



Society for
**Reproductive
Biology**

Dec 2020 edition

HIGHLIGHTS

LOOKING FORWARD TO SRB 2021

After a challenging year, we are all very much looking forward to convening for SRB's annual meeting in Melbourne, Nov 21-24 2021. [Further details on page 4.](#)

CONGRATULATIONS TO AWARD RECIPIENTS

We celebrate our 2020 SRB Virtual Award Winners. Read our Q&A feature article on SRB's 2020 Newcastle Emerging Leader in Reproductive Biology, Dr Elizabeth Bromfield. [Further details on page 9.](#)

Inside this issue

President's Report 2

Membership 5

Virtual Awards 6

Communications
report 14

Secretary's report 19

ALSO IN THIS ISSUE

· Celebrating a SRB
superstar, A/Prof
Karla Hutt 16

· Welcome to new
council members 20

· Farewell to A/Prof
Kirsty Walters 22



As 2020 comes to a close I am happy to yell 'good riddance'. 2020 has been a really tough year. Many of you were in lockdown for months, forced to deliver teaching online, juggle home schooling, and grant funding felt even harder to come by. For SRB the need to cancel the annual conference was very disappointing. Despite this, SRB has stood firm and its members continue to make great contributions at home and across the globe. Thank you to the SRB council who burned the midnight oil to make the award session happen and keep the society on a good footing. Thank you to senior members and early career researchers who continue to politely remind governments, funding agencies and our own universities and institutes that reproductive biology is a core area of the health and agriculture sector and of relevance to virtually every Australian. Thank you to our post-graduate students and post-doctoral fellows who produce the data and make the discoveries that make our jobs so enjoyable.

Thank you to everyone who took part in the online awards sessions. It was by any measure a huge success. As outlined elsewhere in the newsletter, the presentations were of a spectacular standard. If you are looking to relive part of the day, Michael Bertram will be representing SRB as part of his David Healy Award at Fertility 2021 which will be held online January 6-10th (<https://fertilityconference.org/>).

Congratulations also to our two new SRB Fellows: Simon de Graaf and Mark Green. Both have made major contributions to the field and the society. Stand by for the announcement of life members early in the new year.

I feel hopeful 2021 will be an easier year. Australia is a brilliant place health wise. The universities are coming back to life, admittedly with wicked budget challenges, but at least in some universities there is a concerted effort to shield early career researchers where they can. We are in reality going back to the future where it is likely researchers will need to do teaching as part of their day-to-day job i.e. academics in the true sense of the word. I personally don't think this is a terrible move ... the challenges around research funding however is another matter.



I am also pleased to report that the SRB finances are slowly creeping back to where we were pre-pandemic (103% of March 2020 level, and 99% of Dec 2019 level) and planning for the 2021 annual scientific meeting is well underway. The meeting will be held November 21-24th with our partners ESA and ANZBMS. We are currently in discussions about whether this should be in-person only or a hybrid meeting. As requested at the AGM, a working group has been established to calculate the costs and risks of various scenarios related to the pandemic. The World Congress of Reproductive Biology is still slated for September 2021 in Beijing. We will keep the membership up-to-date about our involvement.

Thank you again for your ongoing support of SRB. I, and the whole council, wish you a restful holiday season and a very successful 2021.

*Professor Moira O'Bryan
President*

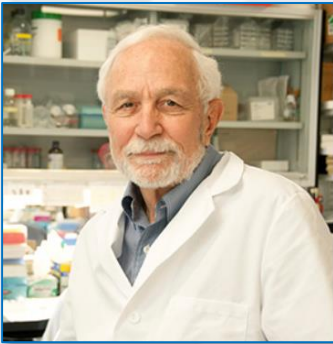




The 2021 SRB conference will be held at the Melbourne Convention and Exhibition Centre, 21-24 November 2021, in partnership with Endocrine Society of Australia (ESA) and the Australian and New Zealand Bone and Mineral Society (ANZBMS).

The plenary speakers for the 2021 SRB meeting are:

Bruce Murphy



University of Montreal,
SRB President's Lecturer

Neil Gemmell



University of Otago,
SRB Founders' Lecturer

Sarah Kimmins



McGill University,
SRB-ESA joint lecturer

We look forward to connecting with you all in 2021
at Melbourne Convention and Exhibition Centre.

SAVE THE DATE
ESA-SRB-ANZBMS
21-24 November 2021





The total number of members as at November 2020 was 350, up by 60 members since March 2020. This is no doubt in part due to people renewing their memberships for the Virtual SRB conference in September. If you have not already done so, please renew your membership and support our Society.

Benefits of being a SRB member:

- Access to the premier organisation representing the interests of reproductive scientists throughout Australasia
- Invitation to attend the annual conference
- Subsidised conference registration fees
- Access to e-mail news
- Subscription to the Newsletter published bi-annually
- Eligibility for awards
- Eligibility to nominate for committee positions
- Reduced subscription fees to Journal of Reproduction, Fertility and Development
- Membership in Science and Technology Australia (STA)
- Eligibility for discounted affiliate membership with SSR

Additional benefits for student members:

- Eligibility for travel awards to attend the Annual Scientific Conference
- Eligibility for awards
- Eligibility to nominate for student representative committee position

JOIN/RENEW here <https://www.srb.org.au/join-srb>

**We thank current members for your support
of the Society in these testing times.**

*Kylie Dunning
Membership Secretary*

SRB VIRTUAL AWARD SESSION SUMMARY



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Despite having to cancel our 2020 Annual meeting, we were thrilled to be able to run our SRB Virtual Award sessions in conjunction with our sponsors! Across four consecutive days, 8th-11th September, we had 22 outstanding presentations from finalists for our award sessions, including both students and early career researchers. Award finalists and winners (★) are listed below:

David Healy New Investigator Award	ANZPRA New Investigator Award	ART lab solutions Gamete and Embryo Award	Newcastle Reproduction Emerging Research Leader Award
Anya Arthurs (Flinders Uni)	Lucy Bartho (Griffith Uni)	★ Urooza Sama (Monash)	★ Elizabeth Bromfield (Uni Newcastle)
★ Michael Bertram (Swedish University of Agricultural Science)	Sonia Tamanna (Uni Newcastle)	★ Tiffany Tan (Uni Adelaide)	Juneo Silva (Federal University of Minas Gerais, Brazil)
Natasha de Alwis (Uni Melb/Mercy)	Daniel McKeating (Griffith Uni)	Samuel Cheers (Monash)	Cassy Spiller (Uni Queensland)
Osezua Oseghale (RMIT)	Gabrielle Crombie (Uni Newcastle)	William Stocker (Monash)	Jessica Stringer (Monash)
Luciano Cardoso Santos (State Uni, Santa Cruz)	Carole-Anne Whigham (Uni Melb/Mercy)	Yasmyn Gordon (Robinson/Uni Adelaide)	
Natalie Trigg (Uni Newcastle)	★ Meaghan Griffiths (Monash)	Roisin Griffin (Uni Newcastle)	

The organising committee would like to extend their gratitude to our wonderful sponsors, and the ASN team for helping with the abstract platform and publicising our event.

We are pleased to announce that these, and many additional awards will be up for grabs at the 2021 meeting in Melbourne. Check out our website for further details!

NOTE that there are 6 month membership requirements for some of our awards, so we encourage you to sign up now if you are not already an SRB member!



2020 DAVID HEALY NEW INVESTIGATOR **WINNER!**

Michael Bertram, Swedish University of Agricultural Sciences



Michael is a behavioural ecologist and ecotoxicologist, who completed his PhD at Monash University. His presentation for this award was focussed on impacts of pharmaceutical contaminants on reproduction in fish populations. He is currently based at the Swedish University of Agricultural Sciences (Umeå, Sweden), where he uses both lab- and field-based approaches to uncover environmental effects of pollution.



2020 ART LAB SOLUTIONS AWARD **WINNER!**

Urooza Sarma, Monash University



Urooza is a PhD Candidate at the Monash Biomedicine Discovery Institute, supervised by A/Prof Karla Hutt and Prof Kenneth Beagley (QUT). Her project is focused on understanding the impact of Chlamydia infection on ovarian structure, function and oocyte quality. Urooza's passion lies within the fields of reproductive biology and immunology, and she is always keen to talk more about either or both and learn from the best!





2020 ART LAB SOLUTIONS AWARD **WINNER!**

Cheow Yuen (Tiffany) Tan, Robinson Research Institute

Tiffany is a final year PhD student in Prof Jeremy Thompson's Early Development Group at the Robinson Research Institute, University of Adelaide. Her primary supervisor is Dr Kylie Dunning. Tiffany's research focuses on assessment of embryo health, particularly metabolism and aneuploidy, using non-invasive light-based technology.



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2020 ANZPRA NEW INVESTIGATOR **WINNER!**

Meaghan Griffiths, Monash University

Meaghan is a 3rd year PhD student at the Biomedicine Discovery Institute at Monash University. She is supervised by A/Prof Karla Hutt and Dr Amy Winship. Meaghan's work focuses on characterising the long-term and off-target impacts of cancer therapies on the uterus and its ability to establish and maintain a healthy pregnancy.



ANZPRA

Australian and New Zealand Placental Research Association



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MEET DR ELIZABETH BROMFIELD



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Dr Elizabeth Bromfield (University of Newcastle and Utrecht University, The Netherlands) is this year's *Newcastle Emerging Leader in Reproductive Biology Award* winner. Liz was also awarded an ARC DECRA Fellowship in the 2020 round. Our ECR reps organised a Q&A session with Dr Bromfield to learn more about her research journey.



Q1) What made you choose a career in reproductive biology?

I pursued a career in science in general because my brother (a physics teacher) took the time to teach me simple science experiments as a kid and I was fascinated. My niece is also an ICSI baby and this spurred my interest in reproductive science. Mostly, however, I credit the influence of Brett Nixon, Shaun Roman and Eileen McLaughlin during my undergraduate degree. I was lucky to have many exceptional reproductive biologists as lecturers and I was drawn in by this. At the time I started my PhD, I wanted to work on assisted conception strategies for endangered species. Although my research has taken other directions, I have been fortunate that Brett has always done fantastic work in this space and in the past, we have setup temporary 'camping labs' all over Australia to study sperm maturation in koalas, wombats and crocodiles. We are lucky in Australia to work in such a supportive, interesting and inclusive field.

“ I strongly believe that reproductive researchers in Australia build each other up, celebrate other's wins and collaborate, rather than compete.”

The SRB has facilitated much of this community building within our field and I am grateful to be a part of it.

Q2) What do you feel has been essential in ensuring your fellowships successes?

Like most 'wins' in academia, there has certainly been an element of 'right place, right time' for my fellowship applications. However, I have received some great advice over the years. I am quite strategic

MEET DR ELIZABETH BROMFIELD



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about what I apply for and when. I spend a lot of time carefully benchmarking my CV against those of previous, successful applicants and I only apply for grants that I feel I have a reasonable chance of attaining.

I was also told a few years ago that it is important to accentuate what is unique and timely about your application. i.e. why should the government be investing in your research and why 'now', specifically? I try to get 2-3 people to read my applications, including someone from outside the field. I emphasize the international collaborations that I have and seek out new collaborators for each grant application. I try to think about how to use techniques or methods in my applications that are not common in our field yet.

“Above all else, I think it is the incredible mentorship that I have received that has equipped me with awareness of the schemes available to me and the most strategic times to apply.”

Without this awareness, and the occasional push out of my comfort zone, I would not have been prepared enough to spend adequate time on my applications.





Q3) What advice would you give to up and coming ECRs?

TIP#1 Support those at the same career stage as you

I have received such amazing peer-mentorship from my colleagues at UON over the years. We work extremely hard to support each other's careers, put each other's names forward for opportunities, coach each other, celebrate wins and losses and most importantly, laugh about how trying this career can be at times. The more support you give, the more time you will spend celebrating.

TIP #2 Be comfortable with being really bad at things

I think getting comfortable with owning your own mistakes and shortcomings is one of the most confronting and difficult things I have learned (first as a PhD student) but also one of the most beneficial. By its very nature (the fact that your research is focused on the new and unknown), science has to be about getting things wrong and improving on that. Often that exposes your own insecurities or lack of knowledge/skills in a certain area. This is not a nice feeling but I have found that as I become more comfortable being bad at things, and doing them anyway, I am more likely to take risks, learn new skills and I am a better teacher/supervisor too.

TIP #3 Take a long hard look at how you spend your time

Learning to lock in my lab and writing days each week before agreeing to any meetings was an important step in improving my time organisation. We also have a well-known saying in our lab 'land your closest jets' (probably from a ThinkWell PhD session) which a lot of us have carried through our early careers. It sounds simple, learning to complete the thing that is most complete first, but it's a gem and I use it every day to focus my attention.

"land your closest jets"



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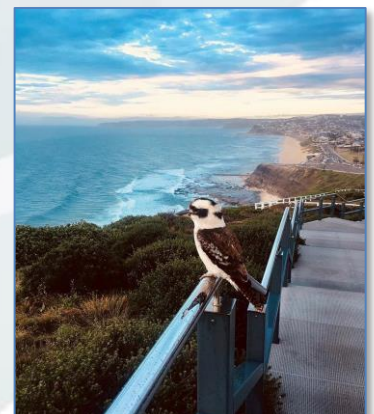
Q4) How do you deal with the pressures/stress of a career in research/academia?

In the first few years of my postdoc at Newcastle, I struggled with leaving at the end of the day. I always felt like I hadn't achieved enough and I had to sit there until I had. While I don't have a fool-proof solution to that problem, I have become better at leaving documents half finished when I need to (this still physically hurts me), planning my next week on Friday and walking away, and prioritising myself and my time outside of work. There were two things that really catalysed this change for me:

- 1) I realised that despite my best efforts, I was not being a good role model. While I was telling my students that they should be leaving work at 5pm when possible and taking time for themselves, I wasn't demonstrating this behaviour very well. I'm sure seeing my light still on in the office didn't make them feel like they could just leave when they were done and enjoy the afternoon.
- 2) I was asked in a career workshop to write my own eulogy. It has never been so clear to me that 'Liz published x number of publications and achieved \$\$ in grant funding' was not going to cut it! While I still work very hard and I am very focused on my career, I now think very carefully about how I use my time outside of work and I value this time.

And what do you do to de-stress?

In Newcastle, I would swim in the ocean each morning before work. I always prioritised my time in the mornings for only the things that I liked to do, even if that meant starting work a bit later. Now I go for walks in the forest when I'm stressed and I'm an obsessive list maker and use Trello to organise my life. If I get it out of my head and on to a piece of paper/list then I can manage. Turning off my email notifications permanently was also a game changer for me.



Courtesy of Liz Bromfield



Q5) How does the experience of being an ECR in Australia versus Europe differ? What have been the benefits or drawbacks of each?

I think one of the biggest things that I have noticed actually relates to work vs life commitments. The first thing my European colleagues do each year is NOT block out time in their diaries for grant writing, it is blocking out time for their summer holiday! I have learnt that a holiday is not going to a conference in Italy with a few extra days to explore and 'relax'. A holiday is going to Italy...because you want to. My colleagues are still high achievers and hard workers but they prioritise their life and their families first. It has been important for me to experience this.



Courtesy of Liz Bromfield



The other big thing is the structure/expectations of PhDs and postdocs. In general, PhDs are much longer in The Netherlands (5 years on average) and the postdoctoral period is generally funded through a supervisor, or several, for a long time rather than through independent funding attained by the ECRs themselves. This means that independence comes a bit later than for Australian ECRs but the training period is excellent and extensive and provides a bit more freedom for creativity and pursuing high risk ideas.

“SRB have been an incredible support, and that support has always been given freely, without any prerequisite achievements. I am incredibly proud to receive the 2020 SRB Newcastle Emerging Leaders Award. It really has provided some tangible validation that my consistent effort does pay off.”



SRB 2020 Virtual Awards and Happy Hour

These awards were a highlight of the year for many SRB members, given we could not meet face-to-face. We were active in promoting the award sessions on social media in early September, as well as the SRB Virtual Student Meeting. We also featured the winners for each award in a series run on both Twitter and Facebook over two weeks following the awards. These received a lot of interest on these social media platforms. On the Friday following the award sessions, we also ran a 'Virtual Happy Hour' on Zoom, with Kelly and Tu'uhe providing the entertainment. We are hopeful that we will all be able to meet in person in Melbourne in 2021! *For more on the award winners, see page 6.*

SRB MRFF Submission

Moira & Kelly (along with fellow SRB council members) prepared a submission to the Medical Research Future Fund (MRFF) consultation to inform the third Australian Medical Research and Innovation Priorities for 2020-2022. This was important to highlight SRB's commitment to working with the government in developing research priorities, and to shine a spotlight on the importance of reproductive health as one of these priority areas. *We have provided this submission at the end of this newsletter.*

Showcasing SRB Research Articles and Members on Social Media

We have heavily promoted SRB members and their achievements over the past few months. This has included incoming committee members, recently awarded SRB Fellows, and successful grant recipients. We are also continuing to highlight recent publications by SRB researchers. We encourage all SRB council members to tag SRB (@ReproductionSRB) in their Twitter feeds, and to contact either Lisa or Kelly if you would like us to showcase your recent paper or event.





SRB Website

We are always looking for new reproduction-themed, scientific images to feature in the rotating banner images on the website – please send through your high-resolution images for consideration. Feedback on the functionality of the webpage is also welcome. You will find the webpage here: <https://www.srb.org.au/>



Image: trackvia.com

Written by Lisa Akison and Kelly Walton

TEAM HUTT CELEBRATES A SUCCESSFUL YEAR IN RESEARCH!



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Associate Professor Karla Hutt is an ovarian biologist from the Monash Biomedicine Discovery Institute and is celebrating a hugely successful year in research. In the past 12 months, her team has published 10 manuscripts, been awarded two ARC fellowships, and several of their lab members took out SRB's 2020 coveted annual awards. This winning streak started with Karla receiving an ARC Future Fellowship in 2019, in recognition of her outstanding research achievements through the early stages of her career. These highly contested ARC mid-career fellowships (5-15 years post-PhD) are awarded to up to 100 researchers each year, undertaking high quality research in areas of national and international benefit. We spoke to Karla about her research journey, and the factors that led to her recent successes.



Planning has been really important in team Hutt's research strategy.

Planning has been really important in team Hutt's research strategy. One of the pivotal career moments for Karla was in 2017, when she was awarded the Monash BDI Outstanding Women in Science Fellowship. In preparing her fellowship application, Karla put together a cohesive five-year research plan that included both big and small picture projects, research personnel and collaborators, and targeted publications. Receipt of this fellowship provided Karla with the funds and strategic plan to advance her research success. Karla emphasised that this fellowship came at a crucial point in her career.

TEAM HUTT CELEBRATES A SUCCESSFUL YEAR IN RESEARCH!



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Mentors have also played an integral part in Karla's career progression and research success. Karla emphasised that it was important that these mentoring relationships were formed '*organically*', and that having multiple mentors, and at varied career stages is really the best approach. Karla has been mentored across her career by male and female mentors both within and outside of her work place, by both discovery and clinical researchers. She also emphasised that getting career advice from a mentor just one academic step ahead can be really valuable.

SRB has played a big role in Karla's research career, providing both research and peer connections across her career. The annual SRB meeting is a yearly highlight for the Hutt team, and Karla is continually impressed by the quality of the work presented by the SRB community. In this year's SRB Virtual Award sessions, her PhD students Meaghan Griffiths and Urooza Sama won the ANZPRA New Investigator Award and the ART lab solutions Gamete and Embryo Award, respectively. An outstanding early career researcher in her laboratory, Dr Jessica Stringer was also a finalist in the Newcastle Reproduction Emerging Research Leader Award session. In addition to these SRB's success stories, Dr Amy Winship was awarded an ARC DECRA Fellowship in the 2020 round. Karla said that:

“One of my biggest career highlights is celebrating the successes of my postdoctoral researchers and students.”



TEAM HUTT CELEBRATES A SUCCESSFUL YEAR IN RESEARCH!



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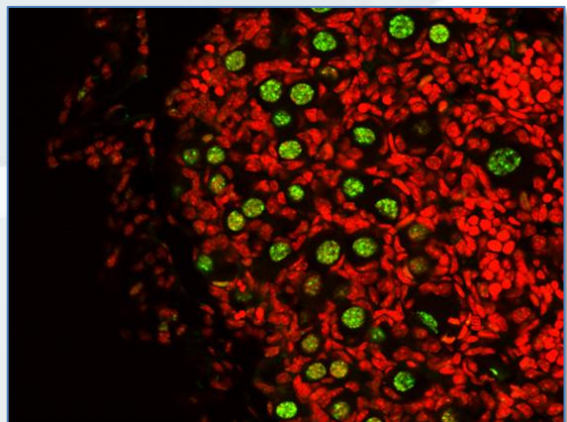
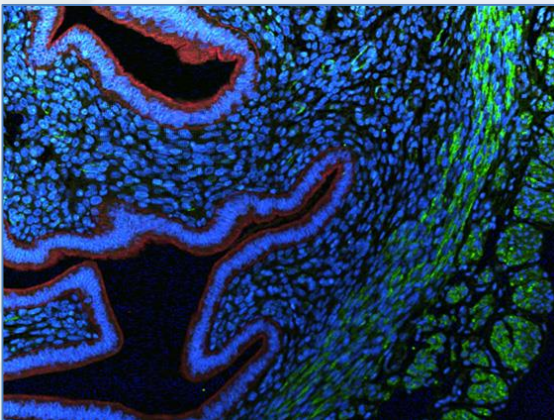
But the journey hasn't been without its challenges, and Karla acknowledges the rejections and failed research attempts along the way. *"It hurts, and you need to give yourself a chance to wallow before refocusing on your work. Every failed grant has been much improved following reattempts, it really does push you outside of your comfort zone to design an improved research plan."* Karla's advice for early career researchers was to "be resilient", and to:

"...put one foot in front of the other and just keep going. Sometimes to succeed in research you need to be the last one standing after the failed attempts."

Karla's team focuses on understanding the regulation of oocyte numbers and quality in the ovary, in order to improve the health and fertility of women during ageing and following anti-cancer treatment or infection. They also examine whether cancer treatments can damage the uterus and impair a woman's ability to support the baby during pregnancy.

Find out more about her team's fascinating research here:

<https://www.monash.edu/discovery-institute/hutt-lab/home>



Written by Kelly Walton



This year saw the positions of President Elect and one ordinary Council member up for election. We are very excited to welcome Professor Brett Nixon as the Society's President Elect. We also extend a very warm welcome to Dr Geoffry De Iuliis (University of Newcastle) and Dr Kelsey Pool (University of Western Australia) who both join Council as a result of our tied election. Geoff has transitioned into the role of Conference Secretary and Reproduction, Fertility and Development Liaison while Kelsey will establish a new portfolio in her role as Exotic Species Liaison. On behalf of the Society, we extend a very warm welcome to you all and look forward to working with you over the coming years. We also extend a huge congratulations to Dr Jessica Dunleavy (The University of Melbourne) who has joined Dr Dulama Richani as our ECR representatives as well as Shenae Cafe (University of Newcastle) who has joined Meaghan Griffiths as our Student Representatives. The Society is also very grateful to Professor Jeremy Thompson for his willingness to continue in the role of Public Officer for a further 12 months.

We are also indebted to those whose terms on Council have come to an end. These include Associate Professor Tu'Uhe Kaiu'u-Lino (Conference Booth Secretary / RFD Liaison) who we are very fortunate to have join our POC, Dr Amy Winship (ECR Representative) and Saije Morosin (Student Representative). On behalf of the Society we wish to thank each of you for your outstanding contributions to Council over many years.

Well, that's all from me for the time being, but I would like to wish you all a happy and healthy holiday season and safe new year. See you all (hopefully in person!) in Melbourne in 2021.

Best wishes,

David Sharkey
SRB Secretary

MEET incoming SRB council members



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**Dr Geoff De Iuliis, Senior Lecturer,
School of Environmental and Life
Sciences, University of Newcastle**

Using his training in chemistry, Geoff investigates the molecular nature of oxidative stress in sperm and the loss of function that usually results as a consequence. Geoff also has a strong reputation as an educator across the Hunter Valley region and has trained many undergraduate and postgraduate students in reproductive biology and andrology throughout his career. *Geoff is the Conference Secretary/RFD Liaison on council.*



**Dr Kelsey Pool, Research Associate,
School of Agriculture and Environment,
University of WA**

Kelsey currently holds the Lefroy research fellowship at UWA, having completed her PhD with the Animal Reproduction Group, The University of Sydney. Her research aims to both contribute to a better mechanistic understanding of reproductive biology in livestock whilst providing tangible benefits to animal production. Her work has led to the commercial implementation of melatonin as a strategy to improve reproductive efficiency in Australian sheep production. *Kelsey takes on the new role of Exotic Species Liaison on council.*

MEET incoming SRB council members



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Dr Jess Dunleavy, School of BioSciences, The University of Melbourne. Following the completion of her PhD in 2018, Jessica commenced her postdoctoral research in male fertility alongside Professor Moira O'Bryan. Her research focuses on cytoskeletal dynamics during male meiosis, sperm flagella formation and sperm head shaping. As a new *SRB Early Career Researcher Representative*, Jessica is excited about the opportunity to serve both her SRB peers and contribute to SRB initiatives.



Shenae Cafe, Priority Research Centre (PRC) for Reproductive Science, University of Newcastle. Following the award of her Bachelor of Biotechnology in 2017, Shenae joined the PRC as research assistant before undertaking her PhD. Shenae's PhD project focuses on protein homeostasis during germ cell development. As a new *SRB Student Representative*, Shenae is enthusiastic about supporting her peers through their research journeys. Shenae believes that not all heroes and heroines wear capes....some wear lab coats!

FAREWELL TO KIRSTY WALTERS!



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As many SRB members would be aware, A/Prof Kirsty Walters has recently relocated to the UK. While she has maintained her ties to Australia with an Adjunct position at the UNSW and multiple collaborations, she will be greatly missed by her SRB family.

Kirsty's research examines the role of androgens in regulating female fertility and the development of polycystic ovary syndrome (PCOS). Her findings have paved the way for development of therapeutic targets and approaches for treatment of female infertility and the wide range of health issues associated with PCOS. Her research is a great example of how animal work can inform clinical practice.

Kirsty has a long history with SRB. She became a member in 2005 and was awarded the Young Investigator Award in 2006. She received the Newcastle Emerging Research Leader Award in 2015, the Visiting Lecturer Award in 2016, the RFD Publication of the Year Award in 2017 and the Robinson Research Institute Award for Excellence in Reproductive Biology Research in 2019. Kirsty was on SRB Council from 2013-2016 and co-chair of the POC for the annual meeting from 2016-2018.



This is what a few of the SRB members have to say about Kirsty:

"Kirsty was...always willing to say 'yes' and help others. She reminded everyone that even if science has its ups and downs, it is as much about the people you work with and having fun, as it is doing great science..." Dr Mark Green (U Melbourne)

"Kirsty totally blew me away with her presentation at WCRB in Japan! I have now incorporated her research into my 3rd year course at UQ and the students love it! She is an incredible role model for women in research..." Dr Lisa Akison (UQ)

"Kirsty is a source of inspiration for me...she has always been a great friend, an amazing role model for all ECRs but especially women, and a kind supporter of so many! I have loved 'growing up' with her in the SRB family."

A/Prof Natalie Hannan (U Melbourne)

"I have many fond memories of working with Kirsty on the POC. She has an energy and enthusiasm that is contagious, and made this challenging job one of the highlights of my career...SRB is lucky to have her as one of our own."

Prof Brett Nixon (U Newcastle)

"...one of the highlights of the year is catching up with Kirsty at SRB's annual conference. Kirsty is an outstanding scientist and wonderful friend. It's been a blast sharing all the highs and lows of this challenging career with her!" A/Prof Karla Hutt (Monash)



We wish Kirsty every success and happiness in her new life in the UK!!

Compiled by Lisa Akison



SSR recently hosted an outstanding virtual symposia series on ‘**Solving Challenges in Contraceptive Discovery and Innovation**’. This was presented in partnership with the International Society of Endocrinology (ISE) and supported by the Bill and Melinda Gates Foundation. Prof Darryl Russell co-chaired one of the symposium sessions.

There were three sessions presented over three weeks:

- Session 1: Novel Contraceptives Targeting Sperm Development and Function
- Session 2: Male Contraceptive Development Targeting Spermatogenesis
- Session 3: Non-Hormonal Female Contraceptive Strategies

Each session comprised a keynote speaker, followed by 6 shorter presentations chosen from submitted abstracts. These included researchers from the USA, Argentina, Brazil, Canada, Nigeria, Peru and Australia, with Doan Thao Dinh presenting her work from her PhD on progesterone receptor-regulated mechanisms controlling ovulation (Russell/Robker Lab, Robinson Research Institute, University of Adelaide).

Highlights included the keynote presentations by Prof Martin Matzuk from the Baylor College of Medicine (USA), Dr Patricia Cuasnicú from the Institute of Biology and Experimental Medicine (Argentina) and Prof Diane Duffy from the Eastern Virginia Medical School (USA).

If you are an SSR member, all talks from this series are available online as webinars from the following website: <https://www.ssr.org/news-events/ssrcontraceptive>

The SSR virtual seminar series coincided with the recent release of a special issue of *Biology of Reproduction* featuring ‘Contraceptive development: past, present and future’. This issue presents the latest research into predominantly male-targeted contraceptives, but also non-hormonal female contraceptives. You can check out this series here:

**BOR Contraceptive Special Issue,
Volume 103, Issue 2, August 2020**
<https://academic.oup.com/biolreprod/issue/103/2>

Written by Lisa Akison



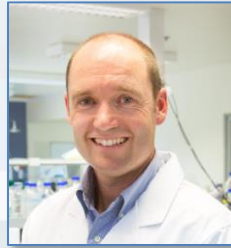
SRB COUNCIL



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Dr John Schjenken
POC Co-Chair



Dr Shaun Roman
Fellows/Life Member/
Plenary Lecturer



Dr Kelly Walton
Public Relations/Website



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Awards/Sponsorship



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Livestock Sector Liaison



Dr Lisa Akison
Communications Secretary



Dr Jessica Dunleavy
ECR Rep



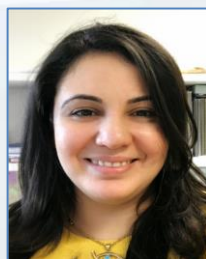
Meaghan Griffiths
Student Rep



Shenae Cafe
Student Rep



Dr Geoff De Iuliis
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Dr Dulama Richani
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Prof Jeremy Thompson
Co-Opted Member/
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Dr Kelsey Pool
Exotic Species Liaison

Response ID ANON-QZ7X-DDDJ-G

Submitted to **Medical Research Future Fund consultation to inform the third Australian Medical Research and Innovation Priorities 2020-2022**

Submitted on 2020-10-07 10:27:15

Introduction

1 Full name

Full Name:

Moira O'Bryan

2 Submission type

Organisation affiliated

3 Organisation type

Non-government

4 Organisation sub-type

Other

5 Residential state or territory

Victoria, New South Wales, Australian Capital Territory, Queensland, Northern Territory, Western Australia, South Australia, Tasmania

6 Do the current Priorities remain relevant in the contemporary environment for continuation for a further 12 months?

250 word limit:

The current priorities remain relevant however they fail to accommodate the urgent need to address medical conditions related to reproduction and fertility. The Society for Reproductive Biology (SRB) is committed to working with government as a trusted partner to develop such priorities and to facilitate scientific excellence. Our goal is to have an enduring positive impact on the reproductive and long-term health of all Australians. The combined issues of infertility, pregnancy disorders, and fertility control affect most Australians and, as such, future MRFF programs should accommodate potential mothers, fathers and children.

The inclusion of reproductive disorders will synergise with existing priority areas including:

1. 'Global and Health Security' through the ability to leverage strategically important partnerships with international consortia and funding bodies including, but not limited to: the World Health Organization, the Oncofertility Consortium, the International Male Infertility Genomics Consortium, the Male Reproductive Health Initiative, the Male Contraceptive Initiative, and the Bill and Melinda Gates Foundation.
2. 'Aboriginal and Torres Strait Islander Health' through collaboration with Indigenous communities to provide culturally and socially trained health care workers to improve family planning and STI prevention and to mitigate future health risk for Indigenous children posed by diseases arising from complications of pregnancy and pre-conception adult health.
3. 'Clinical Researcher Capacity' through the specialist training and deployment of reproductive health clinicians
4. 'Public Health Interventions' to promote for example access to fertility education, disease surveillance strategies, readily available family planning strategies, pregnancy screening, pre-pregnancy advice and post-menopausal support.

7 Should any of the Priorities be emphasised or de-emphasised for the next 12 month period?

If you answered YES, please indicate what specific priorities and why? (max 250 words):

The promotion of healthy ageing is critical. In accordance with health economic data (DOI: 10.1093/humrep/den435), however, we recognise that strategies to establish healthier pregnancies, from higher quality of gametes, will have a larger and sustained impact on the health of Australians and the economy. The data required to develop these strategies is lacking.

We further recognise that the ability to control fertility, either suppression via contraceptives, or promotion, via infertility treatment, are core issues for most Australians. Current approaches do not meet market demand and place a disproportionate burden on females. Conversely, the absence of precise diagnostics for reproductive disorders preclude the development and application of targeted therapies. Further, while assisted reproductive technologies have enhanced the lives of millions, data suggests that they are not without consequences (doi: 10.1097/GCO.0000000000000538). There is an urgent need to monitor the health of children conceived through assisted reproductive technologies, to ascertain the incidence and types of infertility-associated pathology and to develop targeted therapies to minimise off-target effects.

Finally, diseases of the reproductive tract result in death and morbidity in thousands of Australians each year. For example, ovarian and prostate cancer are the 10th and 1st most common cancers diagnosed in Australian females and males, respectively; accounting for >4,200 deaths/year (www.canceraustralia.gov.au). Pre-eclampsia threatens the life and long-term health of ~10,000 mums and babies/year (www.aihw.gov.au/reports/mothers-babies/perinatal-deaths-in-australia-2013-2014/contents/table-of-contents), and endometriosis affects 11% of Australian women (www.aihw.gov.au/getmedia/a4ba101d-cd6d-4567-a44f-f825047187b8/aihw-phe-247.pdf.aspx?inline=true). For each of these conditions, there are fundamental gaps in our knowledge of causation and, as such, avenues for prevention and intervention.

If you answered NO, please indicate what specific priorities and why? (max 250):

8 Are there any unaddressed gaps in knowledge, capacity and effort across the healthcare continuum and research pipeline that would warrant changes to the Priorities?

If you identified a gap, please explain how it should be addressed in the 2020-2022 MRFF Priorities (max 250 words):

Infertility and reproductive health - 'Fertility and reproductive health' is a priority area for the WHO (www.who.int/reproductivehealth/topics/infertility/en/). As outlined above, diseases of the reproductive tract are common, and the failure to control fertility results in great government and personal expense. Key areas of under research and treatment include: male and female infertility (1 in 6 couples); preclampsia; endometriosis; cancers of the reproductive tract and fertility preservation; menopause; the effects of environmental pollutants, stress and age on reproductive function; and the correlation between infertility and morbidity and longevity - the so-called canary in the coalmine hypothesis (doi: 10.1093/humrep/dez189). For each of these areas, opportunities exist for the development of diagnostics and therapies and the dissemination of important health messages. In order to achieve these goals, it is recognised that clinical and biosample resources need to be developed, and fundamental discoveries made to define both the normal and disease state.

Improved reproductive health and preconception care will yield important dividends for maternal and infant health. Data increasingly indicates that the pre-conception health of both the mother and the father, and well as the in utero environment, are critical in establishing offspring susceptibility to chronic disease – the co-called 'non-communicable' diseases. These include metabolic, cardiovascular disorders, neurocognitive, and inflammatory conditions and occur via mechanisms collectively referred to as the "developmental origins of health and disease (DOHAD)". It is therefore critical to define how optimal conception, pregnancy and fetal health is achieved and how environmental exposures, including fertility treatments, impact upon these processes.

If you identified a second gap please explain how it needs to be addressed in the 2020-2022 MRFF Priorities (max 250 words):

A healthy child at the right time – The inability to control fertility has global consequences. On the one hand, the world's population has grown from 1 billion in 1800 to over 7.6 billion in 2018 and will reach 9.8 billion by 2050. Most of this increase is happening in poverty-stricken countries of the Middle East and Sub-Saharan Africa, bringing with it a wave of environmental destruction, disease, poverty and violent conflict.

The development of novel, safe and effective means of regulating fertility is central to the resolution of this problem. The paucity of our current contraception approaches is indicated by the fact more than half of Australia women have had an unplanned pregnancy (www.maristopes.org.au/wp-content/uploads/Real-Choices-Key-Findings.pdf). The technical vacuum in this area is staggering. There have been no radically new methods of fertility control since the oral contraceptive pill was introduced in 1960 and even this contribution to planned parenthood has its roots in the biochemistry of the 1920s and 30s. New methods of fertility regulation are therefore urgently required that not only provide protection against pregnancy, but target sexually transmitted disease. More than 1 million sexually transmitted infections occur globally every day and in Australia both Chlamydia (461% increase) and gonorrhoea (475% increase) infection rates have risen dramatically in the past 20 years, particularly within the indigenous population (www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/indicators-of-australias-health/sexually-transmissible-infections-bloodborne-virus).

The development and provision of such contraceptives will have the added, and substantial, benefits of increased and more equitable reproductive and economic freedom.

9 Is there an opportunity to consolidate the Priorities for the remaining twelve months of the Strategy?

Max 250 words:

No

10 Do you have any additional comments in regards to the Priorities for 2020-2022?

Max 250 words:

No

11 Do you consent to components of your submission being made publicly available?

Yes