



## Australian scientists say “G’day USA”

**B**uilding and strengthening relationships between the United States and Australia is the mission of the American Australian Association. One way in which this non-profit organization promotes such ties is through its education fund, which awards fellowships to Australians and Americans for advanced research and study in the United States and Australia, respectively (1).

The American Australian Association has awarded Australia to US Fellowships since 2002. The 2009 awardees (Figure 1), who were notified that they received the award in the middle of 2009, each received up

Researching the effects of aging and extended periods of hormone depletion on brain responsiveness to the diverse neuroprotective actions of estrogen and progesterone is the focus of Anna Barron, a postdoctoral scientist in Christian Pike’s lab at the University of Southern California. Women are much more susceptible to Alzheimer disease than men, and postmenopausal hormone changes have been implicated as an important contributor to this differential risk. Barron told the *JCI* that the key questions she hopes to help answer are whether the brain remains

allowing her to “learn from one of the leaders in experimental stroke research.” She is investigating the role of inflammatory mediators in brain injury and neurological function following experimental ischemic stroke in mice. Because inflammation develops in the brain up to several days following stroke, it represents a clinically relevant target for the development of much-needed stroke therapeutics. She has found that since being in the US she has had access to novel, non-commercially available strains of genetically modified mice and to cutting-edge technologies not used routinely in Australia. Not only has access to scientific tools and technologies changed since Jackman came to the US, but she told the *JCI* that one big thing she misses about Australia is space – “What could be a greater contrast to living in Manhattan than growing up on a sheep farm in rural Victoria, Australia?”

One awardee starting work in the US in early 2010 is Marcin Grabowicz, who is set to move from the University of Adelaide to join Tom Silhavy’s group at Princeton University, where he will study the assembly of the outer membrane of *E. coli*. Despite *E. coli* being one of the best-characterized organisms on Earth, surprisingly little is known about how many of the constituents of the outer membrane are assembled. Grabowicz hopes that, because “there is a worrying lack of new drugs against Gram-negative bacteria in the development pipeline,” interfering with the protective outer membrane might prove to be an attractive drug target. He told the *JCI* that although Australia has great strength in infectious disease research, there are fewer groups working on the basics of bacterial cell biology, and that this is a real strength of US researchers. He went on to say, “The Silhavy group is a leader in dissecting outer-membrane assembly, and so the support of this Fellowship allows me a rare opportunity to work at the very forefront of knowledge.” Grabowicz ended by saying to the *JCI*, “I’m excitedly awaiting my US experience, but any directions to places selling Coopers beer would be welcomed . . .”

### Karen Honey

1. American Australian Association. Education program overview Web site. <http://www.americaaustralian.org/education/>.



**Figure 1**

Anna Barron (left), Katherine Jackman (center), and Marcin Grabowicz (right) were each awarded an Australia to US Fellowship by the American Australian Association in 2009. Each of the nine recipients received up to US\$25,000 to support the costs of one year of research and/or study in the United States.

to US\$25,000 to support the costs of one year of research and/or study in the United States. Most began working in their host US institution in the fall of 2009, although a few will begin their projects early in 2010.

Applicants for Australia to US Fellowships can propose research projects in one of a number of fields: business, science, technology, medicine, or engineering. However, applications in the fields of medicine, science, and engineering are particularly encouraged. Indeed, the nine 2009 recipients are all undertaking research in these areas, and their projects include developing multigenic models to predict clinical outcomes in complex diseases, researching the nature and properties of dark matter, studying the dynamics of the adoption of alternative-fuel vehicles, and establishing more viable and sustainable ways of performing chemical transformations.

responsive to hormones as it ages, and whether it maintains responsiveness to hormones after an extended period of hormone depletion. Her view is that answers to these questions could help pave the way for improved design of future clinical trials to effectively translate hormone therapy for the prevention of Alzheimer disease. Barron told the *JCI* that her American Australian Association Fellowship has enabled her to join a highly collaborative interdisciplinary team of researchers and that through this unique opportunity she hopes to develop long-term international collaborations that will help her further her research when she returns to Australia.

Another awardee, Katherine Jackman, a postdoctoral scientist in Constantino Iadecola’s lab at Weill Cornell Medical College in New York told the *JCI* that her American Australian Association Fellowship is