



Myths surrounding stroke costing lives

Public perception of stroke as unpreventable and untreatable is out of step with medical advances in the last 20 years and is costing lives, says AUT Professor Valery Feigin.

Professor Feigin says many people still think of stroke as being largely genetically determined, and therefore inescapable, but research has shown strokes to be 95% environmentally determined.

“Stroke is highly preventable. People could make a huge difference to their chances of having a stroke by addressing their biological and lifestyle risk factors.”

And there are massive incentives to address stroke prevention – Professor Feigin says stroke is costing New Zealand \$450 million each year and is the number one cause of disability in adults and the number three cause of death behind cancer and heart attacks.

Lifestyle risk factors include smoking, sedentary lifestyle, obesity, excessive alcohol and an unbalanced diet rich in fat and lacking vegetables. Major biological risk factors include elevated blood pressure and lipids in the blood, irregular heart rhythms and diabetes.

The idea of stroke being untreatable has also endured despite the advances in medications, surgical treatments and rehabilitation for stroke sufferers.

“Only 10% – 15% of stroke sufferers are accessing community rehabilitation and even then it is only for a period of three months. With proper rehabilitation full recovery of function can be achieved in a lot of cases.”

Getting help quickly in the event of a stroke is also critical and people need to be aware of warning signs like the loss of sensation or weakness on one side of the body, language difficulty or a sudden, unexplained, severe headache.

AUT research to boost mussel yields

Using natural chemical cues to increase settlement of mussels in hatcheries could substantially boost yields for New Zealand’s commercial mussel industry.

Bringing in over \$200m each year, mussels are the top export species in the New Zealand aquaculture industry but farmers of the shellfish struggle with losses of up to 90% when the mussels detach from the rope they are settled on.

Research into the positive chemical cues being undertaken by AUT University’s Aquaculture Biotechnology Group (ABG) has attracted industry attention and a grant of \$150,000 over two years.

The grant is part of a larger \$2m research project on hatchery production being conducted by four major New Zealand mussel companies.

AUT senior lecturer in Marine Ecology and Aquaculture, and member of the ABG, Dr Andrea Alfaro, says the group’s research has the potential to increase mussel settlement by 30-60%.

“If we can translate the results we are having in the lab into a commercial setting, that’s a fantastic boost for seed production, which directly translates into economic gains for the industry as a whole,” says Dr Alfaro.

Dr Alfaro’s research arose from observations on



90 Mile Beach of mussel larvae, or spat, coating the seaweed at the beach.

Her research led her to discover that the seaweeds were not only providing chemical cues, but bacterial biofilms on the seaweeds also were influencing settlement.

“We have been able to show that some biofilms are specific to different seaweed species and some of them induce settlement while others kill the larvae. The bacteria in the biofilm use a form of communication with the larvae to tell them which seaweeds to settle on.”

Research in this edition illustrates the importance of science to economic growth and public health. To have an impact research requires translation into business activity and change in policy and practice. Recent Campus events addressed this translation. A public lecture by visiting UK academic Professor Philip James examined strategies to prevent escalating obesity and associated morbidity - diabetes, cardiovascular diseases and cancers. Following round-table discussion involving health sector leaders, MPs and academic staff, among others, considered local implications and measures. The University also hosted a UNESCO meeting to assess the feasibility of developing a Universal Declaration of Ethical Principles in Relation to Climate Change.

While debate continues, there is growing scientific consensus around the main drivers of and solutions to these leading global challenges. As well as advancing knowledge and contributing to economic, social and environmental well-being, research underpins the University’s statutory role as critic and conscience of society and informs teaching at all levels. In this era of cyberspace, ever-briefer media sound-bites, simplistic political rhetoric and overload, the ability to critically reflect and sort junk from meaningful, reality-based information has become increasingly important for our students and us all.



Max Abbott, Pro Vice-Chancellor, North Shore

It's your future - you decide

If you're thinking about your future career and studying at University, our Information Sessions will help you choose.

- 2 JUNE APPLIED SCIENCES
- 2 JUNE EDUCATION
- 3 JUNE HEALTH SCIENCES
- 3 JUNE SPORT AND RECREATION, DANCE

COURSE INFORMATION SESSIONS



0800 AUT UNI (0800 288 864)

To find out more visit: www.aut.ac.nz/infosessions