within life sciences.

Li-Yen Wong (UQ) – Graduate School International Travel Award.

Jarmon Lees (UoM) – Australian Postgraduate Award, and winner of 3 minute thesis, Australian Society for Medical Research.

Hananeh Fonoudi (UNSW) – University International Postgraduate Award from UNSW.

Over 25 postgraduate and postdoctoral researchers within the SCA network were awarded NSCFA Travel awards.

Furthermore, SCA researchers have been successful in securing over 10 new grants or fellowships in 2014 to begin in 2015.



Professor Perry Bartlett (Courtesy of UQ)



Claire Cuddy and Nicole Bye in the lab

Training and Capacity Building

In 2014, the SCA research network was comprised of 18 Chief Investigators, four Partner Investigators, 15 Associate Investigators, six Affiliate Investigators, and 14 Research Assistants.

SCA has an ongoing commitment to developing future researchers; ensuring the brightest minds are nourished, supported and retained. In 2014 there were a total of 55 postdoctoral researchers, with 10 new postdoctoral researchers and 60 postgraduate students, of which 18 were new postgraduate students.

Postgraduate students and post-doctoral researchers from each of our partner organisations have the opportunity to enhance their skills – throughout their candidature or employment – through training and workshops provided at the relevant organisations; including topics such as molecular medicine.

“SCA HAS AN ONGOING COMMITMENT TO DEVELOPING FUTURE RESEARCHERS; ENSURING THE BRIGHTEST MINDS ARE NOURISHED, SUPPORTED AND RETAINED.”

Some of the specific training and workshop opportunities available in 2014 to broaden their skill sets included:

The Victorian Stem Cell Network

“Victorian Stem Cell Network” monthly seminars hosted by The University of Melbourne, to engage with the wider stem cell network.

Stem Cells Conversation

A forum for students and scientists in Melbourne to have discussions on stem cell related topics.

Stem Cells and Regeneration Journal Club

This dedicated monthly forum at VCCRI keeps researchers up to date with major advances in these fields.

U21 Researcher Mobility Programs

Universitas 21 (U21) is an international network of 27 leading research-intensive universities in seventeen countries. The network’s purpose is to facilitate collaboration and cooperation between the member universities and to create opportunities for them on a scale that none of them would be able to achieve operating independently or through traditional bilateral alliances. The network offers a number of opportunities designed specifically for Early Career Researchers and Postgraduate Research Students.

U21 Program in Global Ethics and Integrity Module is a joint project of members from Universitas 21. The module is self-paced, and is available free to all staff and research candidates enrolled at the UNSW. The module consists of a series of case studies allowing participants to reflect upon ‘best practice’, as well as the responsibilities of student researchers, supervisors, universities, other institutions and governments. Candidates will deepen their understanding of how complex ethical issues can be, and will develop an ethical framework of intellectual honesty, respect for others, justice, human rights, beneficence and risk minimisation.

Molecules to Medicine

Sponsored by the Victorian government, this program provides practical on-the-job training and mentoring for researchers in technology transfer, translation and the commercial development of biomedical discoveries. The program is open to postdoctoral early career researchers employed at participating institutions. All Victorian biomedical research organisations, whether commercial or not, can apply. It offers multiple benefits to researchers and institutions, and provides:

- Practical experience with the parent institution in seven core areas related to the business of translating research, namely: opportunity identification and analysis; intellectual property management; technology marketing communication; agreements; technology transfer administration; medicine development process; and team membership, leadership and management.
- An expert series of 15-20 seminars for all interns on the topics associated with research commercialisation.

Walter and Eliza Hall, The Florey and CSIRO are participating in this program.

Advanced Workshop in Stem Cells and Neuroscience Research

As a part of The University of Melbourne Advanced Research Workshops in Neuroscience, scientists from Stem Cells Australia's Pluripotency and Cell Reprogramming program and our Stem Cell Core facility ran a week-long workshop for those wanting to know more about how to grow and use stem cells in their research. The aim of this workshop was to familiarise participants with the application of human pluripotent stem cells to problems in neuroscience, including the study of brain development, functional genomics and disease modelling. Both embryonic stem cells and the



Getting into the lab during the Melbourne StemCore workshop (Courtesy of StemCore)

more recently discovered induced pluripotent stem cells were featured in the workshop.

Over five days of lectures and practical classes, eight PhD students from the Florey, University of Melbourne, Monash University and Ludwig Institute for Cancer Research had the opportunity to develop skills in pluripotent stem cell science directly related to their research projects. Students also discussed the important regulatory, ethical and societal impact of pluripotent stem cell research during the workshop.

Skills Essentials

Monash University offers a comprehensive suite of professional development programs. They have been streamed into the following categories to make the selection easier.

- Management and Communication Fundamentals
- Career and Self Development
- Research Development
- Information Technology, Statistics and Data Management.

Commercialisation Workshops

UQ's research commercialisation company UniQuest Pty Ltd provides free commercialisation workshops at various times throughout the year tailored to the needs and interests of graduate students.

They offer an intensive grounding in the basics of commercialisation and intellectual property protection with speakers drawn from industry, the investment community, UQ, and UniQuest.

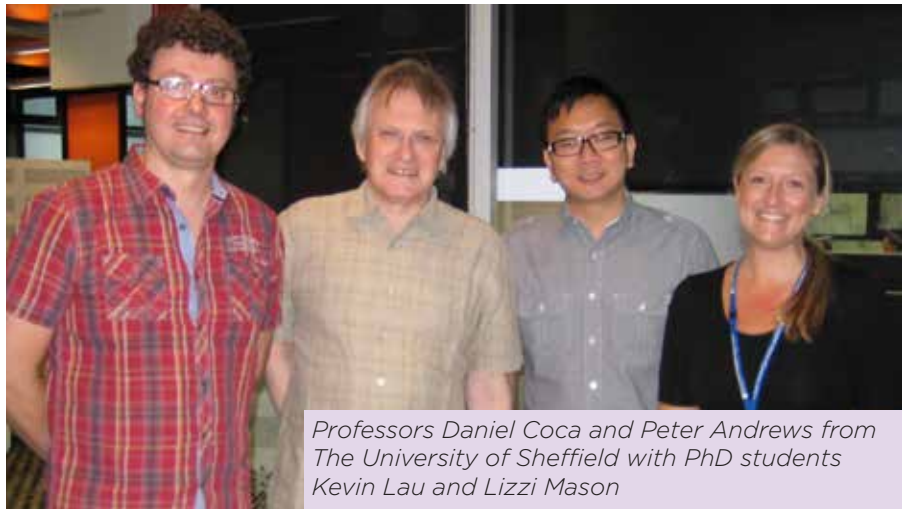
Participants receive informative and practical insights into the commercial environment from researchers who have successfully commercialised their research.

Networking

Scientists working in basic stem cell research rarely get the opportunity to meet and exchange ideas with colleagues involved in the development and delivery of cellular therapies. For the first time in the Australian stem cell field, the ASSCR, the Australian New Zealand region of the International Society for Cellular Therapy (ISCT ANZ) and SCA held a joint conference. Preceding the SCA annual retreat, it brought together scientists from basic and clinical research, engineering and industry. Over 115 members of the SCA network – including researchers, students and members of the SAC and GC – attended the 2014 SCA annual retreat, with more than half also attending the ASSCR joint meeting.

Theme meetings were held throughout the year for each of the four themes.

Professor Nadia Rosenthal hosted a visit by Sir John Gurdon to Monash University in October as part of the Australian Regenerative Medicine Institute (ARMI) external speaker program, providing a fantastic opportunity for researchers to hear insights from a highly acclaimed Nobel Laureate. During his visit to Monash University, he enthralled an audience of over 300 people with tales of his ground-breaking work in cloning and his ongoing fascination



Professors Daniel Coca and Peter Andrews from The University of Sheffield with PhD students Kevin Lau and Lizzi Mason

in genetics, cell reprogramming and the future of stem cell research.

Sir John Gurdon also visited VCCRI and presented at the Leaders in Science Seminar, his presentation titled “Nuclear reprogramming and the possibility of cell replacement therapy”.

Other leading international scientists that visited SCA in 2014 included SCA scientific advisory committee member Professor Andras Nagy (Lunenfeld-Tanenbaum Research Institute, Canada), Dr Kouichi Hasegawa (Institute for Integrated Cell-Material Science (iCeMS), Kyoto University, Japan), Dr Gage Crump (University of Southern California,

USA), Professor Stephen Dalton (University of Georgia, USA), Associate Professor Kateri Moore (Mount Sinai Hospital, USA) and Professor Ihor Lemishka (Mount Sinai Hospital, USA). In February Professors Peter Andrews and Daniel Coca from The University of Sheffield, UK, enjoyed Melbourne’s warmer weather while collaborating with Professor Martin Pera on their Human Frontier Science Program Award - Stem Cell Dynamics in Time and Space.



Professor Peter Currie (ARMI), Sir John Gurdon (Univ. of Cambridge), Professor Nadia Rosenthal (ARMI) and Professor Doug Hilton (WEHI) (Courtesy of G Sack)



Visiting Scientist Dr Kouichi Hasegawa (Japan) and Post-Doctoral Researcher Dr Alison Farley

Research Program

Stem cell science is acknowledged for its potential to revolutionise the understanding of human developmental biology and physiology, and offers discovery and technology platforms that impact across all fields of biomedical and clinical research.

However, despite rapid progress in many areas of stem cell research, scientists do not fully understand how a stem cell “decides” what to become, or how to control this process. Nor have we defined the specific environmental cues that maintain and mobilise the body’s tissue stem cell reserves. As a result, we cannot predict the safety and efficacy of employing stem cells for human tissue regeneration protocols.

SCA discoveries in basic science are contributing to the development of cell transplantation therapy, by facilitating the large-scale production of healthy human tissues from stem cells for use in treating disease. Through a better understanding of the body’s own repair mechanisms, our research is identifying new targets for regenerative medicine

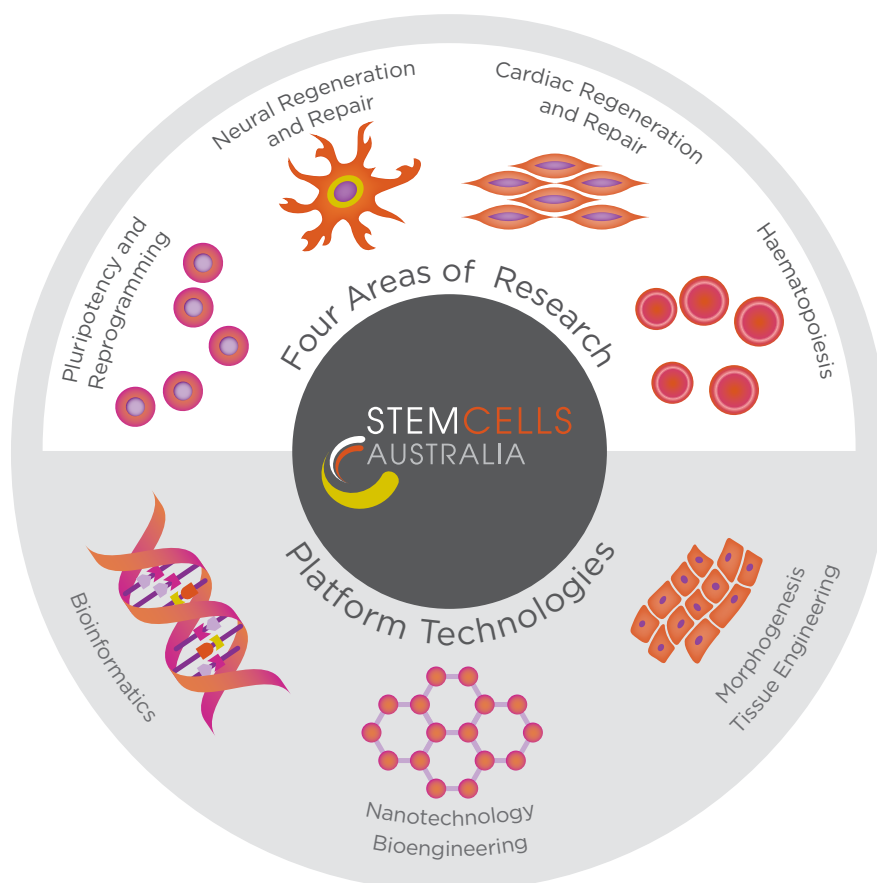
pharmaceuticals, including small molecules, recombinant growth factors and antibodies. Finally, pluripotent stem cells provide a discovery platform for functional human genetics, disease modelling, and drug development and toxicology. This powerful portfolio of research tools will impact across all areas of Australian biomedical science.

The SCA research program brings together a collaborative community of stem cell experts engaged in basic studies of the regulation of cell fate within four biological theme areas:

- Pluripotency and Reprogramming;
- Neural Regeneration and Repair;
- Cardiac Regeneration and Repair; and
- Haematopoiesis.

These biological themes are integrated with our discovery and technology platforms in bioinformatics, nanotechnology, bioengineering, and tissue engineering and morphogenesis. Our research will advance the National Research Priority Goal of promoting and maintaining good health, and will help to build frontier technologies for building and transforming Australian industries.

“THROUGH A BETTER UNDERSTANDING OF THE BODY’S OWN REPAIR MECHANISMS, OUR RESEARCH IS IDENTIFYING NEW TARGETS FOR REGENERATIVE MEDICINE PHARMACEUTICALS”



Theme: Pluripotency and Reprogramming

Professor Martin Pera and Professor Peter Gray

Revolutionised Prospects for Regenerative Medicine and Cell Replacement in the Body

This year SCA researchers participated in a number of major collaborative studies aimed at achieving a better understanding of pluripotency and the reprogramming process.

Christine Wells, Sean Grimmond, and others joined an international team led by our Scientific Advisory Committee member Andras Nagy in Project Grandiose, an appropriately named effort to map the molecular timecourse of cellular reprogramming. The results were published in five manuscripts in Nature group journals, and among the conceptual highlights of the work was the realisation that reprogramming could produce entirely new synthetic cell types with desired properties. These findings could open up a new pathway in synthetic biology.

Christine, Ernst Wolvetang and others also participated in the latest landmark studies from the FANTOM consortium, which used our bioinformatics and stem cell platforms with state of the art cDNA library construction by

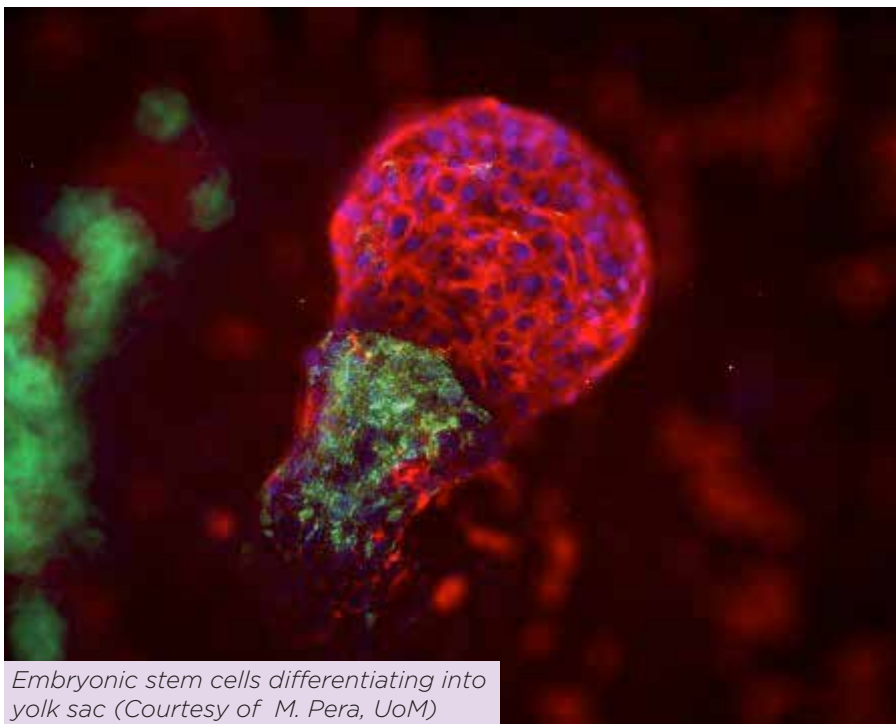
“...AMONGST THE CONCEPTUAL HIGHLIGHTS OF THE WORK WAS THE REALIZATION THAT REPROGRAMMING COULD PRODUCE ENTIRELY NEW SYNTHETIC CELL TYPES WITH DESIRED PROPERTIES.”

the CAGE technique to uncover new facets of gene regulation by enhancers and promoters. Martin Pera, Christine Wells and their student Elizabeth Mason joined forces to publish several papers on single cell analysis of human pluripotent stem cell subpopulations and an analysis of the role of variation in gene expression in explaining network behaviour; Ernst Wolvetang and Andrew Laslett, and collaborators in New York and Boston, were part of these latter studies as well.

Human pluripotent reporter stem cell lines developed by Ed Stanley and Andrew Elefanty continued to feature in a number of high profile studies of stem cell differentiation, including collaborations with Irv Weissman at Stanford (endodermal cells), the Monash University team (thymic progenitors) and Melissa Little (human nephrons).

The groups of Peter Gray and Michael Monteiro worked together to develop a new methodology for propagation of pluripotent stem cells, based on thermosensitive polymers that enable very gentle subculture of stem cells grown in suspension culture. The technique, which provides a new approach for large scale expansion of stem cells, is attracting attention from potential commercial partners and will find application in the propagation of other progenitor cell types.

At present the pluripotent stem cell field is grappling with the challenge of understanding that there are a number of distinct cell states that comprise pluripotency, including ones that do not exist in nature. The properties of these various cell states, their interconversions, and their advantages and disadvantages in practical application, await further elucidation. Meanwhile, the potential of these cells as platforms in human functional genomics and in cell therapy has only just begun to be realised. The next four years will be exciting ones for the Pluripotency and Reprogramming Team.



Embryonic stem cells differentiating into yolk sac (Courtesy of M. Pera, UoM)

Theme: Neural Regeneration and Repair

Professor Perry Bartlett and Professor Trevor Kilpatrick

Brain Cell Regeneration and Repair

This theme will determine the key molecules that stimulate neurogenesis within the CNS and explores the relationships, origins, nature and regulation of neural stem cells.

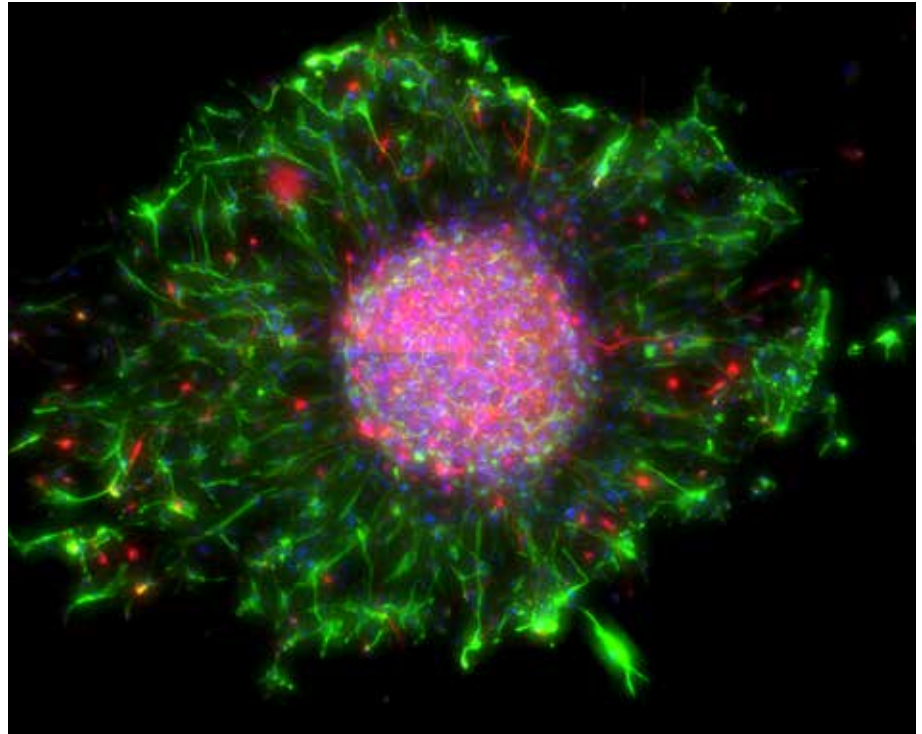
Evidence now suggests that the production of new neurons and oligodendrocytes in both the immature and mature nervous systems play a major role in how the mammalian nervous system learns and adapts to a changing environment and to disease or damage.

Research projects involve understanding molecular and cellular mechanisms regulating the activity of endogenous populations of neural precursor cells, as well as generating different neuronal subtypes from Embryonic Stem Cell (ESC) and induced Pluripotent Stem Cell (iPSC) sources. The theme has three main foci:

1. Understanding the factors regulating endogenous neural precursor maintenance and differentiation in health and disease.
2. Defining mechanisms that lead to production of specific neural phenotypes from in-vitro-generated stem cells.
3. Understanding the function and use of neural precursor progeny in the CNS.

Our data indicate that the adult hippocampus harbours distinct populations of quiescent stem cells that can be activated by different stimuli to generate new neurons. Evidence suggests that new neurons preferentially participate in the functional hippocampal circuitry that leads to enhancement of cognition and mood.

In this project, we have recently developed a novel cell-sorting strategy to purify distinct hippocampal precursor populations by flow cytometry.



A differentiated neurosphere generated by activating a norepinephrine-responsive stem cell isolated from the adult hippocampus contains neurons (red) and astrocytes (green). Nuclei (blue) are labeled with DAPI (Courtesy of D. Jhaveri and P. Bartlett, UQ).

Using this strategy, we will seek to determine whether the neural progeny generated from activating these distinct precursor populations are molecularly similar or different. This may provide a mechanism by which neural precursor subtypes, together with neurogenic stimuli, dictate the functional properties of new neurons.

Both *in vitro* and *in vivo* studies have demonstrated that oligodendrocyte progenitor cells (OPC) could be activated to become multipotent stem cells following injury.

The multipotentiality of OPC presents a novel therapeutic mechanism to address

pathophysiological conditions such as multiple sclerosis, stroke and epilepsy and to evaluate the importance of neurogenesis to learning and spatial memory.

The theme also develops models of the regenerative capacity for disease states such as multiple sclerosis. The use of these disease models will provide the capacity to interrogate similarities and differences in the capacity of cell types to respond to either direct insult or the demand for a regenerative response. This has the potential to increase our understanding of how these regenerative responses could be maximised.

“EVIDENCE NOW SUGGESTS THAT THE PRODUCTION OF NEW NEURONS AND OLIGODENDROCYTES... PLAY A MAJOR ROLE IN HOW THE MAMMALIAN NERVOUS SYSTEM LEARNS AND ADAPTS TO A CHANGING ENVIRONMENT AND TO DISEASE OR DAMAGE.”

Theme: Cardiac Regeneration and Repair

Professor Nadia Rosenthal and Professor Richard Harvey

Regeneration and Repair of Diseased or Injured Heart Tissue

This theme aims to develop a broad picture of the cellular and molecular basis of stem and stromal cell populations in the adult heart in health and disease, including their origins, hierarchies and regenerative potentials.

Furthermore, it seeks to understand the biochemical and epigenetic basis of cardiomyocyte (CM) proliferation and cell cycle withdrawal as crucial additional targets of regeneration therapies. Characterisation of the cellular processes that underlie cardiac regeneration in permissive models, as well as augmented cardiovascular repair in mammals, will be critical to a full understanding of the potential and limitations of heart regeneration in humans.

In the heart, cardiac-resident multipotent stem cells are rare in adults and compromised by aging, but retain the capacity to be expanded *in vitro* and augmented to stimulate repair. The realisation that a variety of adult tissues, including the heart, bear resident stem cell populations showing self-renewal and differentiation capacity has promoted efforts to test the efficacy of stem cell and regenerative therapies, and to understand the biology of tissue-resident stem cells. Understanding the mechanisms that regulate stem cell function in this largely post-mitotic organ will provide the basis for the development of new therapeutic approaches to address common conditions affecting large segments of the population.

The theme has three main foci:

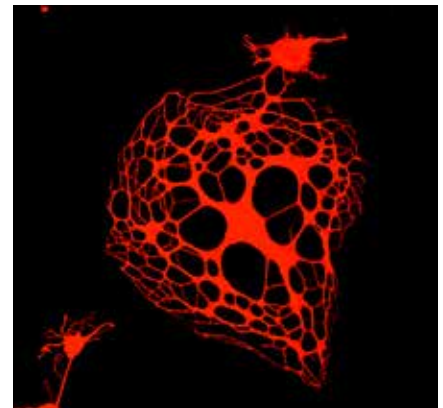
1. Exploration at a molecular and systems biology level of how "stemness" is maintained in cardiovascular tissues and how populations compromised by aging and disease might be rejuvenated.
2. Elucidation of the molecular underpinnings of cardiac repair, exploring a spectrum of organisms and genetically modified animals with varying degrees of cardiac regenerative capacity.
3. Discovery of the molecular switches

that underlie cell cycle re-entry of adult CMs in mammals compared to more regenerative vertebrates. Systems approaches are being used to unravel the molecular basis underlying this remarkable shift in CM proliferative capacity.

The objectives of this theme are being met by novel collaborative research projects among the laboratories of Theme Leaders and our network of Affiliates, and by coordination of research activities through dedicated workshops and special meetings. Current research projects include the generation of progenitor cells and functional cardiac tissue from pluripotent stem cell sources providing new opportunities for drug screening and understanding disease mechanisms, and generating new material for cell therapy; characterising alternative states in the putative stem cell lineage hierarchy of adult cardiac stem cells; and understanding key players in the adult cardiac stem cell niche to uncover their potential in regenerative therapies.

Defining the role of the immune system and other non-myocyte populations in stem cell maintenance and cardiac repair, including resident macrophages and fibroblasts, is another area of intense study. We have identified endogenous molecules that influence innate cardiac repair mechanisms such as c-kit, PDGF, thyroid hormone, IGF-1 and Neuregulin-1, and these are informing the design of therapeutic intervention in heart disease.

Single cell analysis of cardiac stem cell behaviours, such as symmetric versus asymmetric cell divisions, is a key platform that we are now extending to analysis of single cell transcriptomes. Furthermore, we are mining large data sets related to cardiac regeneration and repair, comparing neonatal and adult mouse hearts to other vertebrate models. Molecular and genetic analysis of cardiac progenitor cells is helping to determine the nature of the quiescent state, chromatin landscapes, memory of organ-of-origin and implications for outputs, the metabolic basis of stem cell character and organ



Cardiac Stem Cells (Sca1+PDGFR α +) in culture stained with anti- α -tubulin antibody to visualize tubulin cytoskeleton (red) following cellular stress (Courtesy of V. Janbandhu and R. Harvey, VCCRI)

dialogues. Microfluidic analysis of novel mechanisms of stem cell action through physical transfer is another novel area of collaborative research.

We have shown how adolescent and mature mammalian cardiomyocytes can be stimulated to divide, overturning the long-held paradigm that these cells terminally withdraw from the cell cycle in neonates. Division can be induced by hormones, growth factor pathways, or after inhibition of a stem cell-associated tyrosine kinase receptor. Systems approaches are being used to unravel the molecular basis underlying these remarkable shifts in CM proliferative capacity, including epigenetics, non-coding RNA profiling, and the identification of novel molecules that induce cell-cycle re-entry of adult mammalian CMs. Expansion of human pluripotent stem cell-derived CMs *in vitro* is also being used to model molecular control of the CM cell cycle.

Human heart regeneration is the ultimate goal of these parallel lines of investigation. Effective heart repair after ischemic injury in humans will involve myriad cellular and molecular dialogues that stabilise the injury site against high hemodynamic pressures, resolve scar tissue and replace it with appropriately vascularised myocardium that is functionally integrated with the rest of the organ and responsive to systemic and hemodynamic control of output on a moment-by-moment basis. These studies of the Cardiac Theme are identifying the key nodes in this process for intervention and augmentation.

Theme: Haematopoiesis

Professor Doug Hilton and Professor David Haylock

Stem Cells Converting into Blood Cells

A main aim for this theme is to define parameters for the generation of new sources of Haematopoietic Stem Cells (HSC) by either conversion of human pluripotent stem cells or by direct reprogramming of mature blood cells to HSC.

The last year has seen strong progress on all projects with a total of 20 manuscripts published from Theme investigators.

Of particular note are the outcomes arising from the Doug Hilton and Samir Taoudi (WEHI) project that aims to address the mechanisms of early blood fate in the embryo. Hilton and Taoudi have begun to dissect the developmental pathway of early platelet formation in the yolk sac. Key outcomes to date include:

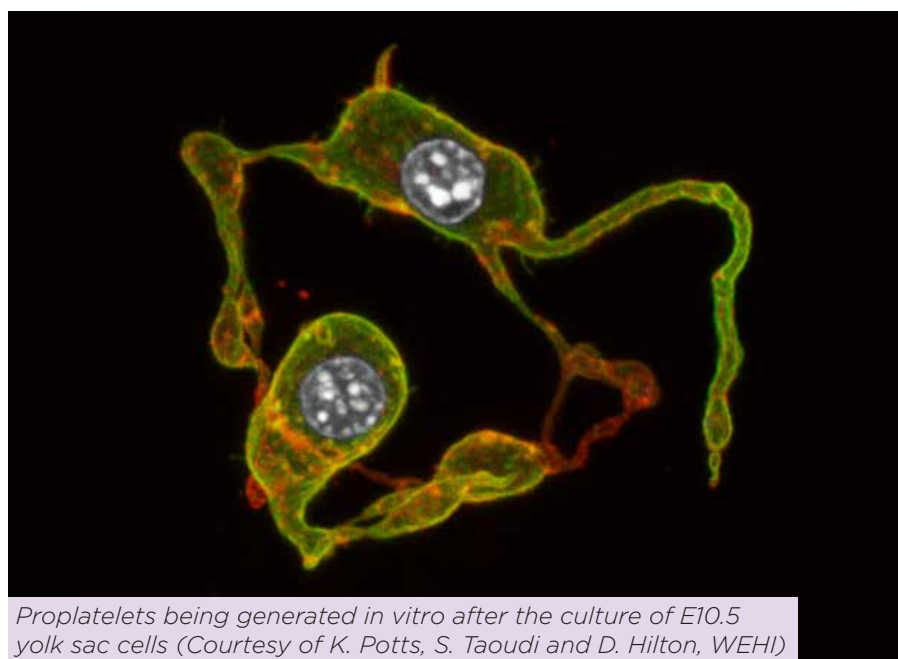
- the discovery that the first phase of platelet formation is via a primitive, progenitor-independent, pathway;
- that the MPL-THPO signaling axis, which is crucial for megakaryocyte and platelet production in the adult, is not required for platelet production in the early embryo; and,
- that platelet production does not occur via formation of megakaryocyte proplatelet extensions, as in adult thrombogenesis, but rather by a process of direct release from megakaryocytes.

The Hilton and Taoudi team also made great progress in their investigation of the molecular control of blood stem cell formation in the embryo: they have identified a number of putative stem cell controlling genes from their expression dataset of the developing stem cell lineage, and are using CRISPR/Cas9 technology to knock out these target genes in the early embryo. Using this approach, they have identified a novel transcription factor that appears to be critical for stem cell formation during embryonic life.

This work is complemented by studies conducted by Martin Pera (UoM) and Andrew Elefanty (MCRI) to generate genetically modified pluripotent stem cells for lineage tracing and differentiation studies. They developed and validated a range of new constitutive and inducible systems via the GAPTrap reporter system. The project lead by Lars Nielsen (UQ) aims to evaluate the compatibility of their recent protocols for HSC expansion with protocols for expansion and differentiation along the neutrophil lineage and to engineer cells capable of multi-lineage differentiation for use in the manufacture of transfusable blood products. They completed initial technical and economic feasibility assessments of the CCRM expansion protocol and completed design of episomal and lentiviral vectors for delivery

of eight transcription factors. The reprogramming project lead by Andrew Laslett (CSIRO), involves lentiviral-mediated transduction of transcription factors (TF) into blood cells. They demonstrated that of the 20 TF tested, only one was capable of generating CD34+CD90+CD38- cells, a phenotype suggesting putative HSC.

A new project overseen by Doug Hilton and Shalin Naik (WEHI) commenced this year and utilises molecular barcoding for in vivo analysis of single cells. Two key objectives are to establish a single cell resolution fate map of haematopoiesis and to identify novel genes involved in the earliest lineage priming events.



Proplatelets being generated in vitro after the culture of E10.5 yolk sac cells (Courtesy of K. Potts, S. Taoudi and D. Hilton, WEHI)

Education, Ethics, Law and Community Awareness Unit

Our Education, Ethics, Law and Community Awareness Unit aims to provide the Australian community with reliable and authoritative information about developments in stem cell science, and in particular the promise of innovative therapies, as well as address the possible ethical and societal impact of such discoveries.

Through partnering with key national and international patient advocacy groups, teacher associations, academics, industry and professional bodies in 2014, we have continued to deliver a suite of educational activities. We have also made substantial contributions to enhancing the understanding of stem cells and their therapeutic potential in Australia, especially with regard to raising awareness about the risks associated with unproven stem cell treatments being sold in Australia and abroad.



Megan Munsie meeting students in Perth (Courtesy of the Perkins Institute)

Outreach and Communication Activities

During 2014 we continued our focus on bringing stem cell science to high school students and their teachers.

In April, SCA partnered with the Harry Perkins Institute of Medical Research in Perth to host an event for over 100 Year 10 high school students. Students began their day by watching a special screening of the award-winning documentary *Stem Cell Revolutions* and then had the opportunity to have their questions about stem cell science and ethical issues answered by a panel of local and SCA stem cell experts. During lunch, school teams enjoyed competing against each other in the 'Start as a Stem Cell' game - much like a giant game of stem cell twister - where awards were given to the schools who achieved the greatest number and type of mature cells. A group of Year 10 Christchurch Grammar students said that they'd just finished a five

week ethics and philosophy course, so the discussion about the ethics of embryonic stem cell research had been very interesting. To quote one of the students, "I didn't know about pluripotent cells before this and I think they're really cool because they create so many possibilities and allow scientists to overcome ethical issues." A feature of the day was a 'meet the scientists' session where students had a chance to 'speed date' scientists working at the Perkins Institute. EuroStemCell generously provided access to the film and educational activities used during the day.

In November we repeated this program at The University of Queensland where another 100 students from Brisbane and the Gold Coast gained a unique insight into stem cell science. One of the teachers attending this event commented: "StemCells@UQ was thoroughly enjoyed by our students and staff. The opportunity to speak to scientists and visit the labs was invaluable - the passion the scientists have for their research was

evident as they engaged with us."

We also partnered with the Gene Technology Access Centre (GTAC), based in Melbourne, to hold two events. The first was held on the science of reprogramming and how cell fate can be changed with this intriguing new technology. Students had the opportunity to meet with ten scientists from across Australia who specialise in this technology and were in Melbourne to attend the Cell Reprogramming Australia conference at the University of Melbourne.

The second event held at GTAC - Stem Cells: Transforming Science, Medicine and Society - was specifically designed by GTAC and SCA for Year 8 students. Students were asked to don lab coats and become scientists for the day. First the students met local stem cell scientists who helped them investigate what goes wrong in three different diseases - macular degeneration, diabetes and leukaemia - and how stem cells are being used to better understand these conditions and develop

possible new treatments. In the next lab, students took on the role of researchers for a fictitious biotechnology company and learnt about how certain types of stem cells can be transformed into beating heart cells and how researchers and pharmaceutical companies are using stem cells to screen for new drugs. To conclude the day, students were challenged to think about the important ethical considerations regarding the current and future use of stem cells as therapies. To illustrate the hope that many place in stem cell research, Dr Mario D’Cruz – a GP and mentor for people with spinal cord injury – joined us to discuss patient expectations and the difficulties for patients, families and their friends to find reliable information given the hype that surrounds this field.

Throughout 2014 SCA participated or co-hosted events for patients and the general public. This included a series of workshops with the Centre for Eye Research Australia (CERA) where the latest research on eye disease using stem cells was discussed. SCA also contributed to a position statement on the possible use of autologous hematopoietic stem cells for multiple sclerosis, as well as a factsheet developed by EuroStemCell on how stem cells could help with cerebral palsy. Megan Munsie was also asked to Chair an international taskforce on public education convened by the ISSCR.

“...STUDENTS WERE CHALLENGED TO THINK ABOUT THE IMPORTANT ETHICAL CONSIDERATIONS REGARDING THE CURRENT AND FUTURE USE OF STEM CELLS AS THERAPIES.”

Core to our outreach and communication activities were the SCA website and social media activities. During 2014 we responded to more than 460 public enquiries, and had over 99,000 visitors to our website where we posted 37 news items about our members and their activities. Our @StemCellAus Twitter feed now attracts over 1,200 followers.



Students playing EuroStemCell's 'Start as a Stem Cell' game (Courtesy of the Perkins Institute)

Research & Policy

The growing practice of selling unproven stem cell ‘treatments’ to Australians continues to be a significant concern to SCA and colleagues around the world. Such experimental interventions – which effectively by-pass the clinical trials framework – are often promoted as safe, and with claims of ‘improvements’, but with little pre-clinical or clinical evidence to support the claims. Such treatments are not cheap, costing many thousands of dollars.

For patients and their loved ones desperate for any option, the clinics offering these treatments – overseas and in Australia – are understandably

attractive. However, to better understand the decision to pursue such unproven treatments, SCA is part of an ongoing international multi-disciplinary research project – *High hopes, high risk? A sociological study of stem cell tourism* – to capture and examine the experience of Australians who have travelled abroad or in Australia for such therapy, or have contemplated doing so.

During 2014, we published an article in *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine* and a book chapter in *Regenerative Biology of the Eye* based on our research. Our work was presented at numerous national and international conferences including the ISSCR conference and the European Association for the Study of Science and Technology.

On the specific issue of autologous stem cell treatments being sold in Australia, during 2014 SCA continued to raise the issue with the Therapeutic Goods Administration, leading patient advocacy groups, members of the Australian cellular therapy biotechnology communities, the Australian Rheumatology Association, the Australian Physiotherapy Association and the general public through media outlets such as the ABC 730 Report, Australian Financial Review, The Age, SBS Insight, RRR and ABC Radio. We also published articles in *Stem Cells and Development* and *Stem Cell Research* outlining the regulatory loophole in Australia that allows these unproven, and in many cases unfounded, treatments to be sold.

The Education, Ethics, Law and Community Awareness Unit is supported by The University of Melbourne and Monash University.

Management Report

Building our Network through Collaborations

One of Stem Cells Australia's objectives is to grow our collaborative network, thereby increasing the human capacity and access to the most sophisticated techniques and equipment. In a research environment, collaboration can be achieved in many different yet equally effective ways; inter organisational, intra organisational, researcher training education, joint supervision of students, researcher exchange and joint appointments. All of which will build a long-term relationship for the progression of the work in stem cell science.

In reporting on this metric, we must first define our existing situation and then look towards expanding our community. This is a continuum and we do this at all levels, starting from our students, by providing networking opportunities for them, through to establishing new working collaborations at both national and international levels.

We measure our networking and collaborative success in a number of different ways. One of the most common yet effective tools is looking at the distribution of authorship of our publications. We have some researchers with cross-disciplinary interaction with other departments at the same university; inter organisational collaboration. In other instances, the research collaboration is between two different organisations to tap into the expertise of the respective organisations; intra organisational collaboration. Our collaborations with our SAC members continues

to grow stronger, and now we see more co-authored publications with our SAC members.

Our collaborative success can also be measured through training and education opportunities extended at both national and international levels. These may or may not result in a journal publication, yet these opportunities sow seeds for later harvest and expansion of our collaborative network. An invitation from one researcher to come and visit another, and gain that all-important hands-on training to learn a new technique, is an example of collaboration through training opportunities.

As we grow our network, we bring on new "Affiliate Investigators". These are researchers from other organisations who are not part of our funding agreement, but are part of our wider stem cell network. This helps to promote an interest for future collaboration.

Visibility is also key for future collaboration. Presenting at conferences and generating discussion at all levels will also attract not just research interest but also commercialisation.

Through collaborative networks, we can build a stronger global family, working towards a common interest. We have the strength to influence policy makers, and the ability to collaborate and speak with one voice.

"VISIBILITY IS ALSO KEY FOR FUTURE COLLABORATION. PRESENTING AT CONFERENCES AND GENERATING DISCUSSION AT ALL LEVELS WILL ALSO ATTRACT NOT JUST RESEARCH INTEREST BUT ALSO COMMERCIALISATION."

We would like to congratulate the following postgraduate students for completion of their studies in 2014

Madeline Cao (PhD) supervised by Susie Nilsson (CSIRO). Title of Thesis *"The role of key adhesive interactions in hemopoietic stem cell regulation in ontogeny"*

Caleb Dawson (Honors) supervised by Samir Taoudi (WEHI). Title of thesis *"Investigating the formation of fetal platelets"*

Alejandro Hidalgo-Gonzalez (PhD) supervised by Justin Cooper-White (UQ). Title of Thesis *"In Vitro Ischemia-Reperfusion Injury Model for Pharmacological Postconditioning of Human Pluripotent Stem Cell-derived Cardiomyocytes"*

Jennifer Hollands (PhD) supervised by Andrew Elefanty & Ed Stanley (MCRI). Title of Thesis *"Expression of a novel homeobox gene identifies precursors of human primordial germ cells"*

Kevin Lau (PhD) supervised by David Gardner & Joy Rathjen (UoM). Title of Thesis *"Identification of novel compounds that induce primitive streak intermediate formation"*

Nicholas Tan (PhD) supervised by David Gardner (UoM). Title of Thesis *"The role of L-proline and L-proline activated signalling in the regulation of pluripotency"*

David Wood (PhD) supervised by Sean Grimmond (UQ). Title of Thesis *"Studying Human Transcriptional Complexity by Massively Parallel Sequencing"*

Research Support

Welcome to Stemformatics: the collaboration platform of SCA

The stepping stone for bioinformatics and stem cell biologist collaboration

Explore the portal

Based at UQ, Stemformatics is a portal to a series of public experiments describing mouse and human stem cells and how they differentiate to become mature cells, tissues and organs. **We'd like you to explore our free service**, which is meeting an increasing demand from the international community.

We provide a fast way to find and visualise genes in exemplar stem cell datasets; high-quality gene expression and annotation data of interest to the stem cell biologist that has been designed to be quick and easy to use.

You'll find data from leading stem cell laboratories in a format that is easy to search, visualise and export. All of the data on the Stemformatics site has been hand-picked, curated and checked for experimental reproducibility and design quality, and normalised in-house. Stemformatics provides a much-needed interface between large, and often complex, gene expression datasets and stem cell researchers who lack bioinformatics training.

The Stemformatic Workbench

The Stemformatic Workbench will allow you to answer the following questions:

- What else behaves like my gene of interest? (Gene Neighbourhood)
- What are the genes that best discriminate between these cell types? (Comparative Marker Selection)
- How similar are these samples? (Hierarchical Cluster)
- What pathways are associated with my gene set? (Annotate a Gene Set)



Get going today!

Log in to run and save your own analyses. If you would like to know more, or request a dataset to be uploaded to Stemformatics, please visit:

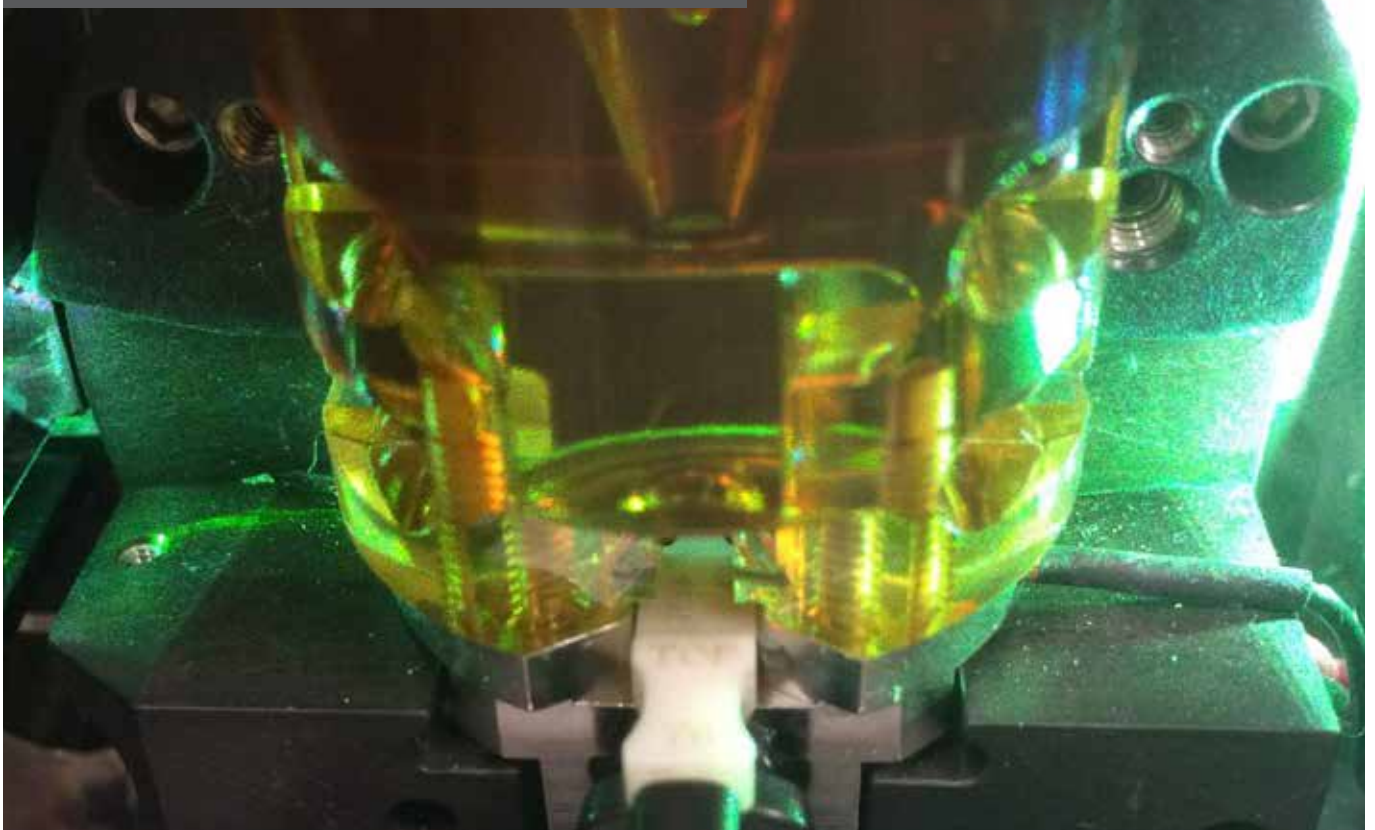
Email: info@stemformatics.org

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www.stemcellsaustralia.edu.au

We care, because we've been there

our core facilities

Stem Cell Core

The Stem Cell Core facility provides essential services for Australian scientists using pluripotent stem cells in their research.

- Ready-for-experiments hESC
- Culture & expansion of cell lines
- Feeder cells & conditioned media
- Validation of pluripotency
- Hands-on training
- Generation of iPSC
- Stem cells genome editing via CRISPRs
- Cryopreservation & banking
- Stem cells differentiation
- Consultation on experimental design

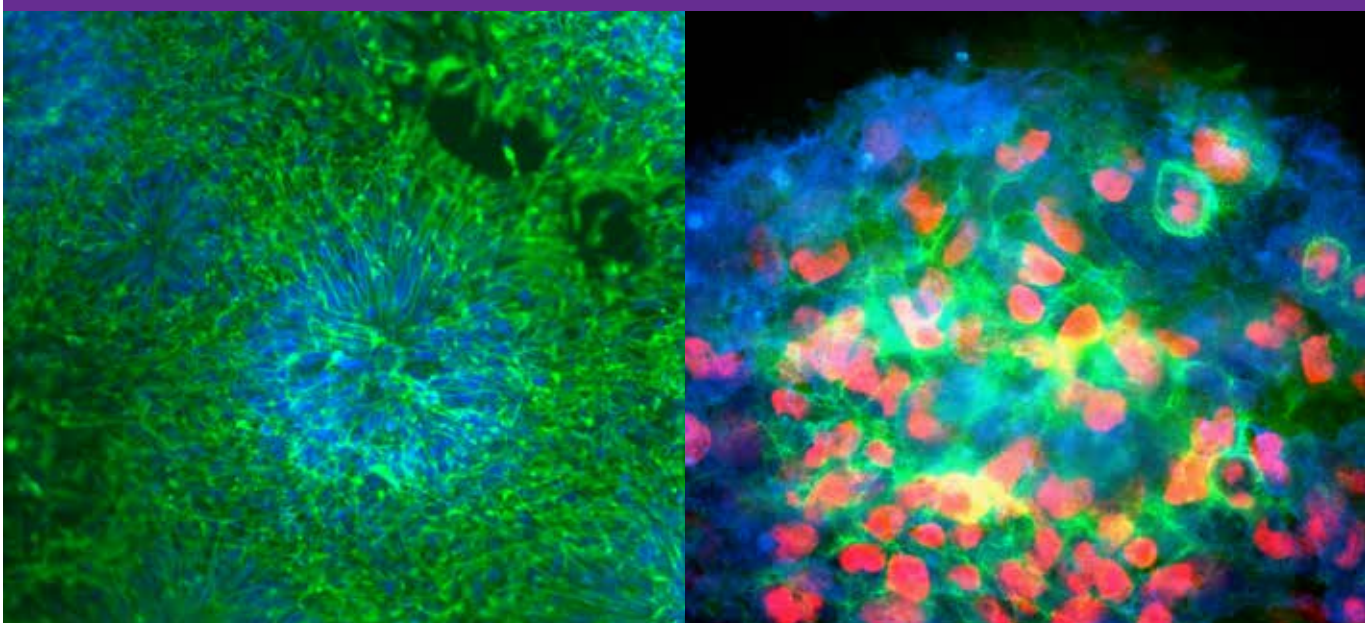
StemCore has two state-of-the-art, not-for-profit core facilities

MBC University of Melbourne

Contact Anna Michalska
Email mbc-stemcore@unimelb.edu.au

AIBN University of Queensland

Contact Nilay Thaker
Email n.thakar@uq.edu.au

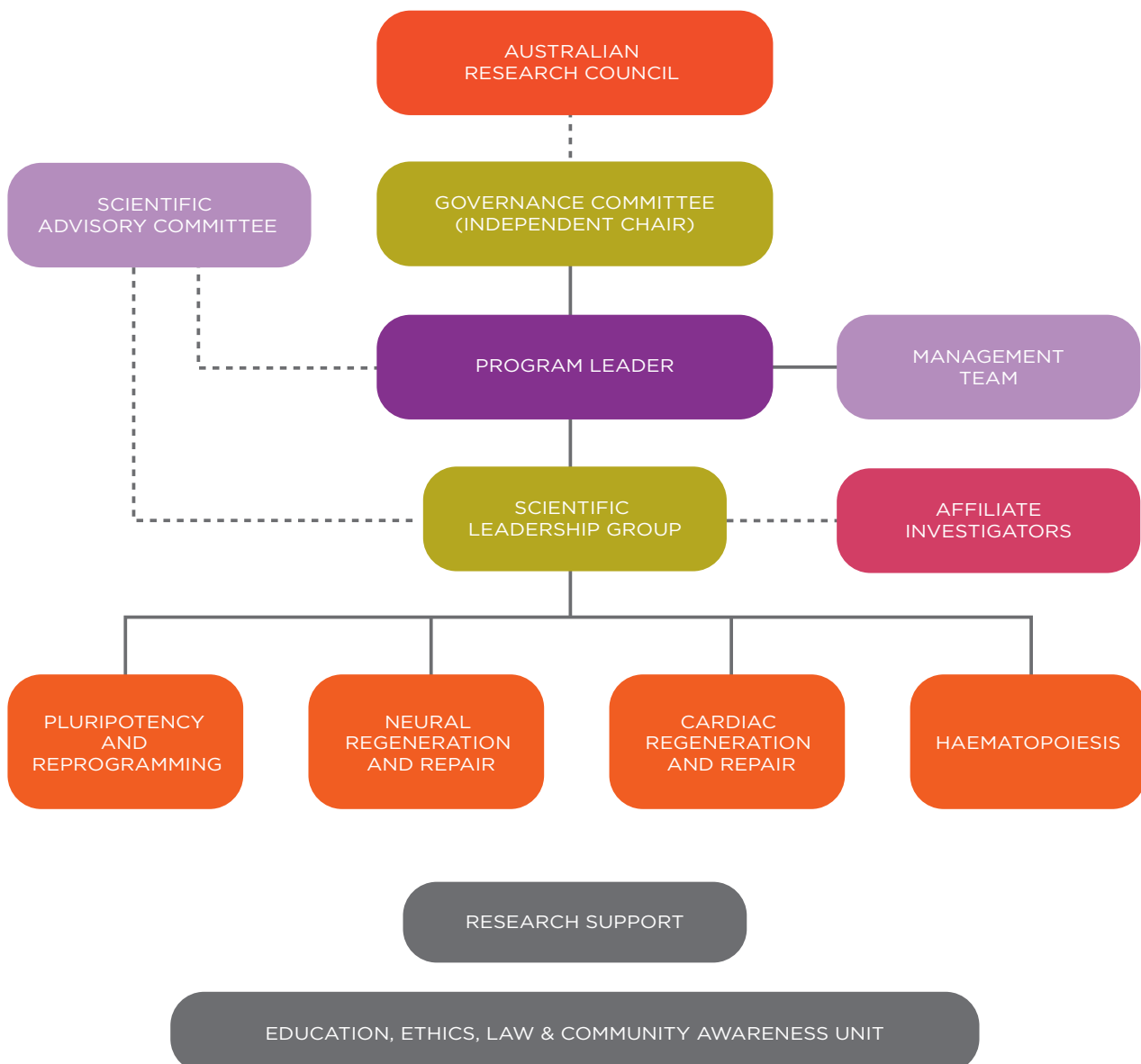


Leadership and Governance

Stem Cells Australia operates under an agreement between the Australian Research Council, with the University of Melbourne as the administering organisation, and its partners.

The Initiative is an unincorporated joint venture of The University of Melbourne, Monash University, University of Queensland, University of New South Wales, Walter and Eliza Hall Institute of Medical Research, Victor Chang Cardiac Research Institute*, Florey Institute of Neuroscience and Mental Health and the Commonwealth Scientific and Industrial Research Organisation.

**VCCRI does not participate in hESC research*



Governance Committee

The GC has representatives from each of the partner organisations and an independent Chair. The Committee ensures that the initiative is well managed with a particular focus on endorsement of the research program and the budget. The GC provides strategic advice to the Program Leader. The Research Program and Individual Projects require approval by this Committee. The Committee meets twice per year.



Professor David de Kretser
Independent Chair



Dr Julian Clark
Walter & Eliza Hall Institute
of Medical Research (WEHI)



Professor Ross Coppel
Monash University
(Monash)



Dr Henry de Aizpurua
The Florey Institute of
Neuroscience and Mental
Health (The Florey)



Ms Britt Granath
Victor Chang Cardiac
Research Institute (VCCRI)



Professor Mark Hargreaves
The University of Melbourne
(UoM)



Professor Anton Middleberg
University of Queensland
(UQ)



Dr Keith McLean
Commonwealth Scientific
and Industrial Research
Organisation (CSIRO)



**Associate Professor Laurent
Rivory**
University of New South
Wales (UNSW)

Scientific Advisory Committee

Consisting of internationally renowned national and international experts in the field of stem cell science, the SAC provides strategic advice to the scientific leader on the research direction of the initiative and will provide independent evaluation and feedback on the research performance and science. The committee members meet once a year at the annual retreat.



Professor Christine Mummery
Leiden University Medical Centre, The Netherlands *Head of pluripotent stem cells and differentiation to cardiovascular cells*

Professor and Chair of Developmental Biology at Leiden University Medical Centre, Professor Mummery pioneered studies on heart muscle cells (cardiomyocytes) made from human embryonic stem cells and was among the first to inject them into a mouse heart after a heart attack. Her present interests are focussed on using stem cell derived cardiomyocytes and vascular cells as disease models for drug discovery.



Professor Andras Nagy
Lunenfeld-Tanenbaum Research Institute, Canada *Canadian Research Chair in Stem Cells and Regenerative Medicine*

Canadian Research Chair in stem cells and regenerative medicine, Professor Nagy heads a team of 50 researchers on project Grandiose which studies the process of creating stem cells and have demonstrated advances in stem cell creation which are expected to lead to improved treatments for a number of diseases. In 2005, Professor Nagy was the first to create new stem cell lines in Canada and in 2009, he demonstrated how cells could be changed into stem cells without the introduction of potentially damaging viruses and was included that year in Scientific American's Top 10 Honor Role. Professor Nagy and his research group have discovered a new type of stem cell, called the F-Class iPS cell. Nagy holds an Adjunct Professorship at Monash University.



Professor Hideyuki Okano
Keio University, Japan *Dean of Keio University Graduate School of Medicine*

Professor Okano conducts basic research in the field of stem cells including adult neurogenesis, neural stem cells, neural crest stem cells, and RNA binding proteins and translational research; in particular, the development of cell replacement strategies for injured spinal cord using somatic neural stem cells from induced pluripotent stem (iPS) cells.

His group first achieved functional recovery of spinal cord injury in model animals including non-human primates by the transplantation of iPS cell-derived neural stem cells and succeeded in generating transgenic non-human primates with germline transmission using common marmoset.

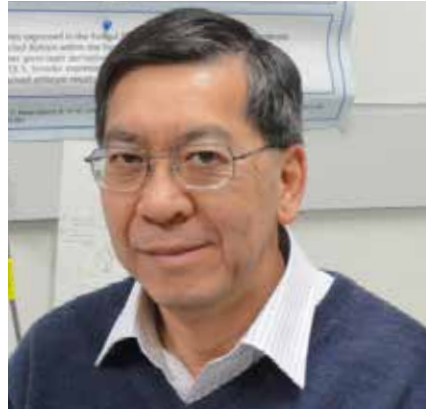
He aims to establish and provide genetically modified non-human primate models for neurodegenerative disorders. He has received several awards and honors including the Medal of Honor with Purple Ribbon in 2009.



Professor Michael Rudnicki
Ottawa Hospital Research
Institute, Canada *Director of the
Regenerative Medicine Program and
the Sprott Centre*

An Officer of the Order of Canada (2013), and the recipient of the prestigious 2014 Till & McCulloch Award for his ongoing work in stem cell and regenerative medicine research, Professor Rudnicki holds the Canada Research Chair in Molecular Genetics and works to understand the molecular mechanisms that regulate the determination, proliferation, and differentiation of stem cells during embryonic development and during tissue regeneration.

The lab has conducted leading studies into both embryonic myogenesis and the function of muscle stem cells in adult regenerative myogenesis, in particular to understand the molecular mechanisms that regulate the function of satellite cells in skeletal muscle. They identified Pax7 as a transcription factor required for the specification of satellite cells, and identified Wnt7a signaling as playing an important role in muscle stem cell function.



Professor Patrick Tam
Childrens Medical Research
Institute *Deputy Director, NSW
Australia*

The Scientific Advisory Committee Chair, Professor Tam's research focuses on the cellular and molecular mechanisms of body patterning during mouse development and the biology of stem cells. He is internationally recognised for pioneering the application of micromanipulation and embryo culture, for analysing the development of mouse embryos, and fate mapping of the mouse germ layers and embryonic gut. His other current research also covers the genetic models of X-linked diseases and the molecular controls of eye development. In recognition of his research achievement, Professor Tam was awarded the President's Medal of the Australia and New Zealand Society of Cell and Developmental Biology in 2007.



Professor Peter Zandstra
University of Toronto, Canada
*Canadian Research Chair in Stem
Cell Bioengineering*

Professor Zandstra's research – motivated by the hypothesis that the appropriate engineering of the cellular microenvironment will enable robust and efficient manipulation of stem cell self-renewal and differentiation – is focused on understanding the interface between microenvironmental control and the endogenous and intracellular networks that underlie stem cell fate decisions.

Areas of work include quantitative spatial and temporal control of embryonic stem cell self-renewal, bioprocesses for the generation of blood and cardiac cells from embryonic stem cells, and control of intercellular signaling networks to grow human blood stem cells. Ultimately, the goal is to enable stem cell based therapies and technologies to be developed for health and welfare.

Our People

Scientific Leadership Group

Chaired by the Program Leader, the Scientific Leadership Group is a group of senior scientists consisting of theme leaders of each of the four themes. This core group is the scientific powerhouse of SCA and are responsible for the delivery of the scientific research programs. They are the regular referral point for the Scientific Leader and assist in the development of the annual research work plan and budget for the initiative.

Meeting bi-monthly, the Scientific Leadership Group assist the Scientific Leader in monitoring the operations and activities of the initiative and are the liaison and co-ordination points for the activities of the initiative within the broader SCA community.



Professor Martin Pera
Program Leader UoM, WEHI, The Florey



Professor Perry Bartlett
Queensland Brain Institute
(QBI) UQ



Professor Peter Gray
Australian Institute for
Bioengineering and
Nanotechnology (AIBN), UQ



Professor Richard Harvey
UNSW, VCCRI



Professor David Haylock
CSIRO



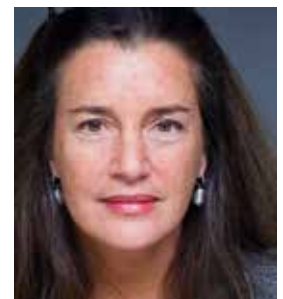
Professor Doug Hilton
UoM, WEHI



Professor Trevor Kilpatrick
UoM



Professor Melissa Little
Institute of Molecular
Bioscience (IMB) UQ



Professor Nadia Rosenthal
Australian Regenerative
Medicine Institute (ARMI),
Monash

Chief and Partner Investigators

The Chief and Partner Investigators are the senior researchers of the initiative and the project leaders of SCA funded projects.



Professor Warren Alexander
Partner Investigator
WEHI



Professor Perry Bartlett
Chief Investigator
QBI, UQ



Associate Professor James Bourne
Chief Investigator
ARMI, Monash



Professor Justin Cooper-White
Chief Investigator
AIBN, UQ



Professor David Gardner
Chief Investigator
UoM



Professor Robert Graham AO
Chief Investigator
UNSW, VCCRI



Professor Peter Gray
Chief Investigator
AIBN, UQ



Professor Richard Harvey
Chief Investigator
UNSW, VCCRI



Professor David Haylock
Partner Investigator
CSIRO



Professor Doug Hilton
Chief Investigator,
UoM, WEHI



Dr Robin Hobbs
Chief Investigator
ARMI, Monash



Professor Trevor Kilpatrick
Chief Investigator
UoM



Associate Professor Andrew Laslett
Partner Investigator,
CSIRO



Professor Melissa Little
Chief Investigator, IMB,
UQ



Professor Lars Nielsen
Chief Investigator,
AIBN, UQ



Associate Professor Susie Nilsson
Partner Investigator,
CSIRO



Professor Martin Pera
Chief Investigator
UoM



Associate Professor Jose Polo
Chief Investigator
ARMI, Monash



Professor Nadia Rosenthal
Chief Investigator,
ARMI, Monash



Associate Professor Christine Wells
Chief Investigator,
AIBN, UQ



Professor Brandon Wainwright
Chief Investigator,
IMB, UQ



Associate Professor Ernst Wolvetang
Chief Investigator,
AIBN, UQ

Associate Investigators

These roles are generally involved in SCA funded projects through a Chief Investigator, and are not usually directly supported financially.



Professor Robert Capon
UQ



Dr Mirella Dottori
UoM



Professor Andrew Elefanty
Murdoch Childrens
Research Institute
(MCRI)



Dr David Elliott
MCRI



Dr Tobias Merson
The Florey



Professor Michael Monteiro
AIBN, UQ



Associate Professor Megan Munsie
UoM



Professor Robert Nordon
UNSW



Dr Clare Parish
The Florey



Associate Professor Alice Pébay
CERA, UoM



Dr Joy Rathjen
UoM



Professor Pankaj Sah
UQ



Professor Ed Stanley
MCRI



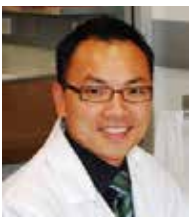
Dr Lachlan Thomson
The Florey



Associate Professor Ann Turnley
UoM

Affiliate Investigators

Stem Cells Australia's Affiliate Investigators are leading Australian and International stem cell researchers from outside our direct network whose vision and leadership further strengthen our initiative.



Dr James Chong
University of
Sydney



Dr Kazu Kikuchi
VCCRI



Dr Jason Kovacic
Mount Sinai
Hospital and the
Cardiovascular
Research Centre,
New York



Dr Enzo Porrello
UQ



Dr Mirana Ramialison
ARMI, Monash



Professor Jane Visvader
WEHI

Management Team

The University of Melbourne is the Administering Organisation for the initiative and hosts the core management team. The Management Team is responsible for all aspects of reporting, administration, finance, committee meetings, events and workshops, and communication activities of the initiative.



Professor Martin Pera
Program Leader

Responsible for the overall direction and operation of the initiative. This role encompasses research leadership, management and communication, liaison and development responsibilities



Ms Barbara Power
Business Manager

Provides administrative leadership across the eight nodes of the initiative whilst managing all the financial dealings including grant and contract management, compliance and program management. Also the committee secretary responsible for all the committee meetings.



Associate Professor Megan Munsie
Head - Education, Ethics, Law & Community Awareness Unit

Responsible for SCA's communication, outreach and policy activities, and leads research into ethical and societal issues associated with stem cell science and its clinical applications.



Ms Jennifer Kendall
Executive Assistant to Program Leader

Provides executive administrative support to the program leader. Responsible for office management, HR and student coordination and assistance with event management, marketing and communication activities.



Dr Sandani Udabage
Assistant to Business Manager

Provides general administrative support including; annual retreat logistics, preparation of the annual report and KPI data collection.



Professors Andras Nagy, Peter Zandstra, Christine Mummery, Associate Professor Megan Munsie, Professors Micheal Rudnicki, David de Kretser, Patrick Tam and Martin Pera (Courtesy of SCA)

Platform Technologies Team

Stemformatics Group

Based at UQ, Stemformatics is a collaboration between the stem cell and bioinformatics communities. It provides the Australian stem cell community with a collaborative platform that enables the interrogation of stem cell datasets without formal bioinformatics training.



**Associate Professor
Christine Wells,**
Project Leader
UQ



Mr Rowland Mosbergen,
Developer
UQ



Mr Othmar Korn,
Bioinformatician
UQ

Facilities Teams

1. Flow Cytometry Facility

Based at the Melbourne Brain Centre at UoM, the Flow Cytometry Facility is a purpose-built core facility in Flow Cytometry for use by interested researchers.



Dr Vanta Jameson,
Manager
UoM



Mr Joshua Kie,
Operator
UoM

2. Stem Cell Core Facilities

Stem Cell Core facilities are based at the Melbourne Brain Centre at UoM and AIBN at UQ. The cores' services are available to the scientists of the two universities as well as other institutions.



Dr Anna Michalska,
StemCore Manager
UoM



Ms Katherine Lim,
Technical Assistant
UoM



Dr Nilay Thakar,
Stem Cells Ltd
Manager
UQ



Ms Set Yen Soo,
Senior Research
Officer
UQ



Ms Nishta Ramnoruth,
Senior Research
Officer
UQ

Early Career Researchers and Students

Invited for SCA annual retreat, post-doctoral researchers, research assistants and students listed in this report are either directly working in our core stem cells projects or active team members working on other stem cells projects of our senior investigators, thereby part of our broader stem cell network.

Post-Doctoral Researchers



Dr Christelle Adolphe
IMB, UQ



Dr David Anderson
MCRI



Dr Naisana Asli
VCCRI



Dr Poornima Balaji
VCCRI



Dr Daniel Blackmore
QBI, UQ



Dr Alexis Bosman
VCCRI



Dr Nicole Bye
UoM



Dr Ben Cao
CSIRO



Dr Ai-Leen Chan
ARMI, Monash



Dr Jarny Choi
WEHI



Dr Tung-Liang (Tom) Chung
CSIRO



Dr Lena Constantin
IMB, UQ



Dr Mauro da Costa
ARMI, Monash



Dr Kathryn Davidson
UoM



Dr Alison Farley
UoM



Dr Jane Fitzpatrick
AIBN, UQ



Dr Elvira Forte
VCCRI



Dr Milena Furtado
ARMI, Monash



Dr Laura Genovesi
IMB, UQ



Dr Nick Glass
AIBN, UQ



Dr James Godwin
ARMI, Monash



Dr Kylie Greig
WEHI



Dr Alexandra Harvey
UoM



Dr Chad Heazlewood
CSIRO



Dr Shen Heazlewood
CSIRO



Dr Melissa Holmes
ARMI, Monash



Dr Jihane Homman-Ludiye
ARMI, Monash



Dr Lieven Huang
ARMI, Monash



Dr Sandy Hung
UoM



Dr Siiri Iismaa
VCCRI



Dr Vaibhao Janbandhu
VCCRI



Dr Andrew Jarratt
WEHI



Dr Dhanisha Jhaveri
QBI, UQ



Dr Anja Knaupp
ARMI, Monash



Dr Alex Koon
IMB, UQ



Dr Ming Li
VCCRI



Dr Sue Lim
ARMI, Monash



Dr Juho Makela
ARMI, Monash



Dr Christian Nefzger
ARMI, Monash



Dr Elizabeth Ng
MCRI



Dr Jonathan Niclis
The Florey



Dr Hieu Nim
ARMI, Monash



Dr Carmel O'Brien
CSIRO



Dr Dmitry Ovchinnikov
AIBN, UQ



Dr Alex Pinto
ARMI, Monash



Dr Florian Rohart
AIBN, UQ



Dr Fernando Rossello
ARMI, Monash



Dr Minoru Takasato
IMB, UQ



Dr Samir Taoudi
WEHI



Dr Jana Vukovic
QBI, UQ



Dr Ashley Waardenberg
VCCRI



Dr Lina Wang
ARMI, Monash



Dr Raymond Wong
UoM



Dr Munira Xaymardan
VCCRI



Dr Daniela Zalcenstein
WEHI

Research Assistants



Ms Casey Ah-Cann
WEHI



Ms Stacey Andersen
AIBN, UQ



Ms Lisa Azzola
MCRI



Ms Penelope Buntine
AIBN, UQ



Ms Kellie Cartledge
CSIRO



Mr Joseph Chen
ARMI, Monash



Mr Hun Chy
CSIRO



Ms Claire Cuddy
UoM



Ms Pei Er
IMB, UQ



Ms Adrienne Hilton
WEHI



Ms Jing Jing (Jane)
Li
UNSW



Mr Nick Seidenman
WEHI



Mr Qi Zhou
CSIRO

Ms Daniela Cardozo
(No Photo)
CSIRO

Students



Ms Dhanushi Abeygunawardena
VCCRI



Ms Sara Alei
ARMI, Monash



Mr Walaá Alsanie
The Florey



Mr Abdullah Alshawaf
UoM



Ms Deevina Arasartnam
MCRI



Ms Anushree Balachandran
AIBN, UQ



Ms Harleen Basrai
UoM



Ms Stephanie Bellmaine
UoM



Ms Daniella Beniamen (MSc)
VCCRI



Ms Bianca Borchin
ARMI, Monash



Ms Jane Brophy
Monash



Ms Freya Bruveris
MCRI



Ms Marion Brunck
AIBN, UQ



Ms Huimin Cao
CSIRO



Ms Xiaoli Chen
AIBN, UQ



Mr James Cornwell
VCCRI



Mr Duncan Crombie
UoM



Mr Caleb Dawson
(Honors)
WEHI



Mr Ryan Debuque
ARMI, Monash



Ms Nona Farbehi
UNSW



Mr Jaber Firas
(Honors)
ARMI, Monash



Ms Hananeh
Fonoudi
VCCRI



Mr Siavash
Foroughi
UoM



Mr Patrick Fortuna
AIBN, UQ



Ms Frisca Frisca
UoM



Mr Alejandro
Hidalgo-Gonzalez
AIBN, UQ



Mr Carlos Gantner
(Honors)
The Florey



Ms Katherine Gill
UoM



Ms Gency
Gunasingh
AIBN, UQ



Mr Amir Hayati
AIBN, UQ



Ms Lucy Hersey
(Honors)
ARMI, Monash



Ms Jennifer
Hollands
MCRI



Mr Alexei Ilinkykh
ARMI, Monash



Mr Tim Kao
MCRI



Ms Mai La (Honors)
ARMI, Monash



Mr Jack Lamshead
CSIRO



Mr Kevin Lau
UoM



Mr Jarmon Lees
UoM



Ms Grace
Lidgerwood
UoM



Mr Xiaodong
(Ethan) Liu
ARMI, Monash



Mr Riley McMahon
(MSc)
UoM



Ms Barbara Maier
IMB, UQ



Ms Elizabeth Mason
AIBN, UQ



Mr Nicholas
Matigian
AIBN, UQ



Mr Ali Motazedian
MCRI



Ms Amy Nicks
VCCRI



Mr Harish
Padmanabhan
AIBN, UQ



Mr Dean Phelan
MCRI



Ms Kathy Potts
WEHI



Ms Jessica
Schwaber
AIBN, UQ



Mr Rhys Skelton
MCRI



Mr Marcos Soto
AIBN, UQ



Ms Gemma Tan (MSc)
MCRI



Mr Nicholas Tan
UoM



Mr Leon Teo
ARMI, Monash



Ms Liyuan Wang
UNSW



Mr David Wood
IMB, UQ



Ms Li-Yen Wong
AIBN, UQ



Ms Lulu Xing
UoM

Mr Jing Wang (Honors)
(No Photo)
ARMI, Monash

**All students enrolled in PhD unless otherwise stated.*

Performance Tables

Key Result Area 1: Research Performance	2011 KPI		2012 KPI		2013 KPI		2014 KPI	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Innovative, internationally, competitive research strategically focussed on fundamental stem cell science								
Number of research outputs: Journal Publications	15	29	70	102	80	116	90	141
Number of Conference proceedings	4	3	20	8	20	9	30	1
Quality of research outputs								
50% of publications will be in peer reviewed, international journals with an Impact Factor >5	50%	50% (14)	50%	54% (55)	50%	45% (46)	50%	43% (50)
15% of publications will be in journals with Impact Factor >10.	15%	20% (6)	15%	12% (12)	15%	17% (17)	15%	20% (23)
Number of invited talks/papers/keynote lectures given at major international meetings	3	16	15	46	15	28	15	97
Patent applications lodged	0	0	0	1*	2	2*	2	0

Key Result Area 2: Research Training and Capacity Building	2011 KPI		2012 KPI		2013 KPI		2014 KPI	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Number of postgraduate students working on core SRI research and supervised by SRI members								
Annual	8	14	10	8	9	20	26	18
Cumulative	8	14	18	22	27	42	53	60
Number of postdoctoral researchers appointed to the SRI working on core SRI research								
Annual	9	11	20	40	20	9	20	-5
Cumulative	9	11	29	51	49	60	69	55
Number of postgraduate completions by students working on core SRI research and supervised by SRI members								
Annual	0	0	4	2	5	2	8	7
Cumulative	0	0	4	2	9	4	17	11
Qualitative measures of capacity building								
Number of Competitive postdoctoral Fellowships awarded	0	1	1	3	2	4	3	5
Other awards, short term fellowships, recognitions, appointments, promotions	0	1	9	10	11	17	9	7

*prior year data updated to reflect actual numbers

Key Result Area 3: International, National Links and Networks	2011 KPI		2012 KPI		2013 KPI		2014 KPI	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
International Collaboration								
Researchers, fellows attend and present at international conferences	4	16	30	39	35	48	35	28
Students attending international research conferences	1	1	13	2	14	4	19	22
Research collaborations with international centres	2	10	3	22	5	16	5	50
International research funding received	0	\$470K	\$500K	\$1.5M	\$750K	\$1.2M	\$750K	\$325K
National Collaboration Cross-institutional collaboration defined as across research institutions (i.e. collaborating and partner organisations) within SCA								
Annual retreat attended by researchers, fellows, students	N/A	N/A	80%	85%	80%	81%	80%	91%
% publications including cross-institutional authorship	N/A	18% (5)	50%	12%	60%	3%	65%	60%
Number of international visitors and visiting fellows funded with SCA funds staying between 1-2 months (approx)	0	0	2	2	2	4*	2	5
Number of workshops held/organised by Stem Cells Australia								
National	1	1	1	4	1	7	1	8
International	0	0	1	1	0	1	1	1

Key Result Area 4: Knowledge Transfer, Outreach and Communication	2011 KPI		2012 KPI		2013 KPI		2014 KPI	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Number and nature of commentaries about the Stem Cells Australia's achievements								
Media releases	2	3	5	4	5	6	5	5
Articles	1	7	3	21	3	20+	4	35+
Number of government, industry and business community briefings	1	1	4	7	4	6+	4	4+
Number and nature of public awareness programs								
Provide tailored resources to community and professional organisations	2	2	4	6	4	11	4	10
Members participating in community or patient advocacy meetings	3	3	5	16	5	12	10	15
Engagements with science teachers' associations	1	1	3	2	3	3	3	3
Website								
Currency of information on Stem Cells Australia's website		Website launched Nov 2011		Posted 27 news items		New sections. Posted 51 news items		Posted 37 news items
Number of website hits (launched 2011)	2,000	2,559	15,000	22,207	20,000	53,038	20,000	99,570

Grants

List of grants secured by SCA researchers in 2014.

Grant	2014	\$ for 2014	Total value \$
ARC	Justin Cooper-White ARC Discovery Grant - How to improve tissue engineering practices in mesenchymal cell culture (\$ 365,000, 2014-2016)	121,667	365,000
	Robin Hobbs ARC Discovery Project grant DP140103965 - "Genetic control of spermatogenesis defining the role of SOX3 in spermatogonial progenitor cells" (\$390,000, 2014-16)	130,000	390,000
	Robin Hobbs ARC Future Fellowship (FT1) 140101029 - "Genetic control of germline progenitor cell heterogeneity and fate" (\$771,700, 2014-18)	154,340	771,700
	Lars Nielsen et al. ARC Discovery Grant - Toward sustainable diesel production using microbial cells unravelling isoprenoid pathway regulation through systems biology (\$376,000, 2014-16)	125,333	376,000
	Lars Nielsen et al. ARC Linkage Grant - Developing an integrated systems and synthetic biology platform to expand the product spectrum of acetogens (\$900,000, 2014-17)	300,000	900,000
	Mirana Ramialison ARC Discovery Project grant (\$390,000, 2014-16)	130,000	390,000
NHMRC	Warren Alexander NHMRC Project Grant 1062840 - "Studies of Cullin 5 deficiency for novel insights into SOCS redundancy and specificity" (\$653,226, 2014-16)	217,742	653,226
	Perry Bartlett and Daniel Blackmore NHMRC Project Grant - Growth hormone ameliorates ageing dementia (\$532,697, 2014-16)	177,566	532,697
	James Bourne, Tobias Merson et al. NHMRC Project Grant - "Functional Neurogenesis in the Injured Neocortex of the Nonhuman Primate" (\$935,558, 2014-16)	311,853	935,558
	Robin Hobbs NHMRC Project Grant APP1062197 - "Control of germline progenitor cell fate and fertility by the mTORC1 signalling pathway" (\$544,793, 2014-16)	181,598	544,793
	Melissa Little NHMRC Project Grant - Building a better kidney (\$660,558, 2014-16)	220,186	660,558
	Tobias Merson and Trevor Kilpatrick NHMRC Project Grant - "Prevention of axonal pathology in early Multiple Sclerosis" (\$655,558, 2014-16)	218,519	655,558
	Alice Pebay, Martrin Pera et al. NHMRC Project grant 1059369 - "Understanding AMD pathogenesis using human induced pluripotent stem cells" (\$552,562, 2014-16)	184,187	552,562
	Christine Wells, Nadia Rosenthal et al. NHMRC Project Grant - Mincle has a dual role in tissue loss and inflammation after ischemic injury (\$587,000, 2014-16)	195,667	587,000
	Christine Wells and Ernst Wolvetang NHMRC Project Grant - Understanding Alzheimer's disease using Down syndrome as a model (\$756,000, 2014-16)	252,000	756,000
	Ann Turnley et al. NHMRC - "The role of neuronal hyperactivity and neurotrophic factor signalling in synaptogenesis, dendrogenesis and neuron death in motor neuron disease" (\$677,616, 2014-16)	225,872	677,616
	Richard Harvey and Mirana Ramialison NHMRC Project Grant (\$502,111, 2014-16)	167,370	502,111

National and International	James Chong University of Sydney, International Program Development Fund Grant (\$20,000, 2014-16)	6,667	20,000
	James Chong NSW Cardiovascular Research Network Development Grant (\$200,000, 2014-16)	66,667	200,000
	James Chong Sydney Medical Foundation Chapman Fellowship/Grant (\$207,392 p.a. 2014 up to 3-5yr)	207,392	207,392
	James Chong Sydney Medical School Early Career Researcher Grant (\$25,000, 2014)	25,000	25,000
	David Gardner University of Melbourne, Grant Support Scheme - "Environmental Disruption of Development" (\$44,578, 2014)	44,578	44,578
	David Gardner Vitrolife - "Production of culture media and solutions for human assisted conception" (\$200,000, 2014)	200,000	200,000
	Melissa Little Commercial Research and Development Grants, Organovo Inc (\$250,000, 2014-15)	125,000	250,000
	Tobias Merson CASS Foundation Project Grant - A new approach to prevent loss of neuronal function in Multiple Sclerosis (\$48000, 2014)	48,000	48,000
	Alice Pebay et al. Clemenger Foundation - "Automation of stem cell culture and reprogramming" (\$600,000, 2014)	600,000	600,000
	Jose Polo The National Stem Cell Foundation of Australia Metcalf prize	50,000	50,000
	Raymond Wong, Alice Pébay et al. Ophthalmic Research Institute of Australia - "Study of Leber's Hereditary Optic Neuropathy using induced pluripotent stem cells" (\$50,000, 2014)	50,000	50,000
	Mirana Ramialison Heart Foundation Project Funding (\$30,000, 2014)	30,000	30,000
	TOTAL	4,767,203	11,945,349

Publications

Journal Articles with Impact Factor greater than 10

2014

Note: researchers in bold are Chief, Partner, Associate or Affiliate Investigators of SCA.

- Andersson, R., Gebhard, C., Miguel-Escalada, I., Hoof, I., Bornholdt, J., Boyd, M., Chen, Y., Zhao, X., Schmidl, C., Suzuki, T., Ntini, E., Arner, E., Valen, E., Li, K., Schwarzfischer, L., Glatz, D., Raithel, J., Lilje, B., Rapin, N., Bagger, F. O., Jorgensen, M., Andersen, P. R., Bertin, N., Rackham, O., Burroughs, A. M., Baillie, J. K., Ishizu, Y., Shimizu, Y., Furuhashi, E., Maeda, S., Negishi, Y., Mungall, C. J., Meehan, T. F., Lassmann, T., Itoh, M., Kawaji, H., Kondo, N., Kawai, J., Lennartsson, A., Daub, C. O., Heutink, P., Hume, D. A., Jensen, T. H., Suzuki, H., Hayashizaki, Y., Muller, F., **Fantom Consortium**, Forrest, A. R., Carninci, P., Rehli, M., & Sandelin, A. (2014). *An atlas of active enhancers across human cell types and tissues*. *Nature*, 507(7493), 455-461. **IF 42.4**
- Benevento, M., Tonge, P. D., Puri, M. C., Hussein, S. M., Cloonan, N., Wood, D. L., **Grimmond, S. M.**, Nagy, A., Munoz, J., & Heck, A. J. (2014). *Proteome adaptation in cell reprogramming proceeds via distinct transcriptional networks*. *Nature Communications*, 5, 5613. **IF 10.74**
- Chong, J. J. H.**, Yang, X. L., Don, C. W., Minami, E., Liu, Y. W., Weyers, J. J., Mahoney, W. M., Van Biber, B., Cook, S. M., Palpant, N. J., Gantz, J. A., Fugate, J. A., Muskheli, V., Gough, G. M., Vogel, K. W., Astley, C. A., Hotchkiss, C. E., Baldessari, A., Pabon, L., Reinecke, H., Gill, E. A., Nelson, V., Kiem, H. P., Laflamme, M. A., & Murry, C. E. (2014). *Human embryonic-stem-cell-derived cardiomyocytes regenerate non-human primate hearts*. *Nature*, 510(7504), 273-277. **IF 42.35**
- Clancy, J. L., Patel, H. R., Hussein, S. M., Tonge, P. D., Cloonan, N., Corso, A. J., Li, M., Lee, D. S., Shin, J. Y., Wong, J. L., Bailey, C. G., Benevento, M., Chuah, A., Wood, D., Rasko, J. E. J., Heck, A. J. R., Grimmond, S. M., Rogers, I. M., Seo, J. S., **Wells, C. A.**, Puri, M. C., Nagypal, T., & Preiss, T. (2014). *Small RNA changes en route to distinct cellular states of induced pluripotency*. *Nature Communications*. Doi 10.1038/Ncomms6522. **IF 10.74**
- Fantom Consortium**, Forrest, A. R., Kawaji, H., Rehli, M., Baillie, J. K., de Hoon, M. J., Lassmann, T., Itoh, M., Summers, K. M., Suzuki, H., Daub, C. O., Kawai, J., Heutink, P., Hide, W., Freeman, T. C., Lenhard, B., Bajic, V. B., Taylor, M. S., Makeev, V. J., Sandelin, A., Hume, D. A., Carninci, P., & Hayashizaki, Y. (2014). *A promoter-level mammalian expression atlas*. *Nature*, 507(7493), 462-470. **IF 42.4**
- Forbes, S. J., & **Rosenthal, N.** (2014). *Preparing the ground for tissue regeneration: from mechanism to therapy*. *Nature Medicine*, 20(8), 857-869. **IF 28.05**
- Furtado, M. B., Costa, M. W., Pranoto, E. A., Salimova, E., Pinto, A. R., Lam, N. T., Park, A., Snider, P., Chandran, A., **Harvey, R. P.**, Boyd, R., Conway, S. J., Pearson, J., Kaye, D. M., & **Rosenthal, N. A.** (2014). *Cardiogenic Genes Expressed in Cardiac Fibroblasts Contribute to Heart Development and Repair*. *Circulation Research*, 114(9), 1422-1434. **IF 11.09**
- Hobbs, R. M.**, & **Polo, J. M.** (2014). *Reprogramming Can Be a Transforming Experience*. *Cell Stem Cell*, 14(3), 269-271. **IF 22.15**
- Hussein, S. M., Puri, M. C., Tonge, P. D., Benevento, M., Corso, A. J., Clancy, J. L., Mosbergen, R., Li, M., Lee, D. S., Cloonan, N., Wood, D. L., Munoz, J., Middleton, R., Korn, O., Patel, H. R., White, C. A., Shin, J. Y., Gauthier, M. E., Le Cao, K. A., Kim, J. I., Mar, J. C., Shakiba, N., Ritchie, W., Rasko, J. E., **Grimmond, S. M.**, Zandstra, P. W., **Wells, C. A.**, Preiss, T., Seo, J. S., Heck, A. J., Rogers, I. M., & Nagy, A. (2014). *Genome-wide characterization of the routes to pluripotency*. *Nature*, 516(7530), 198-206. **IF 42.35**

- Lee, D. S., Shin, J. Y., Tonge, P. D., Puri, M. C., Lee, S., Park, H., Lee, W. C., Hussein, S. M., Bleazard, T., Yun, J. Y., Kim, J., Li, M., Cloonan, N., Wood, D., Clancy, J. L., Mosbergen, R., Yi, J. H., Yang, K. S., Kim, H., Rhee, H., **Wells, C. A.**, Preiss, T., **Grimmond, S. M.**, Rogers, I. M., Nagy, A., & Seo, J. S. (2014). *An epigenomic roadmap to induced pluripotency reveals DNA methylation as a reprogramming modulator*. *Nature Communications*, 5, 5619. [IF 10.74](#)
- Loh, K. M., Ang, L. T., Zhang, J. Y., Kumar, V., Ang, J., Auyeong, J. Q., Lee, K. L., Choo, S. H., Lim, C. Y. Y., Nichane, M., Tan, J. R., Noghabi, M. S., Azzola, L., Ng, E. S., Durruthy-Durruthy, J., Sebastiano, V., Poellinger, L., **Elefanty, A. G.**, **Stanley, E. G.**, Chen, Q. F., Prabhakar, S., Weissman, I. L., & Lim, B. (2014). *Efficient Endoderm Induction from Human Pluripotent Stem Cells by Logically Directing Signals Controlling Lineage Bifurcations*. *Cell Stem Cell*, 14(2), 237-252. [IF 22.15](#)
- Molawi, K., Wolf, Y., Kandalla, P. K., Favret, J., Hagemeyer, N., Frenzel, K., Pinto, A. R., Klapproth, K., Henri, S., Malissen, B., Rodewald, H. R., **Rosenthal, N. A.**, Bajenoff, M., Prinz, M., Jung, S., & Sieweke, M. H. (2014). *Progressive replacement of embryo-derived cardiac macrophages with age*. *Journal of Experimental Medicine*, 211(11), 2151-2158. [IF 13.91](#)
- Murry, C. E., **Chong, J. J. H.**, & Laflamme, M. A. (2014). *Letter by Murry et al Regarding Article, "Embryonic Stem Cell-Derived Cardiac Myocytes Are Not Ready for Human Trials"*. *Circulation Research*, 115(10), E28-E29. [IF 11.09](#)
- Naqvi, N., Li, M., Calvert, J. W., Tejada, T., Lambert, J. P., Wu, J., Kesteven, S. H., Holman, S. R., Matsuda, T., Lovelock, J. D., Howard, W. W., Iismaa, S. E., Chan, A. Y., Crawford, B. H., Wagner, M. B., Martin, D. I. K., Lefer, D. J., **Graham, R. M.**, & Husain, A. (2014). *A Proliferative Burst during Preadolescence Establishes the Final Cardiomyocyte Number*. *Cell*, 157, 795-807. [IF 33.12](#)
- Nguyen, P. D., Hollway, G. E., Sonntag, C., Miles, L. B., Hall, T. E., Berger, S., Fernandez, K. J., Gurevich, D. B., Cole, N. J., Alaei, S., **Ramialison, M.**, Sutherland, R. L., **Polo, J. M.**, Lieschke, G. J., & Currie, P. D. (2014). *Haematopoietic stem cell induction by somite-derived endothelial cells controlled by meox1*. *Nature*, 512(7514), 314-318. [IF 42.35](#)
- Pera, M. F.** (2014). *In search of naivety*. *Cell Stem Cell*, 15(5), 543-545. [IF 22.15](#)
- Pera, M. F.** (2014). *Stress Management: A New Path to Pluripotency*. *Cell Stem Cell*, 14(3), 273-274. [IF 22.15](#)
- Rickard, J. A., O'Donnell, J. A., Evans, J. M., Lalaoui, N., Poh, A. R., Rogers, T., Vince, J. E., Lawlor, K. E., Ninnis, R. L., Anderton, H., Hall, C., Spall, S. K., Phesse, T. J., Abud, H. E., Cengia, L. H., Corbin, J., Mifsud, S., Di Rago, L., Metcalf, D., Ernst, M., Dewson, G., Roberts, A. W., **Alexander, W. S.**, Murphy, J. M., Ekert, P. G., Masters, S. L., Vaux, D. L., Croker, B. A., Gerlic, M., & Silke, J. (2014). *RIPK1 Regulates RIPK3-MLKL-Driven Systemic Inflammation and Emergency Hematopoiesis*. *Cell*, 157(5), 1175-1188. [IF 33.12](#)
- Rios, A. C., Fu, N. Y., Lindeman, G. J., & **Visvader, J. E.** (2014). *In situ identification of bipotent stem cells in the mammary gland*. *Nature*, 506(7488), 322-327. [IF 42.35](#)
- Short, K. M., Combes, A. N., Lefevre, J., Ju, A. L., Georgas, K. M., Lamberton, T., Cairncross, O., Rumballe, B. A., McMahon, A. P., Hamilton, N. A., Smyth, I. M., & **Little, M. H.** (2014). *Global Quantification of Tissue Dynamics in the Developing Mouse Kidney*. *Developmental Cell*, 29(2), 188-202. [IF 10.37](#)
- Takasato, M., Er, P. X., Becroft, M., Vanslambrouck, J. M., **Stanley, E. G.**, **Elefanty, A. G.**, & **Little, M. H.** (2014). *Directing human embryonic stem cell differentiation towards a renal lineage generates a self-organizing kidney*. *Nature Cell Biology*, 16(1), 118-126. [IF 20.06](#)
- Tonge, P. D., Corso, A. J., Monetti, C., Hussein, S. M., Puri, M. C., Michael, I. P., Li, M., Lee, D. S., Mar, J. C., Cloonan, N., Wood, D. L., Gauthier, M. E., Korn, O., Clancy, J. L., Preiss, T., **Grimmond, S. M.**, Shin, J. Y., Seo, J. S., **Wells, C. A.**, Rogers, I. M., & Nagy, A. (2014). *Divergent reprogramming routes lead to alternative stem-cell states*. *Nature*, 516(7530), 192-197. [IF 42.35](#)
- Visvader, J. E.**, & Stingl, J. (2014). *Mammary stem cells and the differentiation hierarchy: current status and perspectives*. *Genes & Development*, 28(11), 1143-1158. [IF 12.64](#)

Published Research Output 2014

Note: researchers in bold are Chief, Partner, Associate or Affiliate Investigators of SCA.

Journal Articles (141)

- Alamein, M. A., **Wolvetang, E. J.**, Ovchinnikov, D. A., Stephens, S., Sanders, K., & Warnke, P. H. (2014). *Polymeric nanofibrous substrates stimulate pluripotent stem cells to form three-dimensional multilayered patty-like spheroids in feeder-free culture and maintain their pluripotency*. Journal of Tissue Engineering and Regenerative Medicine. doi: 10.1002/term.1960. **IF 4.43**
- Andersson, R., Gebhard, C., Miguel-Escalada, I., Hoof, I., Bornholdt, J., Boyd, M., Chen, Y., Zhao, X., Schmidl, C., Suzuki, T., Ntini, E., Arner, E., Valen, E., Li, K., Schwarzfischer, L., Glatz, D., Raitzel, J., Lilje, B., Rapin, N., Bagger, F. O., Jorgensen, M., Andersen, P. R., Bertin, N., Rackham, O., Burroughs, A. M., Baillie, J. K., Ishizu, Y., Shimizu, Y., Furuhashi, E., Maeda, S., Negishi, Y., Mungall, C. J., Meehan, T. F., Lassmann, T., Itoh, M., Kawaji, H., Kondo, N., Kawai, J., Lennartsson, A., Daub, C. O., Heutink, P., Hume, D. A., Jensen, T. H., Suzuki, H., Hayashizaki, Y., Muller, F., **Fantom Consortium**, Forrest, A. R., Carninci, P., Rehli, M., & Sandelin, A. (2014). *An atlas of active enhancers across human cell types and tissues*. Nature, 507(7493), 455-461. **IF 42.4**
- Antonic, A., **Dottori, M.**, Leung, J., Sidon, K., Batchelor, P. E., Wilson, W., Macleod, M. R., & Howells, D. W. (2014). *Hypothermia protects human neurons*. International Journal of Stroke, 9(5), 544-552. **IF 4.03**
- Bartlett, P. F.**, & He, R. Q. (2014). *Introduction to the thematic issue "From brain function to therapy"*. Science China-Life Sciences, 57(4), 363-365. **IF 1.51**
- Benevento, M., Tonge, P. D., Puri, M. C., Hussein, S. M., Cloonan, N., Wood, D. L., **Grimmond, S. M.**, Nagy, A., Munoz, J., & Heck, A. J. (2014). *Proteome adaptation in cell reprogramming proceeds via distinct transcriptional networks*. Nature Communications, 5, 5613. **IF 10.74**
- Bird, M. J., Needham, K., Frazier, A. E., van Rooijen, J., Leung, J., Hough, S., Denham, M., Thornton, M. E., **Parish, C. L.**, Nayagam, B. A., **Pera, M.**, Thorburn, D. R., **Thompson, L. H.**, & **Dottori, M.** (2014). *Functional characterization of Friedreich ataxia iPS-derived neuronal progenitors and their integration in the adult brain*. Plos One, 9(7), e101718. **IF 3.53**
- Brunck, M. E., & **Nielsen, L. K.** (2014). *Concise review: next-generation cell therapies to prevent infections in neutropenic patients*. Stem Cells Translational Medicine, 3(4), 541-548. **IF 3.60**
- Cameron, A. R., Frith, J. E., Gomez, G. A., Yap, A. S., & **Cooper-White, J. J.** (2014). *The effect of time-dependent deformation of viscoelastic hydrogels on myogenic induction and Rac1 activity in mesenchymal stem cells*. Biomaterials, 35(6), 1857-1868. **IF 8.31**
- Cao, B., Hutt, O. E., Zhang, Z., Li, S. H., Heazlewood, S. Y., Williams, B., Smith, J. A., **Haylock, D. N.**, Savage, G. P., & **Nilsson, S. K.** (2014). *Design, synthesis and binding properties of a fluorescent alpha(9)beta(1)/alpha(4)beta(1) integrin antagonist and its application as an in vivo probe for bone marrow haemopoietic stem cells*. Organic & Biomolecular Chemistry, 12(6), 965-978. **IF 3.49**
- Cao, H., Williams, B., & **Nilsson, S. K.** (2014). *Investigating the interaction between hematopoietic stem cells and their niche during embryonic development: optimizing the isolation of fetal and newborn stem cells from liver, spleen, and bone marrow*. Methods and Protocols, 1185, 9-20. **IF not available**
- Cao, J., Ng, E. S., McNaughton, D., **Stanley, E. G.**, **Elefanty, A. G.**, Tobin, M. J., & Heraud, P. (2014). *Fourier transform infrared microspectroscopy reveals unique phenotypes for human embryonic and induced pluripotent stem cell lines and their progeny*. Journal of Biophotonics, 7(10), 767-781. **IF 3.86**
- Cao, K. A. L., Rohart, F., McHugh, L., Korn, O., & **Wells, C. A.** (2014). *YuGene: A simple approach to scale gene expression data derived from different platforms for integrated analyses*. Genomics, 103(4), 239-251. **IF 2.79**
- Chen, X., Prowse, A. B., Jia, Z., Tellier, H., Munro, T. P., **Gray, P. P.**, & **Monteiro, M. J.** (2014). *Thermoresponsive worms for expansion and release of human embryonic stem cells*. Biomacromolecules, 15(3), 844-855. **IF 5.79**
- Chong, J. J. H.**, & Murry, C. E. (2014). *Cardiac regeneration using pluripotent stem cells-Progression to large animal models*. Stem Cell Research, 13(3), 654-665. **IF 3.91**
- Chong, J. J. H.**, Yang, X. L., Don, C. W., Minami, E., Liu, Y. W., Weyers, J. J., Mahoney, W. M., Van Biber, B., Cook, S. M., Palpant, N. J., Gantz, J. A., Fugate, J. A., Muskheli, V., Gough, G. M., Vogel, K. W., Astley, C. A., Hotchkiss, C. E., Baldessari, A., Pabon, L., Reinecke, H., Gill, E. A., Nelson, V., Kiem, H. P., Laflamme, M. A., & Murry, C. E. (2014). *Human embryonic-stem-cell-derived cardiomyocytes regenerate non-human primate hearts*. Nature, 510(7504), 273-277. **IF 42.35**

- Chong, J. J.,** Forte, E., & **Harvey, R. P.** (2014). *Developmental origins and lineage descendants of endogenous adult cardiac progenitor cells*. *Stem Cell Research*, 13(3PB), 592-614. **IF 3.91**
- Clancy, J. L., Patel, H. R., Hussein, S. M., Tonge, P. D., Cloonan, N., Corso, A. J., Li, M., Lee, D. S., Shin, J. Y., Wong, J. L., Bailey, C. G., Benevento, M., Chuah, A., Wood, D., Rasko, J. E. J., Heck, A. J. R., **Grimmond, S. M.,** Rogers, I. M., Seo, J. S., **Wells, C. A.,** Puri, M. C., Nagypal, T., & Preiss, T. (2014). *Small RNA changes en route to distinct cellular states of induced pluripotency*. *Nature Communications*. Doi 10.1038/Ncomms6522. **IF 10.74**
- Combes, A. N., Short, K. M., Lefevre, J., Hamilton, N. A., **Little, M. H.,** & Smyth, I. M. (2014). *An integrated pipeline for the multidimensional analysis of branching morphogenesis*. *Nature Protocols*, 9(12), 2859-2879. **IF 7.78**
- Fantom Consortium,** Forrest, A. R., Kawaji, H., Rehli, M., Baillie, J. K., de Hoon, M. J., Lassmann, T., Itoh, M., Summers, K. M., Suzuki, H., Daub, C. O., Kawai, J., Heutink, P., Hide, W., Freeman, T. C., Lenhard, B., Bajic, V. B., Taylor, M. S., Makeev, V. J., Sandelin, A., Hume, D. A., Carninci, P., & Hayashizaki, Y. (2014). *A promoter-level mammalian expression atlas*. *Nature*, 507(7493), 462-470. **IF 42.4**
- Dambrot, C., Buermans, H. P., Varga, E., Kosmidis, G., Langenberg, K., Casini, S., **Elliott, D. A.,** Dinnyes, A., Atsma, D. E., Mummery, C. L., Braam, S. R., & Davis, R. P. (2014). *Strategies for rapidly mapping proviral integration sites and assessing cardiogenic potential of nascent human induced pluripotent stem cell clones*. *Experimental Cell Research*, 327(2), 297-306. **IF 3.37**
- David, L., & **Polo, J. M.** (2014). *Phases of reprogramming*. *Stem Cell Research*, 12(3), 754-761. **IF 3.91**
- Davidson, K. C., Guymer, R. H., **Pera, M. F.,** & **Pebay, A.** (2014). *Human pluripotent stem cell strategies for age-related macular degeneration*. *Optometry and Vision Science*, 91(8), 887-893. **IF 2.04**
- Evans-Galea, M. V., **Pebay, A., Dottori, M.,** Corben, L. A., Ong, S. H., Lockhart, P. J., & Delatycki, M. B. (2014). *Cell and gene therapy for friedreich ataxia: progress to date*. *Human Gene Therapy*, 25(8), 684-693. **IF 3.62**
- Fearnley, L. G., Davis, M. J., Ragan, M. A., & **Nielsen, L. K.** (2014). *Extracting reaction networks from databases—opening Pandora's box*. *Briefings In Bioinformatics*, 15(6), 973-983. **IF 5.92**
- Fernando, C. V., Kele, J., Bye, C. R., Niclis, J. C., Alsanie, W., Blakely, B. D., Stenman, J., Turner, B. J., & **Parish, C. L.** (2014). *Diverse roles for Wnt7a in ventral midbrain neurogenesis and dopaminergic axon morphogenesis*. *Stem Cells and Development*, 23(17), 1991-2003. **IF 4.20**
- Firas, J., Liu, X., & **Polo, J. M.** (2014). *Epigenetic memory in somatic cell nuclear transfer and induced pluripotency: Evidence and implications*. *Differentiation*, 88(1), 29-32. **IF 2.84**
- Firas, J., Liu, X., Nefzger, C. M., & **Polo, J. M.** (2014). *GM-CSF and MEF-conditioned media support feeder-free reprogramming of mouse granulocytes to iPS cells*. *Differentiation*, 87(5), 193-199. **IF 2.84**
- Forbes, S. J., & **Rosenthal, N.** (2014). *Preparing the ground for tissue regeneration: from mechanism to therapy*. *Nature Medicine*, 20(8), 857-869. **IF 28.05**
- Frith, J. E., Menzies, D. J., Cameron, A. R., Ghosh, P., Whitehead, D. L., Gronthos, S., Zannettino, A. C. W., & **Cooper-White, J. J.** (2014). *Effects of bound versus soluble pentosan polysulphate in PEG/HA-based hydrogels tailored for intervertebral disc regeneration*. *Biomaterials*, 35(4), 1150-1162. **IF 8.31**
- Frith, J. E., **Porrello, E. R.,** & **Cooper-White, J. J.** (2014). *Concise review: new frontiers in microRNA-based tissue regeneration*. *Stem Cells Translational Medicine*, 3(8), 969-976. **IF 3.60**
- Fu, N., Lindeman, G. J., & **Visvader, J. E.** (2014). *The mammary stem cell hierarchy*. *Current topics in developmental biology*, 107, 133-160. **IF 4.21**
- Furtado, M. B., Costa, M. W., Pranoto, E. A., Salimova, E., Pinto, A. R., Lam, N. T., Park, A., Snider, P., Chandran, A., **Harvey, R. P.,** Boyd, R., Conway, S. J., Pearson, J., Kaye, D. M., & **Rosenthal, N. A.** (2014). *Cardiogenic Genes Expressed in Cardiac Fibroblasts Contribute to Heart Development and Repair*. *Circulation Research*, 114(9), 1422-1434. **IF 11.09**
- Ganesan, K., Garrett, D. J., Ahnood, A., Shivdasani, M. N., Tong, W., **Turnley, A. M.,** Fox, K., Meffin, H., & Praver, S. (2014). *An all-diamond, hermetic electrical feedthrough array for a retinal prosthesis*. *Biomaterials*, 35(3), 908-915. **IF 8.31**
- Gardner, D. K.,** & Lane, M. (2014). *Mammalian preimplantation embryo culture*. *Methods and Protocols*, 1092, 167-182. **IF not available**
- Gill, K. P., Hewitt, A. H., Davidson, K. C., **Pebay, A.,** & Wong, R. C. (2014). *Methods of retinal ganglion cell differentiation from pluripotent stem cells*. *Translational Vision Science and Technology*, 3(4), 1-13. **IF not available**

- Godde, N. J., Sheridan, J. M., Smith, L. K., Pearson, H. B., Britt, K. L., Galea, R. C., Yates, L. L., **Visvader, J. E.**, & Humbert, P. O. (2014). *Scribble Modulates the MAPK/Fra1 Pathway to Disrupt Luminal and Ductal Integrity and Suppress Tumour Formation in the Mammary Gland*. *Plos Genetics*, 10(5), e1004323. **IF 8.17**
- Godwin, J. W., & **Rosenthal, N.** (2014). *Scar-free wound healing and regeneration in amphibians: Immunological influences on regenerative success*. *Differentiation*, 87(1-2), 66-75. **IF 2.84**
- Godwin, J., Kuraitis, D., & **Rosenthal, N.** (2014). *Extracellular matrix considerations for scar-free repair and regeneration: Insights from regenerative diversity among vertebrates*. *The International Journal of Biochemistry & Cell Biology*, 56C, 47-55. **IF 4.24**
- Goh, H. N., **Rathjen, P. D.**, Familiari, M., & Rathjen, J. (2014). *Endoderm complexity in the mouse gastrula is revealed through the expression of spink3*. *BioResearch Open Access*, 3(3), 98-109. **IF not available**
- Goldshmit, Y., Frisca, F., Pinto, A. R., **Pebay, A.**, Tang, J. K., Siegel, A. L., Kaslin, J., & Currie, P. D. (2014). *Fgf2 improves functional recovery-decreasing gliosis and increasing radial glia and neural progenitor cells after spinal cord injury*. *Brain Behaviour*, 4(2), 187-200. **IF 2.94**
- Goldshmit, Y., Homman-Ludiye, J., & **Bourne, J. A.** (2014). *EphA4 is associated with multiple cell types in the marmoset primary visual cortex throughout the lifespan*. *The European Journal of Neuroscience*, 39(9), 1419-1428. **IF 3.67**
- Gook, D. A., Edgar, D. H., Lewis, K., Sheedy, J. R., & **Gardner, D. K.** (2014). *Impact of oxygen concentration on adult murine pre-antral follicle development in vitro and the corresponding metabolic profile*. *Molecular Human Reproduction*, 20(1), 31-41. **IF 3.48**
- Gunewardene, N., Bergen, N. V., Crombie, D., Needham, K., **Dottori, M.**, & Nayagam, B. A. (2014). *Directing human induced pluripotent stem cells into a neurosensory lineage for auditory neuron replacement*. *Biores Open Access*, 3(4), 162-175. **IF not available**
- Harvey, A. J., **Rathjen, J.**, Yu, L. J., & **Gardner, D. K.** (2014). *Oxygen modulates human embryonic stem cell metabolism in the absence of changes in self-renewal*. *Reproduction, Fertility, and Development*. doi: 10.1071/RD14013. **IF 2.58**
- Harvey, R. P.**, **Graham, R. M.**, & Pu, W. T. (2014). *Introduction to the Special Issue on Heart Regeneration and Rejuvenation*. *Stem Cell Research*, 13(3PB), 521-522. **IF 3.91**
- Hawthornth, O. A., Coulthard, L. G., Taylor, S. M., **Wolvetang, E. J.**, & Woodruff, T. M. (2014). *Brief Report: Complement C5a Promotes Human Embryonic Stem Cell Pluripotency in the Absence of FGF2*. *Stem Cells*, 32(12), 3278-3284. **IF 7.1**
- Heazlewood, C. F., Sherrell, H., Ryan, J., Atkinson, K., **Wells, C. A.**, & Fisk, N. M. (2014). *High incidence of contaminating maternal cell overgrowth in human placental mesenchymal stem/stromal cell cultures: a systematic review*. *Stem Cells Translational Medicine*, 3(11), 1305-1311. **IF 3.60**
- Heazlewood, S. Y., Oteiza, A., Cao, H., & **Nilsson, S. K.** (2014). *Analyzing hematopoietic stem cell homing, lodgment, and engraftment to better understand the bone marrow niche*. *Annals of the New York Academy of Sciences*, 1310, 119-128. **IF 4.31**
- Henderson, T., Ladewig, K., **Haylock, D.**, Mclean, K., & O'Connor, A. (2014). *Tailorable macro-porous hyaluronic acid cryogels for cell culture and tissue engineering*. *Journal of Tissue Engineering and Regenerative Medicine*, 8, 352-353. **IF 4.43**
- Hobbs, R. M.**, & **Polo, J. M.** (2014). *Reprogramming Can Be a Transforming Experience*. *Cell Stem Cell*, 14(3), 269-271. **IF 22.15**
- Homman-Ludiye, J., & **Bourne, J. A.** (2014). *Mapping arealisation of the visual cortex of non-primate species: lessons for development and evolution*. *Front Neural Circuits*, 8. **IF 2.95**
- Homman-Ludiye, J., & **Bourne, J. A.** (2014). *The guidance molecule Semaphorin3A is differentially involved in the arealization of the mouse and primate neocortex*. *Cerebral Cortex*, 24(11), 2884-2898. **IF 8.31**
- Hough, S. R., Thornton, M., Mason, E., Mar, J. C., **Wells, C. A.**, & **Pera, M. F.** (2014). *Single-Cell Gene Expression Profiles Define Self-Renewing, Pluripotent, and Lineage Primed States of Human Pluripotent Stem Cells*. *Stem Cell Reports*, 2(6), 881-895. **IF not available**
- Huang, E., & **Wells, C. A.** (2014). *The ground state of innate immune responsiveness is determined at the interface of genetic, epigenetic, and environmental influences*. *Journal of Immunology*, 193(1), 13-19. **IF 5.36**
- Hughes, J. N., Edwin Wong, C. K., Lau, K. X., Rathjen, P. D., & **Rathjen, J.** (2014). *Regulation of pluripotent cell differentiation by a small molecule, staurosporine*. *Differentiation*, 87(3-4), 101-110. **IF 2.84**

- Hussein, S. M., Puri, M. C., Tonge, P. D., Benevento, M., Corso, A. J., Clancy, J. L., Mosbergen, R., Li, M., Lee, D. S., Cloonan, N., Wood, D. L., Munoz, J., Middleton, R., Korn, O., Patel, H. R., White, C. A., Shin, J. Y., Gauthier, M. E., Le Cao, K. A., Kim, J. I., Mar, J. C., Shakiba, N., Ritchie, W., Rasko, J. E., **Grimmond, S. M.**, Zandstra, P. W., **Wells, C. A.**, Preiss, T., Seo, J. S., Heck, A. J., Rogers, I. M., & Nagy, A. (2014). *Genome-wide characterization of the routes to pluripotency*. *Nature*, 516(7530), 198-206. **IF 42.35**
- Jackson, J. T., Nasa, C., Shi, W., Huntington, N. D., Bogue, C. W., **Alexander, W. S.**, & McCormack, M. P. (2015). *A crucial role for the homeodomain transcription factor Hhex in lymphopoiesis*. *Blood*, 125(5), 803-814. **IF 9.78**
- Jhaveri, D. J., Nanavaty, I., Prosper, B. W., Marathe, S., Husain, B. F., Kernie, S. G., **Bartlett, P. F.**, & Vaidya, V. A. (2014). *Opposing effects of alpha2- and beta-adrenergic receptor stimulation on quiescent neural precursor cell activity and adult hippocampal neurogenesis*. *Plos One*, 9(6), e98736. **IF 3.53**
- Kauhausen, J., **Thompson, L.**, & **Parish, C.** (2014). *Cell intrinsic and extrinsic factors contribute to enhance neural circuit reconstruction following transplantation in Parkinsonian mice*. *Neuroreport*, 25(3), 156-157. **IF 1.64**
- Kempf, H., Olmer, R., Kropp, C., Ruckert, M., Jara-Avaca, M., Robles-Diaz, D., Franke, A., **Elliott, D. A.**, Wojciechowski, D., Fischer, M., Lara, A. R., Kensah, G., Gruh, I., Haverich, A., Martin, U., & Zweigerdt, R. (2014). *Controlling Expansion and Cardiomyogenic Differentiation of Human Pluripotent Stem Cells in Scalable Suspension Culture*. *Stem Cell Reports*, 3(6), 1132-1146. **IF not available**
- Kikuchi, K.** (2014). *Advances in understanding the mechanism of zebrafish heart regeneration*. *Stem Cell Research*, 13(3 Pt B), 542-555. **IF 3.91**
- Klaric, T. S., Thomas, P. Q., **Dottori, M.**, Leong, W. K., Koblar, S. A., & Lewis, M. D. (2014). *A reduction in Npas4 expression results in delayed neural differentiation of mouse embryonic stem cells*. *Stem Cell Research & Therapy*, 5, 64. **IF 4.63**
- Kopan, R., Chen, S., & **Little, M.** (2014). *Nephron Progenitor Cells: Shifting the Balance of Self-Renewal and Differentiation*. *Current Topics In Developmental Biology* 107, 293-331. **IF 4.21**
- Larman, M. G., & **Gardner, D. K.** (2014). *Ultraprapid vitrification of mouse oocytes and embryos*. *Methods and Protocols*, 1092, 153-165. **IF not available**
- Lau, C. L., Kovacevic, M., Tingleff, T. S., Forsythe, J. S., Cate, H. S., Merlo, D., Cederfur, C., Maclean, F. L., **Parish, C. L.**, Horne, M. K., Nisbet, D. R., & Beart, P. M. (2014). *3D Electrospun scaffolds promote a cytrotrophic phenotype of cultured primary astrocytes*. *Journal of Neurochemistry*, 130(2), 215-226. **IF 4.24**
- Le Cao, K. A., Rohart, F., McHugh, L., Korn, O., & **Wells, C. A.** (2014). *YuGene: a simple approach to scale gene expression data derived from different platforms for integrated analyses*. *Genomics*, 103(4), 239-251. **IF not available**
- Lee, D. S., Shin, J. Y., Tonge, P. D., Puri, M. C., Lee, S., Park, H., Lee, W. C., Hussein, S. M., Bleazard, T., Yun, J. Y., Kim, J., Li, M., Cloonan, N., Wood, D., Clancy, J. L., Mosbergen, R., Yi, J. H., Yang, K. S., Kim, H., Rhee, H., **Wells, C. A.**, Preiss, T., **Grimmond, S. M.**, Rogers, I. M., Nagy, A., & Seo, J. S. (2014). *An epigenomic roadmap to induced pluripotency reveals DNA methylation as a reprogramming modulator*. *Nature Communications*, 5, 5619. **IF 10.74**
- Lee, E. J., Be, C. L., Vinson, A. R., Riches, A. G., Fehr, F., Gardiner, J., Gengenbach, T. R., Winkler, D. A., & **Haylock, D.** (2014). *Immobilisation of a thrombopoietin peptidic mimic by self-assembled monolayers for culture of CD34+ cells*. *Biomaterials*, 37C, 82-93. **IF 8.31**
- Lee, E. J., Godara, P., & **Haylock, D.** (2014). *Bio manufacture of human platelets for transfusion: Rationale and approaches*. *Experimental Hematology*, 42(5), 332-346. **IF 2.81**
- Li, H. Q., Frith, J., & **Cooper-White, J. J.** (2014). *Modulation of Stem Cell Adhesion and Morphology via Facile Control over Surface Presentation of Cell Adhesion Molecules*. *Biomacromolecules*, 15(1), 43-52. **IF 5.79**
- Li, H., & **Cooper-White, J. J.** (2014). *Changing ligand number and type within nanocylindrical domains through kinetically constrained self-assembly - impacts of ligand 'redundancy' on human mesenchymal stem cell adhesion and morphology*. *Biomaterials Science*, 2(11), 1693-1705. **IF not available**
- Li, M., Iismaa, S. E., Naqvi, N., Nicks, A., Husain, A., & **Graham, R. M.** (2014). *Thyroid hormone action in postnatal heart development*. *Stem Cell Research*, 13(3PB), 582-591. **IF 3.91**
- Little, M. H.**, Brown, D., Humphreys, B. D., McMahon, A. P., Miner, J. H., Sands, J. M., Weisz, O. A., Mullins, C., & Hoshizaki, D. (2014). *Defining Kidney Biology to Understand Renal Disease*. *Clinical Journal of the American Society of Nephrology*, 9(4), 809-811. **IF 5.25**

- Little, M. H.,** Takasato, M., Er, P., Becroft, M., Vanslambrouck, J., **Stanley, E., & Elefanty, A.** (2014). *Directed Differentiation of Pluripotent Stem Cells to Form a Self-Organising Kidney*. *Nephrology*, 19, 16-16. **IF not available**
- Loh, K. M., Ang, L. T., Zhang, J. Y., Kumar, V., Ang, J., Auyeong, J. Q., Lee, K. L., Choo, S. H., Lim, C. Y. Y., Nichane, M., Tan, J. R., Noghabi, M. S., Azzola, L., Ng, E. S., Durruthy-Durruthy, J., Sebastiano, V., Poellinger, L., **Elefanty, A. G., Stanley, E. G.,** Chen, Q. F., Prabhakar, S., Weissman, I. L., & Lim, B. (2014). *Efficient Endoderm Induction from Human Pluripotent Stem Cells by Logically Directing Signals Controlling Lineage Bifurcations*. *Cell Stem Cell*, 14(2), 237-252. **IF 22.15**
- Mahmoud, A. I., **Porrello, E. R.,** Kimura, W., Olson, E. N., & Sadek, H. A. (2014). *Surgical models for cardiac regeneration in neonatal mice*. *Nature Protocols*, 9(2), 305-311. **IF 7.78**
- Main, H., **Munsie, M.,** & O'Connor, M. D. (2014). *Managing the potential and pitfalls during clinical translation of emerging stem cell therapies*. *Clinical and Translational Medicine*, 3, 10. **IF not available**
- Martinez, V. S., & **Nielsen, L. K.** (2014). *NEXt: Integration of Thermodynamic Constraints and Metabolomics Data into a Metabolic Network*. *Methods and Protocols*, 1191, 65-78. **IF not available**
- Mason, E. A., Mar, J. C., **Laslett, A. L., Pera, M. F.,** Quackenbush, J., **Wolvetang, E., & Wells, C. A.** (2014). *Gene Expression Variability as a Unifying Element of the Pluripotency Network*. *Stem Cell Reports*, 3, 1-13. **IF not available**
- Mater, A., & **Chong, J. J. H.** (2014). *Stem Cell Therapy for Cardiac Dysfunction*. Springer Plus. doi: 10.1186/2193-1801-3-440. **IF not available**
- Merson, T. D., & Bourne, J. A.** (2014). *Endogenous neurogenesis following ischaemic brain injury: Insights for therapeutic strategies*. *The International Journal of Biochemistry & Cell Biology*, 56C, 4-19. **IF 4.24**
- Mo, W., Liu, Y., **Bartlett, P. F.,** & He, R. (2014). *Transcriptome profile of human neuroblastoma cells in the hypomagnetic field*. *Science China Life Sciences*, 57(4), 448-461. **IF 1.51**
- Molawi, K., Wolf, Y., Kandalla, P. K., Favret, J., Hagemeyer, N., Frenzel, K., Pinto, A. R., Klapproth, K., Henri, S., Malissen, B., Rodewald, H. R., **Rosenthal, N. A.,** Bajenoff, M., Prinz, M., Jung, S., & Sieweke, M. H. (2014). *Progressive replacement of embryo-derived cardiac macrophages with age*. *Journal of Experimental Medicine*, 211(11), 2151-2158. **IF 13.91**
- Munsie, M.,** & Hyun, I. (2014). *A question of ethics: selling autologous stem cell therapies flaunts professional standards*. *Stem Cell Research*, 13(3 Pt B), 647-653. **IF 3.91**
- Munsie, M., & Pera, M.** (2014). *Regulatory loophole enables unproven autologous cell therapies to thrive in Australia*. *Stem Cells and Development*, 23 Suppl 1, 34-38. **IF 4.20**
- Murry, C. E., **Chong, J. J. H.,** & Laflamme, M. A. (2014). *Letter by Murry et al Regarding Article, "Embryonic Stem Cell-Derived Cardiac Myocytes Are Not Ready for Human Trials"*. *Circulation Research*, 115(10), E28-E29. **IF 11.09**
- Naqvi, N., Li, M., Calvert, J. W., Tejada, T., Lambert, J. P., Wu, J., Kesteven, S. H., Holman, S. R., Matsuda, T., Lovelock, J. D., Howard, W. W., Iismaa, S. E., Chan, A. Y., Crawford, B. H., Wagner, M. B., Martin, D. I. K., Lefer, D. J., **Graham, R. M.,** & Husain, A. (2014). *A Proliferative Burst during Preadolescence Establishes the Final Cardiomyocyte Number*. *Cell*, 157, 795-807. **IF 33.12**
- Needham, K., Hyakumura, T., Gunewardene, N., **Dottori, M.,** & Nayagam, B. A. (2014). *Electrophysiological properties of neurosensory progenitors derived from human embryonic stem cells*. *Stem Cell Research*, 12(1), 241-249. **IF 3.91**
- Nefzger, C. M., Alaei, S., Knaupp, A. S., Holmes, M. L., & **Polo, J. M.** (2014). *Cell surface marker mediated purification of iPS cell intermediates from a reprogrammable mouse model*. *Journal of Visualized Experiments* (91), e51728. **IF not available**
- Ng, A. P., Kauppi, M., Metcalf, D., Hyland, C. D., Josefsson, E. C., Lebois, M., Zhang, J. G., Baldwin, T. M., Di Rago, L., **Hilton, D. J., & Alexander, W. S.** (2014). *Mpl expression on megakaryocytes and platelets is dispensable for thrombopoiesis but essential to prevent myeloproliferation*. *Proceedings of the National Academy of Sciences of the United States of America*, 111(16), 5884-5889. **IF 9.81**
- Nguyen, P. D., Hollway, G. E., Sonntag, C., Miles, L. B., Hall, T. E., Berger, S., Fernandez, K. J., Gurevich, D. B., Cole, N. J., Alaei, S., **Ramialison, M.,** Sutherland, R. L., **Polo, J. M.,** Lieschke, G. J., & Currie, P. D. (2014). *Haematopoietic stem cell induction by somite-derived endothelial cells controlled by meox1*. *Nature*, 512(7514), 314-318. **IF 42.35**

- O'Reilly, V. C., Lopes Floro, K., Shi, H., Chapman, B. E., Preis, J. I., James, A. C., Chapman, G., **Harvey, R. P.**, Johnson, R. S., Grieve, S. M., Sparrow, D. B., & Dunwoodie, S. L. (2014). *Gene-environment interaction demonstrates the vulnerability of the embryonic heart*. *Developmental Biology*, 391(1), 99-110. **IF 3.64**
- Ortega, F. J., Vukovic, J., Rodriguez, M. J., & **Bartlett, P. F.** (2014). *Blockade of Microglial K-ATP-Channel Abrogates Suppression of Inflammatory-Mediated Inhibition of Neural Precursor Cells*. *Glia*, 62(2), 247-258. **IF 5.47**
- Ovchinnikov, D. A., Titmarsh, D. M., Fortuna, P. R., Hidalgo, A., Alharbi, S., Whitworth, D. J., **Cooper-White, J. J.**, & **Wolvetang, E. J.** (2014). *Transgenic human ES and iPS reporter cell lines for identification and selection of pluripotent stem cells in vitro*. *Stem Cell Research*, 13(2), 251-261. **IF 3.91**
- Parish, C. L.**, & **Thompson, L. H.** (2014). *Modulating Wnt signaling to improve cell replacement therapy for Parkinsons disease*. *Journal of Molecular Cell Biology*, 6(1), 54-63. **IF 8.43**
- Paul, M. H., **Harvey, R. P.**, Wegner, M., & Sock, E. (2014). *Cardiac outflow tract development relies on the complex function of Sox4 and Sox11 in multiple cell types*. *Cellular and Molecular Life Sciences*, 71(15), 2931-2945. **IF 5.86**
- Pebay, A.**, & Wong, R. C. (2014). *Study of Gap Junctions in Human Embryonic Stem Cells*. *Methods and Protocols*. doi: 10.1007/7651_2014_83. **IF not available**
- Pera, M. F.** (2014). *In search of naivety*. *Cell Stem Cell*, 15(5), 543-545. **IF 22.15**
- Pera, M. F.** (2014). *Stress Management: A New Path to Pluripotency*. *Cell Stem Cell*, 14(3), 273-274. **IF 22.15**
- Petersen, A., Seear, K., & **Munsie, M.** (2014). *Therapeutic journeys: the hopeful travails of stem cell tourists*. *Sociology of Health & Illness*, 36(5), 670-685. **IF 2.01**
- Petersen, A., Tanner, C., & **Munsie, M.** (2014). *Between hope and evidence: How community advisors demarcate the boundary between legitimate and illegitimate stem cell treatments*. *Health (London)*. doi: 10.1177/1363459314555240. **IF not available**
- Pinto, A. R., Godwin, J. W., & **Rosenthal, N. A.** (2014). *Macrophages in cardiac homeostasis, injury responses and progenitor cell mobilisation*. *Stem Cell Research*, 13(3PB), 705-714. **IF 3.91**
- Pinto, A. R., Godwin, J. W., Chandran, A., Hersey, L., Ilinykh, A., Debuque, R., Wang, L., & **Rosenthal, N. A.** (2014). *Age-related changes in tissue macrophages precede cardiac functional impairment*. *Aging*, 6(5), 399-413. **IF 4.89**
- Poggioli, T., Sarathchandra, P., **Rosenthal, N.**, & Santini, M. P. (2014). *Intramyocardial cell delivery: observations in murine hearts*. *Journal of Visualized Experiments*(83), e51064. **IF not available**
- Porrello, E. R.**, & Olson, E. N. (2014). *A neonatal blueprint for cardiac regeneration*. *Stem Cell Research*, 13(3PB), 556-570. **IF 3.91**
- Potts, K. S., Sargeant, T. J., Markham, J. F., Shi, W., Biben, C., Josefsson, E. C., Whitehead, L. W., Rogers, K. L., Liakhovitskaia, A., Smyth, G. K., Kile, B. T., Medvinsky, A., **Alexander, W. S.**, **Hilton, D. J.**, & Taoudi, S. (2014). *A lineage of diploid platelet-forming cells precedes polyploid megakaryocyte formation in the mouse embryo*. *Blood*, 124(17), 2725-2729. **IF 9.78**
- Rathjen, J.** (2014). *The States of pluripotency: Pluripotent lineage development in the embryo and in the dish*. ISRN Stem Cells. doi.org/10.1155/2014/208067. **IF not available**
- Rathjen, J.**, Yeo, C., Yap, C., Tan, B. S. N., Rathjen, P. D., & **Gardner, D. K.** (2014). *Culture environment regulates amino acid turnover and glucose utilisation in human ES cells*. *Reproduction Fertility and Development*, 26(5), 703-716. **IF 2.58**
- Rickard, J. A., O'Donnell, J. A., Evans, J. M., Lalaoui, N., Poh, A. R., Rogers, T., Vince, J. E., Lawlor, K. E., Ninnis, R. L., Anderton, H., Hall, C., Spall, S. K., Pheese, T. J., Abud, H. E., Cengia, L. H., Corbin, J., Mifsud, S., Di Rago, L., Metcalf, D., Ernst, M., Dewson, G., Roberts, A. W., **Alexander, W. S.**, Murphy, J. M., Ekert, P. G., Masters, S. L., Vaux, D. L., Croker, B. A., Gerlic, M., & Silke, J. (2014). *RIPK1 Regulates RIPK3-MLKL-Driven Systemic Inflammation and Emergency Hematopoiesis*. *Cell*, 157(5), 1175-1188. **IF 33.12**
- Rios, A. C., Fu, N. Y., Lindeman, G. J., & **Visvader, J. E.** (2014). *In situ identification of bipotent stem cells in the mammary gland*. *Nature*, 506(7488), 322-327. **IF 42.35**
- Rodriguez, A. L., Wang, T. Y., Bruggeman, K. F., Horgan, C. C., Li, R., Williams, R. J., **Parish, C. L.**, & Nisbet, D. R. (2014). *In vivo assessment of grafted cortical neural progenitor cells and host response to functionalized self-assembling peptide hydrogels and the implications for tissue repair*. *Journal of Materials Chemistry B*, 2(44), 7771-7778. **IF not available**

- Schiesser, J. V., Micallef, S. J., Hawes, S., **Elefanty, A. G.**, & **Stanley, E. G.** (2014). *Derivation of insulin-producing Beta-cells from human pluripotent stem cells*. *The Review of Diabetic Studies*, 11(1), 6-18. **IF not available**
- Shenje, L. T., Andersen, P., Uosaki, H., Fernandez, L., Rainer, P. P., Cho, G. S., Lee, D. I., Zhong, W., **Harvey, R. P.**, Kass, D. A., & Kwon, C. (2014). *Precardiac deletion of Numb and Numlike reveals renewal of cardiac progenitors*. *Elife*, 3, e02164. **IF 8.52**
- Short, K. M., Combes, A. N., Lefevre, J., Ju, A. L., Georgas, K. M., Lambertson, T., Cairncross, O., Rumballe, B. A., McMahon, A. P., Hamilton, N. A., Smyth, I. M., & **Little, M. H.** (2014). *Global Quantification of Tissue Dynamics in the Developing Mouse Kidney*. *Developmental Cell*, 29(2), 188-202. **IF 10.37**
- Sivakumaran, P., Newcomb, A. E., Liu, G. S., **Elliott, D. A.**, Dusing, G. J., & Lim, S. Y. (2014). *A Novel Population of Cardiac Resident Stem Cells Isolated from Human Atria*. *Hypertension*, 63(6), E153-E153. **IF 7.63**
- Skelton, R. J., Costa, M., Anderson, D. J., Bruveris, F., Finnin, B. W., Koutsis, K., Arasaratnam, D., White, A. J., Rafii, A., Ng, E. S., **Elefanty, A. G.**, **Stanley, E. G.**, Pouton, C. W., Haynes, J. M., Ardehali, R., Davis, R. P., Mummery, C. L., & **Elliott, D. A.** (2014). *SIRPA, VCAM1 and CD34 identify discrete lineages during early human cardiovascular development*. *Stem Cell Research*, 13(1), 172-179. **IF 3.91**
- Soh, C. L., Giudice, A., Jenny, R. A., **Elliott, D. A.**, Hatzistavrou, T., Micallef, S. J., Kianizad, K., Seach, N., Zuniga-Pflucker, J. C., Chidgey, A. P., Trounson, A., **Nilsson, S. K.**, **Haylock, D. N.**, Boyd, R. L., **Elefanty, A. G.**, & **Stanley, E. G.** (2014). *FOXN1(GFP/w) Reporter hESCs Enable Identification of Integrin-beta 4, HLA-DR, and EpCAM as Markers of Human PSC-Derived FOXN1 (+) Thymic Epithelial Progenitors*. *Stem Cell Reports*, 2(6), 925-937. **IF not available**
- Susnik, N., Sorensen-Zender, I., Rong, S., von Vietinghoff, S., Lu, X., Rubera, I., Tauc, M., Falk, C. S., **Alexander, W. S.**, Melk, A., Haller, H., & Schmitt, R. (2014). *Ablation of proximal tubular suppressor of cytokine signaling 3 enhances tubular cell cycling and modifies macrophage phenotype during acute kidney injury*. *Kidney International*, 85(6), 1357-1368. **IF 8.52**
- Takasato, M., Er, P. X., Becroft, M., Vanslambrouck, J. M., **Stanley, E. G.**, **Elefanty, A. G.**, & **Little, M. H.** (2014). *Directing human embryonic stem cell differentiation towards a renal lineage generates a self-organizing kidney*. *Nature Cell Biology*, 16(1), 118-126. **IF 20.06**
- Takasato, M., Maier, B., & **Little, M. H.** (2014). *Recreating kidney progenitors from pluripotent cells*. *Pediatric Nephrology*, 29(4), 543-552. **IF 2.88**
- Takasato, M., Vanslambrouck, J. M., & **Little, M. H.** (2014). *Reprogramming Somatic Cells to a Kidney Fate*. *Seminars in Nephrology*, 34(4), 462-480. **IF 2.94**
- Tan, G., **Elefanty, A. G.**, & **Stanley, E. G.** (2014). *beta-cell regeneration and differentiation: how close are we to the 'holy grail'?* *Journal of Molecular Endocrinology*, 53(3), R119-129. **IF 3.62**
- Taylor, C. J., He, R. Q., & **Bartlett, P. F.** (2014). *The role of the N-methyl-D-aspartate receptor in the proliferation of adult hippocampal neural stem and precursor cells*. *Science China-Life Sciences*, 57(4), 403-411. **IF 1.51**
- Teo, L., & **Bourne, J. A.** (2014). *A Reproducible and Translatable Model of Focal Ischemia in the Visual Cortex of Infant and Adult Marmoset Monkeys*. *Brain Pathology*, 24(5), 459-474. **IF 4.36**
- Titmarsh, D. M., Chen, H. Y., Glass, N. R., & **Cooper-White, J. J.** (2014). *Concise Review: Microfluidic Technology Platforms: Poised to Accelerate Development and Translation of Stem Cell-Derived Therapies*. *Stem Cells Translational Medicine*, 3(1), 81-90. **IF 3.60**
- Tong, W., Fox, K., Ganesan, K., **Turnley, A. M.**, Shimoni, O., Tran, P. A., Lohrmann, A., McFarlane, T., Ahnood, A., Garrett, D. J., Meffin, H., O'Brien-Simpson, N. M., Reynolds, E. C., & Prawer, S. (2014). *Fabrication of planarised conductively patterned diamond for bio-applications*. *Materials Science and Engineering C: Materials for Biological Applications*, 43, 135-144. **IF 2.74**
- Tonge, P. D., Corso, A. J., Monetti, C., Hussein, S. M., Puri, M. C., Michael, I. P., Li, M., Lee, D. S., Mar, J. C., Cloonan, N., Wood, D. L., Gauthier, M. E., Korn, O., Clancy, J. L., Preiss, T., **Grimmond, S. M.**, Shin, J. Y., Seo, J. S., **Wells, C. A.**, Rogers, I. M., & Nagy, A. (2014). *Divergent reprogramming routes lead to alternative stem-cell states*. *Nature*, 516(7530), 192-197. **IF 42.35**
- Turner, J., Quek, L. E., Titmarsh, D., Kromer, J. O., Kao, L. P., **Nielsen, L.**, **Wolvetang, E.**, & **Cooper-White, J.** (2014). *Metabolic Profiling and Flux Analysis of MEL-2 Human Embryonic Stem Cells during Exponential Growth at Physiological and Atmospheric Oxygen Concentrations*. *Plos One*, 9(11), e112757. **IF 3.53**
- Turnley, A. M.**, Basrai, H. S., & Christie, K. J. (2014). *Is integration and survival of newborn neurons the bottleneck for effective neural repair by endogenous neural precursor cells?* *Frontiers in Neuroscience*, 8, 29. **IF not available**

- Uren, R. T., & **Turnley, A. M.** (2014). *Regulation of neurotrophin receptor (Trk) signaling: suppressor of cytokine signaling 2 (SOCS2) is a new player.* *Frontiers in Molecular Neuroscience*, 7, 39. **IF 2.76**
- Uren, R. T., Turbic, A., Wong, A. W., Klein, R., Murray, S. S., & **Turnley, A. M.** (2014). *A novel role of suppressor of cytokine signaling-2 in the regulation of TrkA neurotrophin receptor biology.* *Journal of Neurochemistry*, 129(4), 614-627. **IF 4.24**
- Varghese, L. N., Zhang, J. G., Young, S. N., Willson, T. A., **Alexander, W. S.**, Nicola, N. A., Babon, J. J., & Murphy, J. M. (2014). *Functional characterization of c-Mpl ectodomain mutations that underlie congenital amegakaryocytic thrombocytopenia.* *Growth Factors*, 32(1), 18-26. **IF 3.09**
- Visvader, J. E.**, & Stingl, J. (2014). *Mammary stem cells and the differentiation hierarchy: current status and perspectives.* *Genes & Development*, 28(11), 1143-1158. **IF 12.64**
- Waardenberg, A. J., Ramialison, M., Bouveret, R., & **Harvey, R. P.** (2014). *Genetic networks governing heart development.* *Cold Spring Harbor Perspectives in Medicine*, 4(11), a013839. **IF 7.56**
- Wang, T. Y., Bruggeman, K. A., Sheean, R. K., Turner, B. J., Nisbet, D. R., & **Parish, C. L.** (2014). *Characterization of the stability and bio-functionality of tethered proteins on bioengineered scaffolds: implications for stem cell biology and tissue repair.* *The Journal of Biological Chemistry*, 289(21), 15044-15051. **IF 4.6**
- Whitworth, D. J., Frith, J. E., Frith, T. J. R., Ovchinnikov, D. A., **Cooper-White, J. J.**, & **Wolvetang, E. J.** (2014). *Derivation of Mesenchymal Stromal Cells from Canine Induced Pluripotent Stem Cells by Inhibition of the TGF beta/Activin Signaling Pathway.* *Stem Cells and Development*, 23(24), 3021-3033. **IF 4.20**
- Whitworth, D. J., Ovchinnikov, D. A., Sun, J., Fortuna, P. R. J., & **Wolvetang, E. J.** (2014). *Generation and Characterization of Leukemia Inhibitory Factor-Dependent Equine Induced Pluripotent Stem Cells from Adult Dermal Fibroblasts.* *Stem Cells and Development*, 23(13), 1515-1523. **IF 4.20**
- Wong, W. W. L., Vince, J. E., Lalaoui, N., Lawlor, K. E., Chau, D., Bankovacki, A., Anderton, H., Metcalf, D., O'Reilly, L., Jost, P. J., Murphy, J. M., **Alexander, W. S.**, Strasser, A., Vaux, D. L., & Silke, J. (2014). *cIAPs and XIAP regulate myelopoiesis through cytokine production in an RIPK1-and RIPK3-dependent manner.* *Blood*, 123(16), 2562-2572. **IF 9.78**
- Xing, Y. L., Roth, P. T., Stratton, J. A. S., Chuang, B. H. A., Danne, J., Ellis, S. L., Ng, S. W., **Kilpatrick, T. J.**, & **Merson, T. D.** (2014). *Adult Neural Precursor Cells from the Subventricular Zone Contribute Significantly to Oligodendrocyte Regeneration and Remyelination.* *Journal of Neuroscience*, 34(42), 14128-14146. **IF 6.75**
- Yap, C., Goh, H. N., Familiar, M., Rathjen, P. D., & **Rathjen, J.** (2014). *The formation of proximal and distal definitive endoderm populations in culture requires p38 MAPK activity.* *Journal of Cell Science*, 127(10), 2204-2216. **IF 5.33**
- Yu, N. Y. C., Gdalevitch, M., Murphy, C. M., Mikulec, K., Peacock, L., Fitzpatrick, J., Cantrill, L. C., Ruys, A. J., **Cooper-White, J. J.**, Little, D. G., & Schindeler, A. (2014). *Spatial Control of Bone Formation Using a Porous Polymer Scaffold Co-Delivering Anabolic Rbmp-2 and Anti-Resorptive Agents.* *European Cells & Materials*, 27, 98-111. **IF 4.89**

Book Chapters

- SCA researchers contributed to 3 chapters of the book *Regenerative Biology of the Eye* edited by **Associate Professor Alice Pebay**. Humana Press.
- Peh, G.S.L., & **Wong, R.C.B.** *Advances in Pluripotent and Adult Stem Cells for Eye Research*, pp. 101-120.
- Hewitt, A.W., & **Davidson, K.C.** *Stem Cell Strategies for Diseases of the Outer Retina*, pp. 145-160.
- Tanner, C., & **Munsie, M.** *Seeing the Full Picture: The Hidden Cost of the Stem Cell and Regenerative Medicine Revolution*, pp. 292-304.

Conference and Meeting Participation

SCA members highlighted in bold.

Invited Speakers

- Alexander W** **Invited Speaker** 25th Lorne Cancer Conference, Lorne, Australia, 2014
- Alexander W** **Invited Speaker** 16th Frank and Bobbie Fenner Conference, Canberra, Australia, 2014
- Bartlett P** **Invited Speaker** *Activation of distinct populations of neurogenic precursors in the hippocampus*, Adult Neurogenesis from stem cells to therapies meeting, Mumbai, India, 2014
- Bartlett P** **Invited Speaker** *Adding new neurons to the adult hippocampus How is it regulated and what is its function?*, Melbourne Brain Symposium Melbourne, Australia, 2014
- Bartlett P** **Invited Speaker** *Adding new neurons to the adult hippocampus How is it regulated and what is its function?*, The Menzies Research Institute Tasmania, Australia, 2014
- Blackmore D** **Invited Speaker** *Physical exercise improves cognitive deficits observed in normally aged mice*, A and PD Symposium, Sydney, Australia, 2014
- Brophy J** **Invited Speaker** *Stem Cell tourism to China*, PhD Up and Comers Melbourne Neuroscience Institute Public Seminar, Melbourne, Australia, 2014
- Chong J** **Invited Speaker** *Clinical Translation of Cardiac Regenerative Strategies*, EMBL Australia PhD Student Symposium, Sydney, Australia, December 2014
- Chong J** **Invited Speaker** *Novel Cell Therapies for Heart Repair*, Westmead Millennium Institute Super Science Symposium, November 2014
- Chong J** **Invited Speaker** *Pluripotent Stem Cells for Cardiac Repair and Regeneration*, Victor Chang Research Institute, 15th Annual Symposium, Darlinghurst, Sydney, Australia, November 2014
- Chong J** **Invited Speaker** *Novel Cell Therapies to Repair and Regenerate the Injured Heart*, Bosch Institute Annual Scientific Meeting, Sydney, Australia, August 2014
- Chong J** **Invited Speaker** 5th Alliance for Design and Application in Tissue Engineering (ADATE) International Symposium, Sydney, Australia, August 2014
- Cooper-White J** **Invited Speaker** Ausmedtech, 2 April 2014
- Cooper-White J** **Keynote Speaker** CSC2014 Vancouver, Canada, 3-5 June 2014
- Cooper-White J** **Invited Speaker** World Biomedics Congress Boston, USA, 7-11 July 2014
- Cooper-White J** **Keynote Speaker** ANZBM, Christchurch, New Zealand, 8-9 September 2014
- Cooper-White J** **Keynote Speaker** Joint Royal Society of Chemistry and Unilever China symposium in Hong Kong, Shanghai and Chengdu, 2014.
- Cooper-White J** **Keynote Speaker** Termis AP Korea, 23-26 September 2014
- Elliott D** **Invited Speaker** Tissue Engineering Symposia, St. Vincent's Hospital, August 2014
- Elliott D** **Invited Speaker** World Congress of Cardiology, May 2014
- Gardner D** **Invited Speaker** *Blastocyst Metabolism*, World Congress of Reproductive Biology, Edinburgh, 2014
- Gardner D** **Invited Speaker** *Metabolism; so much more than ATP*, Robinson Research Institute, Adelaide, Australia
- Davidson K** **Plenary Speaker** EMBO Workshop on WNT Signalling Stem Cells, Development, Disease, Broome, Western Australia, 2014
- Dottori M** **Invited Speaker** *Functional characterization of Friedreich Ataxia iPS-derived neuronal progenitors and their integration in the adult brain*, The 11th World Congress of Society of Brain Mapping and Therapeutics, Sydney, Australia

- Dottori M Invited Speaker** *Multipotent caudal neural progenitors derived from human pluripotent stem cells that give rise to lineages of the central and peripheral nervous system*, The 11th World Congress of Society of Brain Mapping and Therapeutics, Sydney, Australia
- Dottori M Invited Speaker** *Neural Differentiation of human embryonic stem cells*, Stem Cell Network Annual Meeting, Auckland, New Zealand
- Graham R Invited Speaker** *Postnatal heart development provides clues for regenerative therapy*, Burdon Sanderson Cardiac Science Lecture Series, Department of Physiology, Anatomy, and Genetics, University of Oxford, England, 30 September 2014.
- Harvey R Invited Speaker** *Probing the Cardiac Gene Regulatory Network in Health and Disease*, Mt Sinai College of Medicine, NY, March 2014.
- Harvey R Plenary Speaker** *Epicardial-derived mesenchymal stem-like cells in cardiac homeostasis and disease*, American Heart Foundation Basic Cardiovascular Science Meeting, Las Vegas, USA, July 2014.
- Harvey R Invited Platform Meeting Speaker** *Restoration of Self-Renewal and Potency in Mesenchymal Stem and Stromal Cells from Aged and Indured Hearts*, Leducq TransAtlantic Foundation Grant Consortium Kickoff Meeting, Mt. Sinai College of Medicine, NY, March 2014.
- Harvey R Invited Platform Meeting Speaker** *Probing the Cardiac Gene Regulatory Network in Health and Disease*, Cell Reprogramming Australia, 2nd Annual Collaborative Conference - The Making of Reprogramming, Melbourne Brain Centre, The University of Melbourne, May 2014.
- Harvey R Invited Platform Meeting Speaker** *Functional Studies iPS Cells*, International Clinical Cardiovascular Genetics Conference 2014, Brisbane, Australia, August 2014.
- Hilton D Invited Speaker** Taishan Scholar Symposium, 10-14 August 2014, Yantai, China
- Jhaveri D Invited Speaker** *Phenotypic and functional heterogeneity amongst quiescent precursor cells in the adult hippocampus Implications for the treatment of mood disorder*, Australasian Neuroscience Society Meeting, Adelaide, Australia, 2014
- Kikuchi K Invited Speaker** *Immune regulation of zebrafish heart regeneration*, Australian Network of Cardiac and Vascular Developmental Biologists Meeting, Melbourne, Australia, 4 -5 December 2014
- Kikuchi K Invited Speaker** *Immune regulation of zebrafish heart regeneration*, Stem Cell Australia Annual Retreat, Lorne, Australia, 10-12 November 2014
- Kikuchi K Invited Speaker** *Immune regulation of zebrafish heart regeneration*, ComBio2014, Canberra, Australia, 28 Sep - 2 Oct 2014
- Kilpatrick T Invited Speaker** *Myelin regeneration by precursor cells in the adult central nervous system* ComBio Meeting, Canberra, Australia, 28th Sept - 2nd Oct 2014
- Laslett A Keynote Speaker** *A dummy's guide to being a medical researcher...*, ASMR Student Research Symposium, Royal Melbourne Hospital, Melbourne Australia, May 2014
- Laslett A Invited Speaker** *Novel tools for human pluripotent stem cell biology*, 5th International NanoBio Conference, Brisbane, Australia
- Laslett A Invited Speaker** *Harnessing pluripotency novel tools for human stem cell biology*, UCI Stem Cell Research Center- Special Spring Lecture, Irvine, CA, USA
- Laslett A Invited Speaker** *Harnessing pluripotency novel tools for human stem cell biology*, Sino German Spring School on Regenerative Medicine, Guangzhou, China
- Little M Invited Speaker** Innovation in Healthcare, FutureHealth Forum Australia, Sydney, 2014
- Little M Invited Speaker** 14th Asian Pacific Congress of Nephrology, Tokyo, Japan, 2014
- Little M Invited Speaker** 2014 PAH Health Symposium, Princess Alexandra Hospital, Brisbane.
- Little M Invited Speaker** COMBIO 2014, Canberra, Australia
- Little M Invited Speaker** 2nd Asia Pacific Kidney Development Workshop, Queenstown, New Zealand, 2014
- Little M Invited speaker** International Society for Stem Cell Research, Vancouver, Canada, 2014
- Little M Keynote Speaker** Pan Pacific Symposium on Stem Cells and Cancer, Taiwan, 2014
- Little M Keynote Speaker** The Australian Society for Medical Research, Queensland Postgraduate Student Conference, Brisbane, Australia, 2014

- Merson T Invited Platform Speaker** *The role of remyelination in progressive MS*, 7th Congress of the Pan-Asian Committee for Treatment and Research in Multiple Sclerosis (PACTRIMS), Taipei, Taiwan, 6-8 Nov 2014
- Merson T Invited Platform Speaker** *Stem Cells in Multiple Sclerosis and Neurological Disease*, MS Research Australia/NSW Stem Cell Network joint workshop, Sydney, Australia, 28 May 28 2014
- Nielsen L Plenary Speaker** *Systems Biology*, International Conference in Bioinformatics, Sydney, Australia
- Nielsen L Invited Speaker** *Systems Biology of gas fermenting clostridia*, Green Chemistry GRC 2014, Hong Kong
- Nielsen L Invited Speaker** *Metabolic and Regulatory Models for Synthetic Biology Design*, NanoBio 2014, Brisbane, Australia
- Nielsen L Invited Speaker** *Opening Pandora's Box*, Metabolic Engineering X, Vancouver,
- Nielsen L Invited speaker** *Constraint based reconstruction and analysis of metabolic and regulatory networks* Symposium on Chemical and Biotechnology Engineering, NTU, Singapore
- Nilsson, S Invited Speaker** *Bone marrow endothelium: A hierarchically organized system with hemogenic stem cells giving rise to functional blood vessels as well as hemopoietic stem cells*, ASSCR and ISCT ANZ joint meeting "Narrowing the gap between stem cell science and cell therapy", Lorne, Australia, November 2014
- Pebay A Invited Speaker** *A role of LPA in neurotrama*, Optic nerve Conference, Obergurgl, Austria, 03-05 December 2014
- Pebay A Invited Speaker** *Using human pluripotent stem cells for disease modelling*, Asia-Pacific Glaucoma Congress, Hong Kong, China, September 2014
- Pebay A Invited Speaker** *Pluripotent stem cells for disease modelling*, Harbin International Cataract Conference, China, August 2014
- Pebay A Invited Speaker** *A role of LPA in neurotrama'*, World Congress of the Society for Brain Mapping and Therapeutics, Sydney, Australia, March 2014
- Pera M Invited speaker (Special Lecture)** 13th Congress Japanese Society for Regenerative Medicine – Kyoto, Japan, 2nd – 7th March 2014
- Pera M invited speaker** Cell Reprogramming Australia Inc. 2nd Annual Collaborative Conference – National, 5th 6th June 2014
- Pera M Invited Speaker** International Conference on Systems Biology 2014, Melbourne, 18 September 2014
- Pera M Invited Speaker** Nature Conference--Nuclear Reprogramming Conference, Guangzhou, 31 Oct 2 Nov 2014. Meeting sponsored by Guangzhou Institutes of Biomedicine and Health, CAS.
- Ramialison M Invited Speaker** *Introduction to ChIP-seq*, BioinfoSummer 2014, Melbourne, Australia, Dec 2014
- Ramialison M Invited Speaker** *Deciphering Cardiac Gene Regulatory Networks*, SBI Australia Systems Biology Collaborative, Melbourne, Australia, November 2014
- Ramialison M Invited Speaker** *Deciphering Cardiac Gene Regulatory Networks*, Brazil-Australia Symposium on Development & Regenerative Medicine, Sao Paulo, Brazil, October 2014
- Ramialison M Invited Speaker** *Deciphering Cardiac Gene Regulatory Networks*, Joint Symposium between the Institute of Biomedical Sciences, Institute of Biophysics Carlos Chagas Filho and Australian Regenerative Medicine Institute, Rio de Janeiro, Brazil, October 2014
- Ramialison M Invited Speaker** *Developing Trawler for de novo motif discovery in ChIP-seq datasets*, Australian Bioinformatics Conference, Melbourne, Australia, October 2014
- Ramialison M Invited Speaker** *Deciphering Cardiac Gene Regulatory Networks*, ARMI – University of Chile Symposium, Santiago, Chile, October 2014
- Ramialison M Invited Speaker** *Deciphering Cardiac Gene Regulatory Networks*, Monash-RIKEN Symposium, Tokyo, Japan, August 2014
- Ramialison M Invited Speaker** *Decrypting Elk1 function in heart development using TALENs*, Genome Editing Symposium, Melbourne, Australia, May 2014
- Ramialison M Keynote Speaker** *Big Data Research Perspective*, Big Data 2014 Health Informatics Society of Australia, Melbourne, Australia, March 2014
- Rosenthal N Keynote Speaker** *Immune regulation of regeneration*, EMBO/EMBL Cardiovascular Conference, Heidelberg, 2014

- Rosenthal N** **Keynote Speaker** *Advances in Regenerative Medicine*, MDI Biolabs Science Cafe, Bar Harbor, USA 2014
- Rosenthal N** **Plenary Speaker** *Bridging biomedical worlds*, Science conference, Beijing, 2014
- Rosenthal N** **Plenary Speaker** *Immune regulation of cardiac repair*, Keystone Symposium on Skeletal/Cardiac Muscle, Santa Fe, USA, 2014
- Rosenthal N** **Plenary Speaker** *Immune regulation of regeneration*, Aging and Regeneration Workshop, Singapore, 2014
- Rosenthal N** **Plenary Speaker** *Regeneration and stem cells*, IBSA Stem Cell Conference, Lugano, Switzerland, 2014
- Rosenthal N** **Plenary Speaker** *Immune regulation of regeneration*, SAHMRI Conference, Adelaide, Australia, 2014
- Rosenthal N** **Plenary Speaker** *Systems approaches to regenerative Medicine*, Systems Biology Course, Innsbruck, Austria, 2014
- Rosenthal N** **Keynote Speaker** *Macrophages to the rescue*, 8th Bioscaffolds Conference, Napa Valley, USA, 2014
- Rosenthal N** **Plenary Speaker** *Immune regulation of regeneration*, World Congress on Cardiology, Melbourne, Australia, 2014
- Rosenthal N** **Plenary Speaker** *Immune regulation of regeneration*, ISD Conference, London, 2014
- Rosenthal N** **Invited Speaker** *IGF1 Gene and Cell-Based Therapies*, American Heart Association, Chicago, USA, 2014
- Rosenthal N** **Invited Speaker** *Cardiogenic Genes Expressed in Cardiac Fibroblasts Contribute to Heart Development and Repair*, American Heart Association, Chicago, USA, 2014
- Rosenthal N** **Invited Speaker** *Biomaterial injections in Heart Failure Preclinical and Clinical Status*, American Heart Association, Chicago, USA, 2014
- Turnley A** **Invited Speaker** *Adult neural stem cells resident in the brain may be harnessed to promote repair* in Neural Stem Cells and Regeneration Session 11th Annual World Congress of Society of Brain Mapping and Therapeutics, Sydney Australia, 17-19 March 2014
- Wolvetang E** **Invited Speaker** *Cell reprogramming approaches to cure disease, the way of the future*. AusBiotech Conference, Gold Coast, Australia, 30 Oct 2014
- Wolvetang E** **Invited Speaker** *CRISPR editing of human iPSC*, Brisbane Genome Editing Symposium, Australia, 16 Sept 2014
- Wolvetang E** **Invited Speaker** *Human induced pluripotent cells as tools to study neurological diseases*, TRI Stem Cell Symposium, Brisbane, Australia, 10-11 Sept 2014
- Wolvetang E** **Keynote Speaker** *Human induced pluripotent cells as tools to study neurological diseases*, 5th international NanoBio conference, Brisbane, Australia, 7-11 July 2014
- Wolvetang E** **Keynote Speaker** *Generating and correcting stem cell based models of disease with CRISPR genome editing tools*, Genome Engineering of Cells and Organisms CRISPR and TALENs Workshop, Melbourne Brain Centre, Australia, 21 May 2014
- Wolvetang E** **Keynote Speaker** *Human induced pluripotent cells as tools to study neurological diseases*, 11th annual world conference of the Society for Brain Mapping & Therapeutics, Sydney, Australia, 17-19 March 2014

Oral Presentations

- Basrai, H.S., Christie, K.J. & Turnley, A.M.** *Regulation of newborn neuron survival and the inflammatory cell response after traumatic brain injury by suppressor of cytokine signalling 2 (SOCS2)* 5th Annual Neurotrauma Symposium Adelaide, SA, Australia
- Cornwell, J.** *Quantifying Competing Fates of Cardiac Stem Cells in Fully-Defined Serum Free Medium by Live Cell Imaging, Single Cell Tracking, and Competing Risks Regression* ASSCR/ISCT ANZ joint meeting Lorne, Australia
- Davidson, K.C.,** Ware, C.B., & Moon, R.T. *Wnt/ β -catenin signalling in pluripotency* Cell Reprogramming Australia Annual Conference Melbourne, Australia
- Evans-Galea, M.V., Ong, S.H., Zhang, D.C., Novakovic, B., Corben, L.A., Tai, G., Sim, C.H., Wilson, G.R., Stephenson, S.E. M., Sarsero, J.P., Newgreen, D.F., **Dottori, M., Pebay, A.,** Thorburn, D., Saffery, R., Lockhart, P.J., & Delatycki, M.B. *Developing novel therapies and biomarkers for Friedreich ataxia* FARA Annual meeting, December 2014

Graham, R. **Mending a broken heart: a potential new role for the alpha1A-adrenergic receptor** High Blood Pressure Research Council of Australia, Annual Meeting Adelaide, SA, Australia

Harvey, A.J., O'Brien, C., Lees, J.G., Rathjen, J., Lamshead, J., Sheedy, J.R., Laslett, A.L. & Gardner, D.K. **Distinct metabolic profiles identify metabolic dysfunction in human pluripotent stem cells** EMBL Symposium Frontiers in Metabolism: From Molecular Physiology to Systems Medicine Heidelberg, Germany

Lamshead, J., O'Brien, C., Meagher, L. & Laslett, A.L. **Role(s) of Cell Adhesion Molecules in Maintaining Human Pluripotent Stem Cells** Society For Biomaterials 2014 Annual Meeting and Exposition: Pioneering the Future of Biomaterials Denver, CO, USA

Laslett, A.L. **Harnessing pluripotency: novel tools for human stem cell biology** Australian Regenerative Medicine Institute Clayton, Australia

Laslett, A.L. **Harnessing pluripotency: novel tools for human stem cell biology", Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences/Shanghai Jiao Tong University School of Medicine, Shanghai, China** Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences/Shanghai Jiao Tong University School of Medicine Shanghai, China

Munsie, M., Tanner, C., McGregor, C. & Petersen, A. **When hopes clash: patient optimism confronts scientific evidence** ISSCR 12th Annual Meeting Vancouver, Canada

Ramialison, M., Bouveret, R., Waardenberg, A., Doan, T., de Jong, D., Schönrock, N. & Harvey, R.P. **Co-option of ubiquitous transcription factors in the cardiac developmental gene regulatory network** 15th ANZ Zebrafish Meeting Sydney, Australia

Ramialison, M., Bouveret, R., Waardenberg, A., Doan, T., de Jong, D., Schönrock, N. & Harvey, R.P. **In silico prediction of mutant transcription factors function** ISMB 2014 Regulatory Genomics SIG Boston, USA

Turnley, A. **Adult neural stem cells resident in the brain may be harnessed to promote repair** 11th Annual World Congress of Society of Brain Mapping and Therapeutics Sydney Australia

Turnley, A., Christie, K. & Turbic, A. **Rho kinase inhibition promotes functional improvement and altered neurogenesis following traumatic brain injury** Australasian Neuroscience Society Meeting Adelaide, SA, Australia

Vukovic, J. **Presence of immature hippocampal neurons in the adult mouse brain is important for learning** Australasian Neuroscience Society meeting Adelaide, SA, Australia

Wong, L.Y., Wolvetang, E., & Cooper-White, J.J. **Development of "smart", self-assembled polymer nanoparticle system for gene deliver** TERMIS-AP Sept 2014 Daegu, Korea

Wong, R. **Modelling retinal diseases by large scale manufacture of human induced pluripotent stem cells** Frontiers in Human Engineering symposium Melbourne, Australia

Wong, R. **Understanding ocular disease using human induced pluripotent stem cells** 4th Annual World Congress of Molecular & Cell Biology Dalian, China.

Xing, Y.L., Roth, P.T., Stratton, J.A.S., Ellis, S.L., Chuang, B.H.A., Ng, S.W., Kilpatrick, T.J. & Merson, T.D. **Neural precursor cells outcompete oligodendrocyte progenitor cells to remyelinate broad regions of the rostral corpus callosum** Glia in Health & Disease - Cold Spring Harbor Laboratory New York, USA.

Webinar

Chong, J. **Harnessing the Potential Of Human Pluripotent Stem Cells for Cardiac Regeneration and Repair** International Society of Cellular Therapy Invited Speaker - Webinar

Poster Presentations

Abeygunawardena, D., Asli, N.S., Cornwell, J., Forte, E., Janbandhu, V., & Harvey, R. **Intrinsic differentiation capacity of cardiac MSCs** BABS research symposium UNSW, Sydney, Australia

Abeygunawardena, D., Asli, N.S., Cornwell, J., Forte, E., Janbandhu, V., & Harvey, R. **Intrinsic differentiation capacity of cardiac MSCs** EMBL Australia PhD Symposium UNSW, Sydney Australia

Basrai, H.S., Christie, K.J. & Turnley, A.M. **Regulation of newborn neuron survival and the inflammatory cell response after mild traumatic brain injury by suppressor of cytokine signalling 2 (SOCS2)** 44th Annual Meeting of the Society for Neuroscience Washington, DC, USA

- Basrai, H.S., Christie, K.J. & Turnley, A.M.** **Suppressor of Cytokine Signalling 2 (SOCS2) overexpressing mice have an increased inflammatory cell response after traumatic brain injury** 34th Annual Meeting of the Australian Neuroscience Society Adelaide, SA, Australia
- Blackmore, D.G., Steyn, F., & Bartlet, P.F.** **Physical exercise increases neurogenesis within the dentate gyrus of aged animals** Australasian Neuroscience Society meeting Adelaide, SA, Australia
- Bye, N., Henderson, S., Turbic, A., Cate, H., & Turnley, A.M.** **Assessing neurobiological and functional consequences of traumatic brain injury in infants** 5th Annual Neurotrauma Symposium Adelaide, SA, Australia
- Chung, T.C., Haylock, D., Nilsson, S., & Laslett, A.L.** **Direct Reprogramming to Blood Stem Cells** Cell Reprogramming Australia 2nd Annual meeting Melbourne Australia
- Davidson, K.C., Ware, C.B., & Moon, R.T.** **Wnt/ β -catenin signalling in human naïve pluripotency** Australasian Stem Cell Science and Therapy Meeting Lorne, VIC
- Frisca, F., Pébay, A., & Kaslin, J.** **Biological effect of Lysophosphatidic Acid Signaling in Neurogenesis And Embryonic Development** 12th ISSCR Annual Meeting Vancouver, Canada
- Frisca, F., Pébay, A., Goldshmit, Y., Vandestadt, C., & Kaslin, J.** **Biological effect of Lysophosphatidic Acid Signaling in the Embryonic Development of the Zebrafish** 11th International Conference on Zebrafish Development and Genetics Madison, USA
- Gill, K., Hung, S., Needham, K., Hewitt, A., Pébay, A. & Wong, R.** **Differentiation and enrichment of retinal ganglion-like cells from human embryonic stem cells** 2014 Biomed link conference Melbourne, Australia
- Gonzalez-Rajal, A., Sheng, D., & **Kikuchi, K.** **Identification of a T cell sub-population expressing foxp3 and its contribution to cardiac regeneration in zebrafish** 22nd St. Vincent's Campus Research Symposium Sydney, Australia
- Graham, R.** **A surgical model of hypertension and left ventricular hypertrophy in mice by suprarenal aortic constriction** St. Vincent's Research Symposium Sydney, Australia
- Hallen, S., Chapman, R., Mazo, M., Horejs, C.M., Parmar, P., **O'Brien, C., Laslett, A.L., & Stevens, M.M.** **Control of Human Pluripotent Stem Cell Fate with Advanced Biomaterial Systems** Keystone Symposia: Engineering Cell Fate and Function / Stem Cells and Reprogramming Olympic Valley, CA, USA
- Harvey, A.J., O'Brien, C., Lees, J.G., Rathjen, J., Lamshead, J., Sheedy, J.R., Laslett, A.L. & Gardner, D.K.** **Distinct metabolic profiles identify metabolic dysfunction in human pluripotent stem cells** Australasian Society for Stem Cell Research Lorne, Australia
- Jhaveri, D.J., O'Keefe, I., Newcombe, E., Robinson, G.J., Zhao, Q-Y., Zhang, Z.H., Nink, V., Wray, N.R., & Bartlett, P.F.** **Phenotypic and functional heterogeneity amongst quiescent precursor cells in the adult hippocampus** Adult Neurogenesis: from stem cells to therapies meeting Mumbai, India
- Keith, L.J., Ashworth-Briggs, E.L., **Davidson, K.C., Wong, R.C.B., Pebay, A., Hewitt, A., & Cook, A.L.** **Defining conditions to direct human pluripotent stem cells towards the glaucoma-affected trabecular meshwork cell lineage** Australasian Stem Cell Science and Therapy Meeting Lorne, Vic, Australia
- Kikuchi K.** **Identification of a T cell sub-population expressing foxp3 and its contribution to cardiac regeneration in zebrafish** 11th International Conference on Zebrafish Development and Genetics Madison, USA
- Lamshead, J., O'Brien, C., Meagher, L., & Laslett, A.L.** **Investigating the Role(s) of Cell Adhesion Molecules in Human Pluripotent Stem Cell Culture** Keystone Symposia: Engineering Cell Fate and Function / Stem Cells and Reprogramming Olympic Valley, CA, USA
- Lees, J.G., Rathjen, J., Sheedy, J.R., Gardner, D.K., & Harvey, A.J.** **Nutrient utilization distinguishes between human embryonic stem cell lines** Society for Reproductive Biology Melbourne, Australia
- Merson, T.D., Chuang, B.H.A., Kilpatrick, T.J., & Röth, P.T.** **Cellular dynamics underlying the generation of linear arrays of oligodendrocytes in CNS white matter** 44th Annual Meeting of the Society for Neuroscience Washington, DC, USA
- Ramialison, M.** **Genome-wide targets of mutated cardiac transcription factors in disease** International Conference in Systems Biology Melbourne, Australia
- Ramialison, M., Bouveret, R., Waardenberg, A., Doan, T., de Jong, D., Schönrock, N. & Harvey, R.P.** **Co-option of ubiquitous transcription factors in the cardiac developmental gene regulatory network** Lorne Genome Conference Lorne, Australia

Röth, P.T., Stratton, J.A.S., **Xing, Y.L.**, Chuang, B.H.A., **Kilpatrick, T.J.**, & **Merson, T.D.** **The cellular mechanisms underlying the generation of oligodendrocyte linear arrays in white matter** 9th FENS Forum of Neuroscience Milan, Italy

Vukovic, J., Borlikova, B.G., Ruitenberg, M.J., Robinson, G.J., Sullivan, R.K.P., Walker, T.L. & **Bartlett, P.F.** **Presence of doublecortin-positive cells in the adult mouse brain is important for learning** Keystone Symposia: Adult Neurogenesis Stockholm, Sweden

Wojciak, J., Sabbadini, R.S., Crack, P., Morganti-Kossmann, C., Zhang, M., **Pébay, A.**, Conquest, A. & Morris, A. **Role of lysophosphatidic acid in traumatic brain injury: Anti-LPA antibodies are neuroprotective after experimental TBI** Experimental Biology San Diego, USA

Xing, Y.L., Röth, P.T., Stratton, J.A.S., Chuang, B.H.A., Ng, S.W., **Kilpatrick, T.J.** & **Merson, T.D.** **Adult neural precursor cells from the subventricular zone contribute significantly to oligodendrocyte regeneration and remyelination** 34th Annual Meeting of the Australian Neuroscience Society Adelaide, SA, Australia

Other Participations

Advisory boards, panellists, invites etc

Bartlett, P. **Eccles Lecturer** "Producing new neurons in the adult brain: How is it regulated and what is the use?", Australasian Neuroscience Society Meeting, Adelaide, Australia, 2014

Gardner, D. **Post Graduate Course** at the American Society for Reproductive Medicine, Orlando, 2014

Munsie, M. **Chair** International Society for Stem Cell Research 'Closer Look at Stem Cells' Taskforce (2013)

Munsie, M. **Chair** Australasian Society for Stem Cell Research Policy, Ethics and Translation Sub-Committee (2014)

Munsie, M. **Chair** Centre for Eye Research Australia Vision Regeneration Program (2014)

Nielsen, L. **Steering Committee member** ECI Cell Therapy Conference (2014)

Nielsen, L. **Book editor** Krömer JO, Nielsen LK, Blank LM (2014) Metabolic Flux Analysis: Methods and Protocols, Methods in Molecular Biology, vol. 1191.

Nielsen, L. **Editorial board member** Metabolic Engineering Communications (2014)

Nielsen, L. **Scientific Advisory Board** Metabolic Engineering X, June 15-19, 2014, Vancouver, Canada.

Pera, M. **International Expert Advisory Panel** Canadian Stem Cell Strategy, Toronto, Canada, 9th - 11th March 2014

Pera, M. **Invited lecturer** Victorian Institute of Forensic Medicine, 11th June 2014

Pera, M. **Invited panellist (Focus Session)** ISSCR 2014 Annual Meeting, Vancouver, Canada, 18-21 June 2014

Pera, M. **Invited guest** Human Frontier Sciences Project 14th HFSP Awardees Meeting, Lugano, Switzerland, 4th July 2014

Pera, M. **Invited Reviewer** The proposals of Stem Cell Research Program funded by Ministry of Science and Technology of Taiwan, R. O. C., 20th July 2014

Pera, M. **Invited Panellist** Palo Alto NHLBI Progenitor Cell Biology Consortium (PCBC) Cell Characterization Futures Workshop, California - September 28, 2014

Pera, M. **Invited Panellist** Epilepsy Genetics in the Era of Precision Medicine, California, September 29-30, 2014

Rosenthal, N. **Instructor** EMBL Australia PhD course, Canberra, 2014

Meetings organised, chair etc

Cooper-White, J. **Co-Chair of session** WBC Boston, USA, 7-11 July 2014

Cooper-White, J. **Chair of session** ComBio, Canberra, Australia, 1 October, 2014

Gardner, D. **Co-Chair** The 2nd Biomarker Meeting in Reproductive Medicine, Valencia, Spain, 2014

Gardner, D. **Scientific Chair** Alpha, 10th Biennial Conference, Antalya, Turkey, 2014

Hilton, D. **Session Chair** Joint Symposium of BioGrid Australia and Health & Biomedical Informatics Centre (HaBIC), 2014

Nielsen, L. **Workshop Co-Chair** Applications of -omics Technology, Cell Culture Engineering, May 4-9, 2014, Quebec City, Canada.

Pera, M. **Committee chair** ISSCR Board of Director's meeting and President's reception, Vancouver, Canada, 2014

Pera, Munsie, Milchalska, Jameson, Farley, Cuddy, Dottori, Mason, Lau **Advanced research workshop in neuroscience 2014** Human pluripotent stem cells in neuroscience research, Melbourne, 25-29 August 2014

Ramialison, R. **Conference Organiser and Chair** 3rd Meeting of the Australian Network of Cardiac and Vascular Developmental Biologists, Melbourne, Australia, December 2014

Ramialison, R. **Session Chair** Combio, Canberra, Australia, September 2014

Rosenthal, N. **Organiser** EMBO/EMBL Cardiovascular Conference, Heidelberg, 2014

Participation in Community Activities

We would like to acknowledge and thank our partners and participants for their support of our 2014 community outreach activities.

Community or Patient Advocacy Meetings

Stem Cells and Vision Loss Forum at Centre for Eye Research Australia, Melbourne, Victoria - **Alice Pebay**, Alex Hewitt, **Raymond Wong** and **Megan Munsie**

Stem Cells and Vision Loss Forum with Centre for Eye Research Australia, Bendigo, Victoria - **Alice Pebay**, Alex Hewitt and **Megan Munsie**

Victorian Biology Teachers Network, Melbourne, Victoria - **Megan Munsie**

Australian Physiotherapy Association, Melbourne, Victoria - **Megan Munsie** and Mario D'Cruz

Victorian Science Teachers Forum at Gene Technology Access Centre, Melbourne, Victoria - **Megan Munsie**

MS Queensland Conference Patient Forum, Brisbane, Queensland - **Megan Munsie**

National Stem Cell Foundation of Australia Special Public Seminar, Melbourne, Victoria - **Trevor Kilpatrick**

Hype versus Hope: Stem Cells for Cardiovascular Disease Public Forum, Sydney, New South Wales - **James Chong**

How Neuroscience is transforming our understanding and treatment of brain disease, Hobart, Tasmania - **Perry Bartlett**

Sir John Gurdon Public Seminar at Monash University, Melbourne, Victoria - **Nadia Rosenthal**

Outreach Activities

Shelford Girls School Special Forum, Melbourne, Victoria - **Lizzi Mason**, **Mirella Dottori** and **Megan Munsie**

'Making of Reprogramming' Workshop with Gene Technology Access Centre, Melbourne, Victoria - **Ernst Wolvetang**, Sharon Ricardo, **Andrew Laslett**, **Jose Polo**, **Megan Munsie**, Felicity Barnes and **Jaber Firas**

Stem Cell Revolutions, Perkins Institute, Perth, West Australia - George Yeoh, Louise Winteringham, Kristyn Bates and **Megan Munsie**

StemCells@UQ, Brisbane, Queensland - **Melissa Little**, **Ernst Wolvetang**, **Megan Munsie**, **Dmitry Ovchinnikov**, Taryn Naidoo, **Dhanisha Jhaveri**, **Jana Vukovic**, Marija Kojic, **Li-Yen Wong**, Daniela Grassini, Sam Nayler, Emma Byers, **Daniel Blackmore** and **Jessica Schwaber**

'Stem Cells: Transforming Science, Medicine and Society' special education day at Gene Technology Access Centre, Melbourne, Victoria - **Megan Munsie**, **David Elliott**, **Kathryn Davidson**, Ben Shields, Ana Janic, Mario D'Cruz and PhD students **Grace Lidgerwood** and **Deevina Arasaratman**

Media Coverage

Press Releases

Includes those related to Stem Cells Australia research released by our partners

Jose Polo awarded new Metcalf Prize for stem cell research (SCA) 2 June 2014.

Bendigo: Getting the facts on stem cells (SCA and CERA) 16 June 2014.

CCRM and Stem Cells Australia Agree to Collaborate in the Global Translation of Stem Cell Research (SCA and CCRM) 17 June 2014.

Exploring gene networks provides insight into stem cell behaviour (AIBN) 12 August 2014.

New platform aids stem cell research (Stem Cells Australia) 11 December 2014.

Media Coverage

Stories related to Stem Cells Australia's research and other activities.

Alarm over 'experimental' stem cell use [[Australian Doctor](#), 8 January 2014]

Stem cell doctor hits out at critics [[Australian Doctor](#), 24 January 2014]

GP uses stem cell therapy in autism [[Australian Doctor](#), 24 January 2014]

Scientists hail stem cell 'breakthrough' [[ABC AM](#), 30 January 2014]

Stem cell tourism and risks [[RRR](#), 2 March 2014]

Scientists release first-ever 'map' of gene activity in humans [[SBS](#), 26 March 2014]

Potential diabetes therapy: scientists grow insulin-producing cells using cloning techniques [[SMH](#), [The Age](#) and syndicates, 29 April 2014]

Sydney scientist regrows monkey's heart with stem cells [[SMH](#), 30 April 2014]

Stem-cell repair job could fix heart damage [[The Australian](#), 30 April 2014]

Australian cardiologist regrows monkey hearts with human stem cells [[The Guardian](#), 1 May 2014]

Scientists regrow monkey heart wall using human stem cells [[ABC The World Today](#), 1 May 2014]

ARA voices concern over OA cell therapy [[6Minutes](#), 1 May 2014]

Heart cells have 'preteen' growth spurt [[ABC Science](#), 9 May 2014]

Sydney scientists show young hearts can mend [[SMH](#), 10 May 2014]

Bone grown from monkey skin cells [[ABC Science](#), 16 May 2014]

Stem cell transplants 'safe and successful' in monkeys [[BioNews](#), 28 May 2014]

Stem cell researchers to use national prize to treat brain conditions [[ABC News](#), 2 June 2014]

History of stem cells [[Bendigo Advertiser](#), 3 July 2014]

Stem Cells [[SBS Insight](#), 15 July 2014]

Aussies turning to radical stem cell therapy to help treat injuries [[SBS News](#), 15 July 2014]

Stem cell tourism exploits people by marketing hope [[The Conversation](#), 15 July 2014]

Stem Cell Tourism [[ABC24](#), 17 July 2014]

Stem cell treatment warnings after Australian woman dies in Russia [[SMH](#), [The Age](#) and syndicates, 28 July 2014]

Beware doctors trading on hope [[Australian Medicine](#), 5 August 2014]

Stem cell therapy rogue operators charging thousands for useless or dangerous treatment [[ABC 730 Report](#), 25 August 2014]

Stem cell researcher to use national prize to treat brain conditions [[ABC News](#), 25 August 2014]

Stem cell therapy a primitive science [[Australian Financial Review](#), 27 August 2014]

Questions raised about a clinic offering stem cell treatment using fat from liposuction [[ABC 730 Report](#), 16 September 2014]

Stem cell treatment for AFL players draws medical and market criticism [[ABC 730 Report](#), 6 October 2014]

Tendon grown in lab [[Herald Sun](#), 7 November 2014]

New stem cell opens door to regeneration [[The Australian](#), 11 December 2014]

Researchers identify stem cells that can be reprogrammed [[The Age](#), 11 December 2014]

'Grow your own' body parts a step closer after stem cell breakthrough [[The Age](#), 11 December 2014]

Toronto-led international research team makes stem cell breakthrough [[The Globe and Mail](#), 10 December 2014]

Pioneering Toronto scientist continues to demystify stem cells [[The Star](#), 11 December 2014]

Financial Statement

Financial Statement For Calendar Year January To December 2014

STEM CELLS AUSTRALIA	2014	Total
ARC Funds	3,385,555.92	11,336,301.92
Other Contributions	2,174,226.50	6,335,353.20
Total Income	5,559,782.42	17,671,655.12
Salaries and oncosts	2,730,967.29	9,688,835.85
Consumables and other costs	2,062,977.40	5,908,702.99
Total Expenses	4,793,944.69	15,597,538.84
Net Activity for the year	765,837.73	2,074,116.28
Carry over balance	1,308,278.55	
Balance at 31 Dec	2,074,116.28	2,074,116.28

I certify that:

a) The figures reported above are true and correct in every particular to the best of my knowledge and having made all due enquiries.



Jay Solanki

Research Accountant
Finance & Planning Group

02/04/2015
Date

Finance & Planning Group

The University of Melbourne, Parkville Victoria 3010 Australia
T: +61 3 8344 4000



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