

Graduating address to Uni SA, 2010

Pro Chancellor, Vice Chancellor, Academic and non academic staff, Graduands, parents, friends and supporters of the graduates, may I commence by offering all graduates my personal congratulations on your wonderful achievements. You have acquired now formal endorsement of your new status in the field of knowledge.

The ability to learn and the opportunity to learn are gifts. Your graduation today is one significant mark on your career pathway of learning, but only one. Learning must be embraced as a lifelong experience and like all gifts should be graciously received when offered. Your graduation today is evidence that you can not only take the gift and learn but that you can do so with great ability.

Throughout your life you will be presented with opportunities to learn that may challenge you and may indeed scare you. I want to talk a little about this and how I have benefited by taking learning opportunities. I am not talking about structured coursework.

You will be asked to undertake important tasks or responsibilities that will benefit others and from which you will learn but that you may believe are above your abilities. There is a catch. If you think the task or opportunity is above your abilities, you may say no. On the other hand, if you don't think the task is above your abilities you will probably not learn from it.

I believe you need to do 2 things. Firstly, you need to think very carefully before you refuse offers that may stretch you; and secondly make sure that you develop one or more mentors to help you through these decisions.

How have I handled these situations? My own background is as a medical research scientist and after undertaking graduate and post graduate study in Australia I worked in the USA at the National Institutes of Health near Washington on malaria vaccine research. I was fortunate to be in the right place at the right time and my research went very well. When I say that I was fortunate, my good fortune really was to have some very good mentors in Brisbane and Melbourne who had been instrumental in my research training to that time, Professor Chev Kidson in Brisbane and Professors Gus Nossal and Graham Mitchell in Melbourne who had advised me to go to the US and to the particular lab that I went to.

As it happened, the lab that they suggested, run by Louis Miller, arguably today's leading malaria researcher, had just cloned the first malaria protein that was a potential vaccine candidate and Louis Miller had arranged for me to also work with Jay Berzofsky at NIH who had just determined how to map the regions of a protein that were recognised by immune cells, called T cells. That was 1985.

Those particular cells, T cells, we thought, might be critical to immunity to malaria. So my work was to see if we could identify the regions of a malaria protein that might be critical to stimulating T cells and thus to the development of a malaria vaccine. As it turned out we did identify the regions that were recognised by T cells, but our research showed that those very regions were the parts of the parasite that varied from one strain of malaria to another.

Research is very much like that; we had made a very important discovery but it was not the discovery that we had expected. Nevertheless, that research informed and influenced by own research into a malaria vaccine for the following 25 years up until now. We have now developed a new paradigm to think about ways to make a malaria vaccine and this research has excited me so much that I have decided to resign as Director of the Queensland Institute of Medical Research after 10 years in that job to return to the lab in a full time capacity to help me drive this research through to clinical trials.

But getting back to the 1980s. When I was about to leave America to return to Australia in 1988, a colleague offered me the very senior position of Vice President in a new biotech company in the US. It was very tempting, but the advice from my then mentor Lou Miller was to return to Australia. He thought that my main contributions would come not from commercial research but from public benefit research. I listened to his advice and believe that it was the correct advice. I was also keen to raise my young family in Australia which made the decision a little easier. However, I can tell you that the company that I refused is now a billion dollar company and one of the top pharmaceutical companies in the world.

My response to that is that had I accepted the position of Vice President of the company, it may very well have failed. Further being super wealthy was never a career aspiration of mine. So, although I turned this opportunity down, I did so only after seeking advice from a senior mentor.

So I returned to Australia, took up the offer of a Lab Head position at the Queensland Institute of Medical Research and continued my research. A few years later, it was suggested to me by a senior colleague that I might consider leading a bid for a Cooperative Research Centre for Vaccine Technology, still based at QIMR. If successful the Centre would bring in another \$2M per year of Federal funding and an additional \$4-6M of funding from the various partner organisations. I accepted this offer and the bid was successful and the CRC for Vaccine Technology continued over 13 years and led to a number of significant developments. I learnt an enormous amount about vaccine research and research administration which would not have occurred without the prompting of my colleague to take on this role.

One of the vaccines that we progressed was for streptococcal infections and rheumatic heart disease, of which our Aboriginal and Torres Strait Islander populations suffer the highest rates in the world. We are currently in the position of testing that particular vaccine in clinical trials.

The lessons that I learnt from directing that research centre enabled me to consider applying for the position of Director of QIMR. My senior mentor, Sir Gustav Nossal, Director of the Walter and Eliza Hall Institute of Medical Research in Melbourne, was my leading referee and had indicated to me previously that he believed that that was a job that I could do well at. Without his unprompted advice I doubt that I would have applied for the job and if I had applied I very much doubt that I would have been successful.

After being appointed Director of the Institute, I was approached by Professor Bob Williamson, Director of the Murdoch Institute in Melbourne to ask if he could nominate me as President of the Association of Medical Research Institutes, a 40-member grouping of the all the independent Australian medical research institutes, including Child health Research Institute and Hanson Institute here in Adelaide, institutes such as the Peter Mac, the Murdoch, and The Walter and Eliza Hall Institute in Melbourne and the Garvan in Sydney and of course QIMR in Brisbane.

The job would necessitate that I represent the interests of the member Institutes and spend a lot of time lobbying and convincing politicians of the need for extra funding and support for the medical research institute sector. My first reaction was that this was far too much of a

reach for me with my very limited experience at that time of higher level research administration, and at lobbying, but I knew that Professor Williamson would not have asked me if he did not think that I would do the job properly.

I accepted, but with some significant reservations, but learnt an awful lot about research funding and lobbying in Australia and made numerous contacts who have helped me ever since. I grew quickly to enjoy the new challenges. It was an exciting time, and working with others and other organisations, we were successful in convincing the Federal Government of the need to increase the NHMRC budget.

My point is that once again, an opportunity arose that I did not foresee and for which I would have typically felt unable to address, but I trusted the advice of a more senior colleague, and the learning experience was very worthwhile.

Without boring you with the details, similar experiences have happened to me leading to my appointment to Chair the National Health and Medical Research Council and to Chair the Health Stream of the 2020 summit in 2008.

So from my experiences, my advice to you is to work hard in your careers, make sure you are in a position that you enjoy and is rewarding, but be prepared when the opportunity arises to take on bigger challenges. You will learn from the experience and in so doing you will get great satisfaction in your job. Do not fret about opportunities that may or may not come. If you are doing your job well and enjoying it, opportunities will arise. I see many people turn down opportunities and it surprises and saddens me.

If I could offer one more piece of advice, and again this relates to learning, I would encourage you to think about research as a career direction. At the very least, some research experience will change the way that you think about problems that arise in your job. It is always important to have an enquiring mind, and there is such a buzz that comes from discovery, from being the very first person in the world to know some fact, no matter how small, about nature. Australia has a very proud tradition in research. As a nation that produces only 1.6 % of the OECD GDP, we produce 3% of the OECD life science publications. Australia is a great country to do research in.

There are many wonderful research achievements in Australia. Consider, for example, the discovery that a germ was responsible for stomach cancers – the work of Barry Marshall and Robin Warren, opening the way for new and effective treatments and a vaccine to prevent stomach ulcers and cancer. Consider the discovery of a vaccine to prevent cervical cancer – the work of Ian Frazer and colleagues, and much closer to home, consider the public health research here at the University of South Australia by Caroline McMillen looking at the importance of very early life events in setting the course of one's health over a lifetime and of Kerin O'Dea, Robin McDermot, John Lynch and others underscoring the importance of a population approach to the health of the nation and the role diet and nutritional deficiencies in relation to chronic non-communicable diseases such as diabetes – the epidemic of our generation.

This research here at Uni SA has made and will continue to make a big difference to the health and life expectancy of all Australians. It is particularly exciting.

If research is not for you personally, and I readily accept that it is not for everyone, it is important that everyone understands what it can achieve and that everyone supports it. Research is not an 'us and them' thing. Researchers need the strong support of the community and the community needs researchers if they are to make a difference, whether it be in medical research, research in astronomy, agriculture, water quality or any other field of human endeavour.

Another challenge, of course, is that we must also work to convince Governments and philanthropists to support the research fabric of Australia. I have been blessed to have the opportunity to engage with the community and with government in my current job as Director of the Queensland Institute of Medical Research. I have had the rare pleasure of meeting and getting to know billionaires and people not well off but who have been very generous with what they have.

All these people inspire me. Donors give so that they can make a difference. Everything that we do in science and research is as a direct result of the contributions of other Australians - either through taxes or donations. Understanding that we and the community are working as a team is essential, I believe, if we are to be successful. We can do nothing without them; they can achieve nothing in terms of better health through research without us.

What can we do to lift the standing of and support for science in our community and engage more people to support research? My answer to that challenge is that we simply must talk about what we do and why with great passion. It is important that we talk in a language that our audience can understand. If we are not passionate about what we do we cannot expect others to be. If we are, there is every chance that the community will respond. This is a challenge for you.

Finally, graduates, as a parent of children who have recently graduated in different fields let me remind you of something that I am sure that you understand very well - to be always appreciative of your greatest supporters and mentors, your parents and closest relatives. They will always give you straight advice and think only in your best interests. Today is also a day to celebrate their love and achievements.

So I leave you with the promise of even better things to come if you embrace the opportunities to learn and avail yourselves of the rich human capital and resources that surround you. Enjoy the day, and all the very best for many years of great fulfilment.

Thank you.