Interview with John Chalmers, Senior Director, The George Institute

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For those that are not familiar with your name, would you start by introducing yourself?

After obtaining my PhD in cardiovascular physiology I moved to Boston to work at MIT on neurotransmitters in the brain and the effects on blood pressure. From Boston I moved to Hammersmith hospital in London to work in the hypertension clinic and that is where my experience in physiology, neuroscience and hypertension all came together. In my further career my basic research has been on hypertension and minor fundamental experiments on animals looking at neurotransmitters and brain path ways controlling blood pressure.

For about 20 years I was conducting small factorial trials looking at drug combinations in trials designed to see which drugs make good additive independent combinations and which ones did not. I was doing this in Adelaide where I was head of Medicine of the Flinders Medical Center.
After this I came back to Sydney and helped to found the George Institute. Looking back, my research work could be divided into mainly basic neuroscience with some small clinical subsequently followed by more recent focus on large scale trials worldwide.

You have helped to found the George institute in 1999 with the aim of creating a world-class centre for research in global health. In this respect, what would say have been the main milestones and achievements of the George Institute since its establishment in 1999?

The main milestones have been our tremendous growth, which has been more than we predicted, accompanied by outstanding achievements in the quantity and quality of our science.

Other achievements have been setting up George Institutes in China and India. We started off with a lot of work in China and gradually India as well. We rapidly came to the conclusion that for the long term relationship, success and collaboration it was essential to have an independent Chinese organization with local scientists there. Naturally, Chinese workers respond better to senior Chinese scientists than to Australians. For that reason we have appointed Chinese scientists to leadership positions at The George Institute, China.

This process has taken us around five years to bear fruit and today we have an executive and a scientific director of our Chinese operations, (â??The George Institute, Chinaâ?•), which it has its own board and we employ 50 to 60 Chinese workers.

The startup of our office in Hyderabad, India has been a bit more difficult. We are considering moving a part of our business to Delhi, closer to where the action is. Generally it has been more

difficult to recruit Senior Scientists for our Indian operation, but these are now in place.

You are part of a range of top level medical researchers from Australia â??setting off population versus number of top researchers the country hits above its weight. What do you believe makes Australia such fertile ground for medical research?

Good strong academic infrastructure especially in the basic sciences. Looking back 50 to a 100 years, we have seen gradual development of a strong medical research sector with about 20 or 30 major medical research institutes around Australia. This is not a common structure because although they are affiliated with universities they are independently run. The biggest strengths have come from a culture of first class Universities with a large group of independent research institutes.

This countryâ??s biggest weakness however derives from not having a local pharmaceutical industry. There have been a few success stories such as CSL but there is no strong pharmaceutical industry base. This reduces pharmaceutical input into medical research. We may have branch offices but it is the overseas headquarters that generally pump money at product development into universities and research institutes.
In terms of medical research, the pharmaceutical industry invests less because it has less government encouragement. This in turn reflects the lack of a strong local pharmaceutical research base with local product development. This means that medicines are seen almost entirely as a cost, with little counterpart in earning export dollars. If we had a strong local industry such as in the UK, where the government does pay for a national health system, we would in return see export revenues from our own local pharmaceutical industry. Australia needs more export dollars from such value-added industries.

The pharmaceutical industry worldwide has emphasized to government that is needs to be provided with a strong and vibrant academic counterpart upon which it can depend. If the government weakens this counterpart, companies will move elsewhere.

Australia has a strong academic research workforce, which is not supported by an equally strong pharmaceutical and devices arm. Most of the high value technological innovation is developed oversees and imported here.

What could the government do to foster the right environment for the medical and research sector?

We need a positive virtuous cycle that takes a long time to develop. The closest we have come to recognition at government level was the release of the Wills report in 1999. Mr. Wills was a business man with a background in the construction business and government prior to his involvement in the health and medical research sector. In 1996 he chaired a committee, formed by the Minister of Health and Aged Care, Dr. Woolridge, to take on the task of assessing Australiaâ??s health and medical research. I was a member of that committee. We sought to promote a virtuous cycle and the need for research to improve not just better healthcare, better medical practice and health policy but also product development and commercial advancement for the benefit of Australiaâ??s economy. For a while this has led to increase in funding for the National Health and Medical Research Council but this has been difficult to maintain. Having said this, it takes a long time to develop a local pharmaceutical industry. It is not a three year task but probably a two generation task.

However we are strong in the clinical trial environment and close to India and China, with their large population masses. Therefore Australia is not such a bad place to be. It would not come as a surprise if future large drug companies are Asian. In the last 20 to 30 years we have seen Japanese companies emerge. Today a lot of innovation is coming from Japan and undoubtedly China and India will reach a similar level.

Do you see Australia as a destination for innovative companies?

It is a potential but we need to do something different in order to attract them because why would the large Asian pharmaceutical companies not invest in their own countries.

This country needs to be smart in providing technological knowhow, which means providing technical support at the high, clever and value end rather than merely in primary industry such as mining and agriculture. Unfortunately, Australia has not been particular creative in creating new high value manufacturing industries including the pharmaceutical industry, which is critical for medical research. This could be a serious problem for national development in the long term.

We have seen a 34 percent drop in clinical trials conducted in Australia between 2007 and 2010. And getting less attractive due to the strong AUD, how do you rate the attractiveness of Australia as clinical trial center of excellence?

Less attractive than it was due to the strong AUD or because the rest of the world that is catching up on us. For a while we had collaborative networks and links with Asia, which the rest of the world did not have. We have seen in the past that companies came to Australia requesting us the assist them when they wanted to include Asia. Today we see more competitors from other parts of the world doing this through their own networks.

What role do you see for George Clinical in raising attractiveness of Australia as clinical trial center of excellence?

It is fundamental for us; it is a big part of our work and success. We have conducted a large number of landmark studies.

In the progress trial we have demonstrated a 28% reduction in recurrent stroke with the Servier products. We have also conducted the largest-ever study of treatment designed to prevent complications of diabetes. Our trial randomised more than 11.000 patients from 20 countries, in a project focussed on two key treatment targets for people with type 2 diabetesâ??lowering levels of blood pressure and of blood glucose. Results of this study have showed that more intensive blood pressure lowering reduced the risk of death from cardiovascular diseases, as well as the risk of other complications.

Another study conducted by our researchers showed that a widely used intrevenous fluid for resuscitation of patients in intensive care units provided no clinical benefit but was much more expensive than normal saline.

As the George Institute ended its three-year strategic plan 2009 â?? 2011, could you tell is what will be on the agenda for the next three year strategic plan?

Partly more of the same; strengthen our ties with India and China. In the future we will also increase our level of collaboration with the UK. We aim to recruit talented British Scientists, and also to attract British funding for studies in India because, historically, the UK has strong linkage with India.

Moreover, it has always been a motivation for our Institute to get into translation. In the future we want to focus more on translation to health practice and improved health services.

Another aspect we are looking at is if we can harness some of the modern technologies to reduce costs for innovation by for example using e-health and mobile health. Trying to look at ways in which innovation can bring health care to greater number of people at less costs.

If we were to come back in four years to prepare our next report, will we see you here again?

I have just been part of our team that was interviewed for an application for a program grant, which is the biggest form of grant given out by our National Health and Medical Research Council and if that comes through I should still be working here until I am over 80 years old.

After a long and distinguished career in building what would be your piece of advice to a young, high-potential researcher at the start of his career?

Firstly, follow your instincts and secondly, whatever you do, be prepared. Do background work carefully with anything you are doing no matter how small or large the project, always conduct a thorough preparation.

What is you final message to our readers?

That Australia is a good place to invest in. It has got a highly sophisticated workforce and is close to the biggest markets forging strong networks with researchers, and health care providers and policy makers.

It will take a while before it gets to be so per capita, but eventually China, India and Indonesia will be among the largest and leading economies in the world. I believe that Australiaâ??s future lies with integrating with the Asian economy and the Asian culture. For this countryâ??s continuing development it is essential to remain closely networked and integrated into Asia.

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