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Grants boost biotech sector

The government and philanthropists are helping fund important research

PENNY McLEOD

THERE IS optimism about the biotechnology and medical research sector, after nationwide protests by medical researchers earlier this year helped deliver the largest ever investment in grants for health and medical research.

Last month, the federal government announced it was providing \$673.7 million for 1140 grants to support medical research, at the same time as the philanthropic Ramaciotti Foundations awarded \$2.6m to biomedical research professionals.

Continued government, industry and philanthropic funding of health and medical research comes on the back of sustained, long-term growth within the broader biotechnology sector.

But the sector does face challenges, including insufficient government funds for increasing numbers of grant-worthy research projects, and shortages of good medical science graduates and professionals.

"Fundable projects have increased in number but the success rate of projects [getting funding] has decreased," says director of

philanthropy at Research Australia, Noel Chambers.

"As an example, in 2007-08, 27 per cent of the grant applications received funding. But in 2009 that dropped to 23 per cent, and there were even more grants that were considered fundable but were not funded."

Industry association Aus-Biotech's chief executive Anna Lavelle blames skills shortages in the sector on diminishing interest among secondary school students in higher-level science studies and difficulties in keeping the best scientists in Australia. Traditionally inflexible work arrangements that favour full-time employees over part-time workers, and a culture of job insecurity due to the research community's reliance on government grants, have also been cited as deterrents to working in the sector.

However, the sector is thriving, Lavelle says. "It's a fantastic time to be working in the biotechnology sector because this sector is the future. They are all sunrise industries... they are new. They are not [among] the older indus-

tries, which are more stagnant."

Australia has an international reputation for excellence in medical research. Australian medical scientists developed a rotavirus vaccine for children, the first humidity cribs for premature babies and, more recently, the cervical cancer vaccine.

Of the 12 Australian Nobel prize winners since 1915, 10 have received these awards for science; and of these, seven have been for physiology or medicine, with four of these in the past decade.

"We have a good, strong history of Australia's [medical research sector punching] above its weight on an international scale, both in terms of the number of Nobel laureates and research publications," says Chambers.

"The quality of the researchers and the training in Australia is well regarded on an international level and that must be attractive to people wanting to be involved in health and medical research.

"There are also feel-good factors about moving your research towards translatable outcomes [for public health]."

Key biotechnology employers include medical technology companies, government-funded research institutes (such as CSIRO) and universities, and pharmaceutical businesses. Together they employ about 40,000 people.

Australia is the leading location for biotechnology companies in the Asia-Pacific region, with about 450 based here, mostly working in human therapeutics and linked to world-class medical research organisations, according to a recent report by Research Australia, *Shaping Up: Funds and Statistics in Shaping Medical Health*.

In September 2010, there were 151 healthcare and biotechnology companies listed on the Australian Securities Exchange with a combined market capitalisation of \$48 billion. The nation's three largest biotech companies are CSL, which will create 333 new local highly skilled positions by 2018 via an expansion of its Victorian Broadmeadows facility, Cochlear and Mesoblast.

"Medical technology has an essential role in managing the

'The biomedical sector is growing at a great rate'

ANDREW THOMAS
PERPETUAL'S GENERAL
MANAGER, PHILANTHROPY



press clip

health of Australians and is relied upon by billions of people globally to alleviate pain, injury and disability," says Research Australia's report.

Cochlear is the global leader in implantable and acoustic stimulation solutions for the hearing impaired. The company employs over 2000 people worldwide and manufactures and sells systems to more than 100 countries. "For 25 years Cochlear has developed, manufactured and marketed over 120,000 cochlear implants or bone conduction implants worldwide," says the report.

Industry funding of research and development and philanthropy have played an important role in helping launch and cement the success of such businesses.

Philanthropy in particular,

though only a small source of funding compared to government grants and business investment, has helped launch the careers of significant Australian scientists by providing seed funding for new ideas and projects.

One of the largest private contributors is the Ramaciotti Foundations, a charitable trust established by philanthropist Vera Ramaciotti in 1970. Under Perpetual's management, it has granted over \$51m to biomedical research since Ramaciotti's initial \$6.7m investment.

"Since then, the foundations have provided scientists with necessary funds for creative and cutting-edge medical research," says Perpetual's general manager, philanthropy, Andrew Thomas.

"If you look back over 41 years, you get to see the true benefits.

The foundations funded [clinical immunologist and former Australian of the Year] Ian Frazer in the 1980s, with many others, and that led to the cervical cancer vaccine.

"In 1978, when [creator of the cochlear implant] Graeme Clark ran out of funding, the foundations were able to assist with a \$15,000 grant to the engineering resources of what is now [known as] Cochlear Implants."

Last month, the Ramaciotti Foundations granted over \$2.6m to biomedical research, the largest distribution in their history, at their annual awards ceremony in Melbourne. In 2009, three medical research centres in Queensland were given \$102m by philanthropist Charles Feeney to help scientists fight cancer. "The biomedical sector is growing at a great rate," Thomas says.



MICHAEL POTTER

James Whisstock's research team last month won a Ramaciotti Biomedical Research Award