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Interview
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Interview

An interview with Dr John Kerr (Jock) Findlay

Dr Jock Findlay is a distinguished scientist at the Hudson Institute of Medical Research in Melbourne, Australia. He also holds professorships at both Melbourne and Monash Universities in Australia. Previously, Dr Findlay headed the Female Reproductive Biology Group at Prince Henry's Institute and served as the Director of Research at the Royal Women's Hospital in Melbourne, Australia. His laboratory investigated how sex steroids, growth factors, and peripheral hormones regulate ovarian function. In his long and distinguished career, he published over 400 manuscripts, several of which appeared in *Biology of Reproduction* [1–5]. Dr Findlay recently won the 2017 Society for the Study of Reproduction Distinguished Service Award. We asked him about his outstanding career and commitment to service.

When did you first become interested in reproductive biology and why?

I grew up on a very large sheep ranch (we call them sheep stations) in outback Australia, near Broken Hill NSW, and spent many hours as a young lad driving behind mobs of ewes with lambs. I always wondered why each ewe had either one or two or sometimes three or four lambs. And the more my father selected breeding stock for fine wool, the later in age ewes started having lambs. One of my other jobs was helping to castrate the male lambs to produce wethers, which produced more wool and meat. These experiences were my introduction to reproductive biology.

How did you become a scientist?

Being a boy from the Bush, I decided to study agricultural science at University. An honors year resulted in my first publication in a peer-reviewed journal after which I was hooked on research. This was followed by a Ph.D. in reproductive physiology, studying estrogen metabolism in the feto-placental unit of the sheep.

What inspired you to study the ovary?

My first postdoc in Australia, after a year in Germany, was with the late Dr Jim Goding who had established a model to study ovarian function by transplanting an ovary into the neck of ewes. This allowed access to the arterial and venous blood supplies to the ovary and facilitated research on the counter current theory of luteolysis of the corpus luteum and the production and actions of estrogens. From sheep, I turned to using rats, then mouse and human ovary.

What is the most important scientific accomplishment that you think you have made so far?

I think I contributed to a paradigm shift in understanding that regulation of the ovary involves not only the actions of peripheral hormones (FSH, LH), but also local actions of growth factors, particularly TGFβ family members, and steroids.

Who are the past and current scientists whom you admire and inspired your research?

Past scientists include Professor Bob Seamark, my Ph.D. supervisor, the late Dr Jim Goding for providing me with such a great opportunity, Professors Henry Burger and David de Kretser at Prince Henry's Institute who took me on and provided a fantastic research environment, and Professor David Baird (University of Edinburgh) for many enjoyable hours discussing why inhibin is so important.

Current scientists who inspired my research include Drs Marty Matzuk, John Eppig, and Teresa Woodruff in the USA, Professor Richard Anderson at the University of Edinburgh, and Professors Rob Norman, Andreas Strasser, and Martha Hickey in Australia.

What do you consider the greatest breakthroughs in the field of reproductive biology and why?

The capacity to sequence, clone, and manipulate genes, especially in mice, and our ability to measure subnanogram levels of hormones and growth factors have allowed significant advances in our understanding of many facets of reproductive biology. In the future, use of techniques like CRISPR/Cas and proteomic analyses will now allow us the test our ideas more elegantly in human tissues. These "breakthroughs" have and will continue to rely on animal models.

What do you see as the future for research in reproductive biology?

We are already moving into proteomes (and the other –omes!) which is essential if we are to gain a complete understanding of reproductive biology. This has to use bioinformatics if we are to go beyond understanding monogenetic control of reproductive function.

What advice do you have for students and new investigators entering the field?

Choose a supervisor/mentor/laboratory with whom you feel compatible and comfortable and which offers the greatest opportunities for you. Learn as many techniques as you can along the way, particularly those that will serve you well in future. The techniques in and the ambience of a laboratory should always be considered together. But ultimately, it is the mentor who is the most important factor.

This year, you received the Distinguished Service Award from SSR. Why do you think scientific service is valuable?

Scientific service allows you to meet and learn about others in your field, not just your peers, and to learn from others as well as contribute to their careers. It is also a way to assist the field that assisted your career. It provides an opportunity for collaboration, which is a very important part of every research career.

Would you enter this career again? Is this a career you would suggest for scientists today?

Yes, I would enter this career again because it has been exciting and rewarding. There is something special about being the first to discover a new fact, albeit not always ground breaking but nonetheless important. If that discovery leads to a translatable outcome that serves a useful purpose, so much the better. I consider myself fortunate in that I had excellent mentors and facilities and a generous research funding environment, despite the fact that early in my career I had only annual grants! We need scientists to continue research on reproductive health (of all animals) if we are to achieve a healthy lifestyle and a stable environment. Hopefully, the current funding crisis will resolve for the better to allow this to happen.

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