Professor Paul Young has received a US$100,000 Grand Challenges Explorations grant from the Bill & Melinda Gates Foundation.

The grant will support an innovative global health research project conducted by Prof Young, entitled ‘An altruistic vaccine for mosquito transmitted pathogens.’

Prof Young’s project is one of 81 grants announced by the Gates Foundation in the second funding round of Grand Challenges Explorations, an initiative to help scientists around the world explore bold and largely unproven ways to improve health in developing countries.

The grants were provided to scientists in 17 countries on six continents. The initiative is highly competitive, receiving more than 3,000 proposals in this round.

“Mosquito transmitted pathogens such as dengue and malaria are a significant disease burden on society, particularly in the developing world,” said Paul.

He aims to develop a novel vaccine approach based on blocking mosquito transmission of a wide range of diseases rather than the traditional approach of inducing pathogen-specific immunity.

Prof Young’s laboratory has been involved in dengue research for over 25 years and has made significant contributions to our understanding of the biology of this mosquito-transmitted agent, as well as to disease control strategies and improved diagnosis.

“I am thrilled to have received this grant as it will allow us to kick start a new and untested strategy for disease control,” Paul said.

“The winners of these grants are doing truly exciting and innovative work,” said Dr Tachi Yamada, president of the Gates Foundation’s Global Health Program.

“I’m optimistic that some of these exploratory projects will lead to life-saving breakthroughs for people in the world’s poorest countries.”

*(Based on an article written by Travis Taylor, Faculty of Science Engagement Unit)*
Thirteen students recently received prizes ranging from cash to books to membership of professional associations at the SCMB Awards Ceremony for Outstanding Achievement in Undergraduate Studies 2008.

Held on 2 April in the Terrace Room of the General Purpose North 4 Building, the annual ceremony was attended by around 70 guests who witnessed students receiving their awards from sponsors and senior staff of the Faculty.

Professor Christa Critchley, former Dean of the UQ Graduate School, gave the guest address, before those attending enjoyed a cocktail function.

Karl Davy, currently completing Honours in the School, was the recipient of three awards, while Simon Chen and Nicole Maggacis each received two awards.

Assoc Prof Lawrie Gahan and Dr Gwen Lawrie are winners of an Australian Learning & Teaching Council competitive grant for their project IS-IT learning? Online Interdisciplinary Scenario-Inquiry Tasks for active learning in large, first year STEM courses.

Project leaders Lawrie and Gwen are joined by team members Peter Adams (Associate Dean, Academic, Faculty of Science), Kelly Matthews (UQ Science Student Experience Officer), Lydia Kavanagh (School of Engineering), Philip Long (Centre for Educational Innovation & Technology and formerly of the Massachusetts Institute of Technology), and Gabriela Weaver (Purdue University, USA).

The project involves the development of active learning experiences which simultaneously address the diverse needs of the large 1st year chemistry cohorts and engage them in deeper learning. The ‘IS-IT’ tasks progress over a number of weeks, integrated with the lecture program and scaffolded by strategic activities placed within peer-assisted study sessions (PASS). They will be presented online, supported by the IS-IT management system software, allowing students to work on the tasks face-to-face and remotely.

Prof Alastair McEwan and Prof Bostjan Kobe are part of a team that has won a 2010 National Health and Medical Research Council Program Grant worth $9.1m.

The team, led by Prof James Paton at the University of Adelaide, will seek to understand the dynamic interactions between major disease-carrying bacteria and their human hosts, urgently needed to combat bacterial infectious diseases in the 21st century.

NHMRC Program Grants are highly prized because they enable research teams to pursue the best research options in their field, knowing they have the time, funds and flexibility to respond to unexpected findings and opportunities.
Professor Alex Khromykh has been awarded a highly competitive five-year NHMRC Research Fellowship commencing 2009. This follows on from Alex’s prior success in this fellowship scheme. Prof Khromykh’s research laboratory is interested in the replication of flaviviruses, a group of viruses causing outbreaks of encephalitis in humans, birds and animals, and has commercialized technology being used to develop a vaccine for West Nile virus.

Dr James Fraser (pictured left) is the recipient of a NHMRC Career Development Award (Biomedical) for a project entitled Evolutionary events shaping the genome of Cryptococcus neoformans and their effects on pathogenesis. James receives funding for four years from 2009.

Congratulations to Dr Renfu Shao and colleagues, including Assoc Prof Steve Barker, on being published in the 2 April 2009 edition of the leading science journal, Nature.

The ‘Research Highlights’ section of the issue profiles a finding by the group in relation to the mitochondrial genomics of head lice.

Under the heading, ‘Bloody Anomaly,’ the item reads:

Blood-sucking lice are common. Genetically, they are also unusual, say Renfu Shao at the University of Queensland, Australia, and his colleagues. Using information from the Human Body Louse Genome Project, the team found that the mitochondrial genome of the human body louse (Pediculus humanus) is splintered into 18 mini-chromosomes.

Chromosome fragmentation seems to have evolved along with blood sucking: the authors found it in human head and pubic lice, as well as in blood-sucking lice of other primates, but not in related lice that feed on other material. The chromosomal break-up may have been advantageous by increasing recombination between mini-chromosomes and introducing genetic variation that helped lice adapt to a bloody mammalian diet.

Additionally, Assoc Prof Barker was interviewed by GEN magazine (Genetic Engineering and Biotechnology News) about the influence of Charles Darwin on his and Dr Shao’s work on the genomes of lice and ticks and on their paper on the remarkable mitochondrial minichromosomes of the lice of primates. You can listen to a podcast of the interview at http://www.genengnews.com/genCasts.aspx?id=258.
Research Higher Degree students who commenced in the School of Chemistry & Molecular Biosciences in 2008 and 2009 have been most successful in securing scholarships and living stipends.

Around 40 students have been awarded 71 scholarships, living stipends and/or fee waivers administered through the UQ Graduate School, including APA, APIA, IPRS, Smart State and various UQ awards. The figures do not include overseas government and other miscellaneous scholarships.

SCMB Head of School, Prof Alastair McEwan, paid tribute to the School’s top class applicants and researchers and to the RHD support team, led by Assoc Prof Melissa Brown, for its work in preparing nominations.

New RHD students of the School receive a comprehensive induction and can participate in specially designed seminars that cover issues of interest to students, such as post-study career pathways. The School also holds an RHD Student Symposium annually, organised by students, at which prizes are awarded for best poster presentations.

A new Honours and RHD Student Consultative Committee has been formed in 2009, at which student representatives can raise issues on behalf of fellow students, for the attention of senior staff of the School. RHD students have also formed a social committee this year.

Ian Gentle’s and Alex Khromykh’s promotions to Professor were confirmed at the February meeting of Senate.

Federation Fellow Prof Bostjan Kobe has won the Merck Medal for 2009, awarded by the Australian Society of Biochemistry & Molecular Biology. The Merck Medal is awarded to an outstanding Australian biochemist or molecular biologist with less than 15 years postdoctoral experience. Prof Kobe will present the Merck Medal Lecture and receive an honorarium from the sponsor, Merck Chemicals Ltd.

Prof Michael Jennings departed the School 17 April to take up the position of Deputy Director of the Glycomics Institute at Griffith University.

Head of School, Prof Alastair McEwan, said that Mike had been an excellent teacher and graduate student supervisor at UQ for more than 10 years and has an outstanding record in research and commercialisation.

“Over the last three years a significant amount of his time has been taken up as a member of the ARC College of Experts and I think that many of us appreciate the informal advice that he has provided with regard to strategies within the ARC schemes”, said Alastair.

Mike is a member of the Adelaide-UQ-Wollongong team that has won a 2010 NHMRC Program Grant (see separate story).