$6.3m for chronic pain

Cone snails and spiders aren't usually where people turn for pain relief, but for a team of Australian researchers, these animals may hold the key to improved drugs for chronic pain.

The scientists, led by Professor Richard Lewis from the IMB, will this year begin a $6.36 million research program discovering new venom peptides (mini-proteins) to use in future pain therapeutics.

Developing new drugs for pain is vital; a 2007 Access Economics Report found chronic pain cost Australia $34 billion a year and affected one in five people. Current drugs do not relieve pain in all patients, and can have unwanted side effects.

The new research grant builds on an earlier five-year Program Grant, both of which were funded by the National Health and Medical Research Council. The other researchers in the team are Professor Paul Alewood from the IMB, Professor David Adams (RMIT) and Professor MacDonald Christie from the Brain and Mind Institute at the University of Sydney.

"The peptides we discovered in venom have the ability to selectively modify the function of specific pain channels and receptors, which would potentially inhibit the transmission of pain signals without causing side effects," Professor Lewis said.

"This new grant will allow us to optimise the stability of the peptides and their ability to target very specific receptors and channels. This will maximise pain-relieving properties and minimise unwanted side effects respectively."

The new grant will expand beyond investigating cone snail venom to include spider venoms, and will use tests developed during the original grant to allow the team, for the first time, to rapidly screen and isolate molecules that block gates, known as ion channels, in pain pathways.

The Program Grant is supported by a team of outstanding researchers and postgraduate students, plus world-renowned spinal anaesthetist Professor Michael Cousins, Chair of the National Pain Summit, which aims to have pain management addressed as part of the Federal Government's national health reforms.

Other researchers supporting the grant are spider venom expert Professor Glenn King (IMB), protein expression expert Professor Kirill Alexandrov (IMB), molecular pain expert Professor John Wood (University College London) and calcium channel expert Professor Gerald Zamponi (University of Calgary).

Scientific images go from lab to limelight

Darren Brown (left) and Michael Landsberg with their certificates.

IMB researchers were given the chance to display their artistic side in the revamped Ångstrom Art competition this February.

Ångstrom Art aims to bring scientific images out of the laboratory and into the limelight, showcasing the stunning images scientists see down their microscopes.

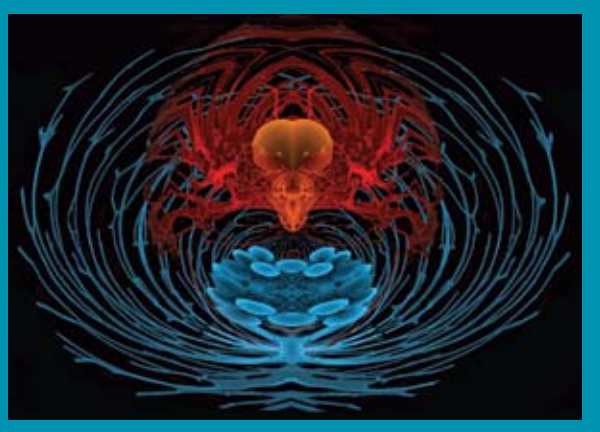
Entries were open to all IMB researchers, and organisers received 62 images altogether.

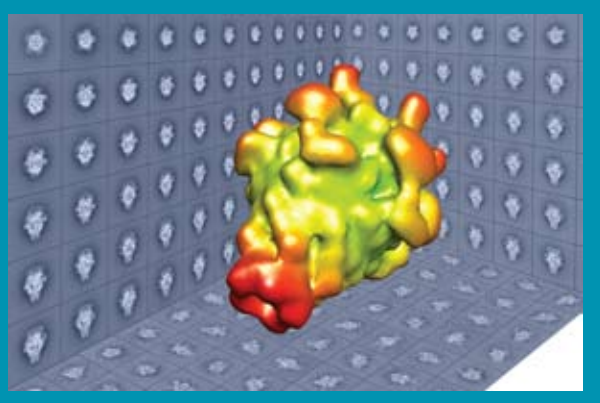
Three judges faced the difficult task of winnowing these entries down to a winner and two runners-up.

Professor Stephen Walker, Executive Dean of the UQ Faculty of Science, Nick Mitzevich, Director of the UQ Art Museum, and Mrs Beverley Trivett, Director of the John Trivett Foundation, chose the three images pictured below.

Researchers were eligible to enter multiple times, which paid off for Darren Brown, a research assistant from the Stow group. Mr Brown contributed both the winning image, "MacBeads", and one of the runner-up images, "RealMacAlien". Dr Michael Landsberg, a research officer from the Hankamer group, rounded out the runners-up with his image, "Insect Assassin."

All images can be viewed on the Angstrom Art website, www.angstrom-art.com, and will form the 2010 Ångstrom Art Centenary Collection, celebrating UQ's centenary and IMB's first decade. The images will also be on display at UQ's Community Celebration of the Centenary, which will be held on Sunday April 18.





Left: 'MacBeads', the winning image by Darren Brown.
Above Top: 'RealMacAlien', runner-up image by Darren Brown.
Above Bottom: 'Insect Assassin', runner-up image by Michael Landsberg.

IMB links up for better research

Researchers from The University of Queensland will speed up their effort to develop new drugs thanks to the latest round of Federal Government funding.

Professor Richard Lewis from the IMB leads a team that received $424,000 from the Australian Research Council's Linkage Infrastructure, Equipment and Facilities scheme to establish an advanced molecular discovery and characterisation facility in conjunction with RMIT University.

The LIEF scheme provides funding for large-scale cooperative initiatives so expensive infrastructure, equipment and facilities can be shared by researchers in partnered organisations. UQ projects received $1.66 million in funding in this round.

Professor Lewis said the facility would accelerate the discovery of drugs from natural products by providing dedicated, state-of-the-art facilities for testing the suitability of molecules from organisms such as cone snails for use as potential pharmaceuticals.

"This facility will provide unique capabilities and extended capacity not currently available in Australia," Professor Lewis said.

"Peptides and small molecules are widely regarded as crucial leads for drugs of the future and the research enabled by this facility will lead to the development of new drug candidates."

The facility will strengthen a number of ARC-funded Discovery Grants and two NHMRC Program Grants at the IMB, and underpins a Centre of Excellence bid from UQ to further accelerate drug discovery in Australia.