

APRIL 2010

INSIDE | AUT

NEWS FROM AUT UNIVERSITY | TE WĀNANGA ARONUI O TĀMAKI MAKAU RAU

Myths surrounding stroke costing lives, says AUT academic

PUBLIC PERCEPTION of strokes 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.

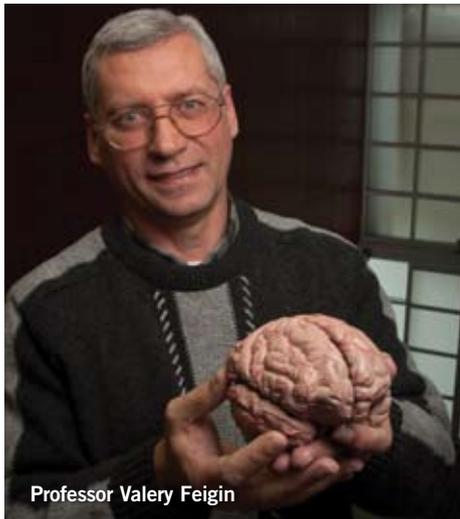
Professor Feigin says many people still think of stroke as being largely genetically determined, and therefore inescapable, but research has shown strokes to be 95% environmentally determined.

“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 consumption, and an unbalanced diet

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Professor Valery Feigin



Dr Steve O'Shea unveils the world's first plastinated giant squid

Giant squid undergoes plastic surgery

NEW ZEALAND is welcoming the world's first plastinated giant squid specimen.

In 2004 AUT researcher Dr Steve O'Shea donated a pair of *Architeuthis dux* to anatomist Gunther von Hagens to undergo the plastination process – a technique which preserves specimens by replacing the natural water in the body with silicone.

Now AUT is about to take possession of one of the 4.9m long specimens that has resulted and put it on public display.

“Traditionally, marine animals are preserved in alcohol or formaldehyde but with plastination, there is no glass barrier between the viewer and the squid,” says O'Shea.

The plastination of the squid was a massive project undertaken by

von Hagens and his China-based team, involving 105 hours of dissection work and 260 hours spent working with 1500 litres of silicone.

AUT is currently in the process of preparing a display site for the 90kg, 4.9m squid which has been positioned to accurately represent the movement (muscles) and biological functions (organs).

Since inventing the plastination process in 1975, von Hagens has toured his *Body Worlds* exhibition internationally and had his work viewed by over 28 million people.

He says he became very interested in working on a squid specimen after reading about the squid research and conservation efforts of marine biologist Dr O'Shea.

PHOTO: MARCEL TROMP

LETTER FROM THE VC

LAST MONTH, the Minister for Tertiary Education, Steven Joyce, used the first speech in his new portfolio to announce changes to tertiary funding and the consideration of stricter criteria for student loans. From 2012, a portion of tertiary funding will be linked to performance. This may include linking part of the funding allocation to successful course completion and the progression of students into further study, for example. Exact details of the new system are still being determined, but the Minister announced that performance linked funding will be applied across the entire tertiary education sector. The amount of funding involved will be low initially – between five and 10 percent – but is likely to increase over time.

Not surprisingly, reaction and comment has focussed on the likelihood of universities lowering standards in order to increase pass rates and retain funding. An extension of that idea is the likelihood that universities will seek to admit fewer of the students who are not guaranteed to pass – performance based funding provides an incentive to avoid risky students, such as those from lower decile schools. Among those groups affected would be Māori and Pasifika students, who have made strong inroads into tertiary territory and need to maintain their momentum. Māori and Pasifika are fundamentally important groups to Aotearoa New Zealand, both in terms of its identity and its future, and we need to have a care that their advance is not stopped in its early stages. I've argued previously that a capped system of places at university has the potential to slow that advance, and this latest policy decision poses yet another challenge to Māori and Pasifika advancement.

In terms of the impact for AUT and our students, we already invest a great deal in performance. We have some of the strongest degree performance and completion rates of any university in New Zealand – across the general student population, for under 25s, and for Māori and Pasifika. Our philosophy and teaching pedagogy demonstrate a genuine desire to see our students achieve to their highest potential; we don't take the 'sink or swim' approach to individual student success. At AUT, small classes encourage interaction and engagement with academics and fellow students. Outside the classroom we have active monitoring and engagement strategies in place to support our students to do well. The success of these strategies highlights the importance of providing the right balance in the student journey – obtaining passing grades at university is not just about academic capability, it is also about receiving appropriate support and encouragement within a stimulating teaching environment. It is a point worth remembering in any discussion about enhancing student performance and outcomes. The idea behind performance based funding is to make more efficient use of money already in the system, without the expectation of additional investment. In reality, achieving greater performance outcomes from the university sector requires more investment, not less.

Derek McCormack

Myths surrounding stroke costing lives

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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.

Professor Feigin says another myth is that stroke is a disease confined to the elderly.

"A quarter of people who suffer a stroke are under 65 years old and 5% are under 45 years. The prevalence of stroke in younger people is on the increase which is in keeping with the increased prevalence of risk factors such as obesity and diabetes."

Professor Valery Feigin will discuss the evolution of stroke at his professorial address on Monday 3 May, 2010 at 4.30pm – AUT University, Level 2, WA Building, 55 Wellesley St East, Auckland. RSVP attendance to sue.chapman@aut.ac.nz

AUT graduate named best emerging filmmaker

MASTERS GRADUATE

Anna McKessar (right) has been named best emerging New Zealand filmmaker at the Documentary Edge awards held in Auckland in March.

McKessar's winning film, *Five Hours with Raja*, follows a young mother as she carries her unborn baby to term despite the diagnosis of a fatal birth defect. The film explores the impact of baby Raja's birth and short life on his extended family.

"A lot of people are taken aback when they hear the synopsis of *Five Hours with Raja*, but without fail, everyone who takes the time to watch cannot help but be moved by this family's love and heart. I felt the weight of responsibility as a storyteller to do something with the amazing footage I had captured and to extend the influence of that little life," says McKessar.

Making the film, which formed



part of her Masters in Communication Studies at AUT, was an "incredible experience," says McKessar. Her exegesis focused on the ethics of participant-filmmaker interaction, a crucial part of making this sensitive film.

Five Hours with Raja has been a success for McKessar on several fronts. She has already signed a deal with an international distributor and an academic publisher has accepted her exegesis for publication.

Companies graduate from Business Innovation Centre in Manukau

PRIME MINISTER John Key attended the recent AUT Business Innovation Centre (BIC) graduation and talked about New Zealand's entrepreneurial spirit and the need for more money to be invested in technology research.

The business incubator, located on AUT's new Manukau Campus, offers a unique collaborative environment focused on the transformation of innovative ideas into business reality. These ideas range from technology research to established technology businesses.

One of the graduating companies this year was iMonitor, a fledgling company specialising in wireless monitoring and control technology. It entered the business incubator in 2006 when former broadcasting engineer Allan Weeks and electronics engineer Robin Alden approached the BIC with a basic idea and limited technology.

iMonitor's growth has seen it expand to a company employing 12 people who design, test and engineer a variety of innovative technology products and is soon to expand overseas.

BIC chief executive Jonathan Kirkpatrick says the Centre offers expertise in areas that entrepreneurs are traditionally weak in, such as developing technology into product, finding customers and company issues such as legal structures, shareholder agreements and cash flow modelling.



"What the BIC did was help iMonitor get the business platform secure, made sure Allan and Robin were introduced to the right people and had support and guided the company and its products down a commercial path," says Kirkpatrick.

Other companies to graduate included technology companies Enerv8 and Airo.

Airo has developed a high tech programme designed to promote positive changes in your body through the process of breathing simulated 'thin' oxygen normally found at altitude.

The Airo programme is designed to increase energy levels, aerobic ability

Above: Prime Minister John Key speaking at the Business Innovation Centre graduation in March

and power output as well as improve recovery and endurance.

Enerv8 have an innovative way to convert energy which is otherwise lost into a reusable form. The transformed energy can then be used for light commercial purposes or fed back into the national power grid. The innovation is environmentally friendly and is obtained from a renewable resource, and has been trialled in Singapore with huge success.

Avatars, virtual fashion on agenda at textile symposium

AUT'S Textile and Design Laboratory (T+DL) continues to focus on emerging textile technologies and will host this month's *Digital Strategies* symposium.

The symposium is supported by the Textile Institute's New Zealand section and Fashion Industry New Zealand, and looks at innovative and emerging technologies for the textile and apparel sectors.

Speaking at the event is renowned researcher Kerry Maguire King from US company (TC)². Her visit is partly funded by a successful ISAT grant application.

King, who is highly regarded as a researcher, educator, consultant and product developer, will talk about sustainable product development, 3D body scanning, avatars and virtual fashion, as

well as technologies and applications for digital textile printing.

T+DL manager Peter Heslop says King's visit is part of a research-building process between the T+DL and (TC)², and will play a part in shaping future directions for the lab.

New Zealand presenters will cover innovation in the New Zealand context, including smart textiles, digital supply chains, wool apparel innovations and digital fabric cutting technology.

The symposium will run from 14–15 April 2010. For more information visit www.tdl.aut.ac.nz

■ BRIEFLY

AUT on Triangle TV

THE WORK of AUT's television students will be shown on Triangle Television this month.

An eight-part series entitled *Green Shoots* will showcase work from year one to three students, with each programme based around a theme such as the environment, music or art. Each programme features up to 25 productions, ranging in length from one to 15 minutes long.

"There is so much beautiful work that comes out of here and it's a great forum. Some of it moved me to tears because it is so well done," says head of Television Diane Musgrave.

Green Shoots screens on Triangle Mondays at 10pm, and on its digital channel Stratos on Mondays at 10.30pm.

AUT now a four-campus university

THE OPENING of AUT's Manukau Campus and the official naming of the AUT Millennium Campus mean the university now has four campuses.

Manukau and the AUT Millennium Campus join the Akoranga-based North Shore Campus and the City Campus, in Auckland City. The AUT Millennium Campus has developed from the partnership between AUT and the Millennium Institute of Sport and Health.

AUT has made significant investment in land and capital, including \$12m from Government, to expand the Millennium Institute's North Shore facilities, making it a joint shareholder.

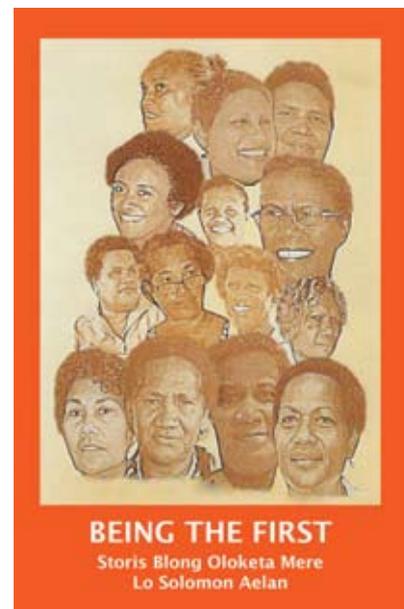
Stories of outstanding Solomon Islands women

A BOOK launched in the Solomon Islands in March on International Women's Day celebrates leadership and achievement amongst Solomon Islands women. *Being the First* tells the stories of 14 women who have broken barriers to rise to high positions within the Solomon Islands public service, and encourages young Solomon Islands women to follow their lead.

Alice Aruhe'eta Pollard and AUT University's Professor Marilyn Waring co-edited the book as part of their work heading up the Women in Governance component of the Regional Assistance Mission for Solomon Islands (RAMSI).

"The public service is the Solomon Islands' single largest employer, but only six percent of women who work in it hold senior management positions. As part of our work with RAMSI we are required to mentor women in the public service. And when we realised that no book about Solomon Islands women has ever been written by Solomon Islands women, we realised this was another way we could mentor women and encourage them to strive for leadership roles," says Waring.

All of the women profiled in *Being the First* have broken new ground within Solomon Islands government structures to take on roles, including permanent secretaries, officers of parliament, the



only woman elected to parliament, and a former public service commissioner.

Waring says it is important that the women's stories are written down and form part of recorded Solomon Islands history. Many of them have spent time overseas studying and working, and those parts of their lives are easily lost from the Islands' history unless details are written down.

Being the First is published by AUT's Pacific Media Centre on behalf of RAMSI and AUT's Institute of Public Policy.

Triennial launch success



Left: Auckland Art Gallery Director Chris Saines and AUT Vice Chancellor Derek McCormack at the launch of the Triennial

MORE THAN 500 people gathered at Shed 6 for the opening of the 4th Auckland Triennial – *Last Ride in a Hot Air Balloon*.

Vice Chancellor Derek McCormack joined Auckland Art Gallery director Chris Saines, the Minister for Arts, Culture and Heritage Chris Finlayson, and art patron and donor Dayle Mace to deliver the opening speeches which celebrated the theme of risk and adventure in contemporary art.

AUT is a Triennial partner, as

well as a venue for the event which runs from April to June 20. For the Triennial, AUT's St Paul St Gallery is hosting work by two artists – dancer and choreographer Tino Sehgal from Berlin, and sculptor Martin Boyce from Scotland.

The Auckland Triennial is New Zealand's biggest exhibition of contemporary visual art featuring work by 27 artists from 18 countries across five venues – St Paul St, Auckland Art Gallery, Artspace, George Fraser Gallery and Shed 6.

International expert says obesity an unstoppable disease

UNLESS MAJOR changes are made to food policies and urban planning, obesity and its associated diseases will overwhelm health services, says a visiting British academic.

Professor Philip James, president of the International Association for the Study of Obesity (IASO) and chair of the International Obesity Task Force (IOTF), will give two public lectures while in New Zealand, the second to be held at AUT University's North Shore Campus on April 23.

"Health education is a worthy feature of modern society but it benefits the affluent and educated preferentially," says James. Of particular concern is the increased susceptibility of children. "Women becoming pregnant on inappropriate diets and then weaning their babies onto a typical Western diet is a recipe for disaster."

James was invited to New Zealand by AUT Professor Elaine Rush (New Zealand

council member of IASO) to help raise awareness of the relationships between the prevalence of chronic disease and its mismatch with the changing environment, and the importance of the interactions between the food chain, climate change and health.

"The food environment of New Zealand needs to fundamentally change to counteract the inequity that currently exists between food choices for the rich and poor," says James.

"Track records of the most successful food businesses show that once a good product is developed, its economic value is determined by price, pervasive availability and intense marketing."

He went on to say that governments are now introducing a new set of ground rules for food systems and need to develop, within a defined time frame, specifications of food which allow the bigger and responsible food companies to adapt.

"The challenge is then how to help



the small food producers and processors who have little technical background and know little about health and nutrition."

As part of the lecture series Professor Rush will facilitate a round-table dinner to bring together selected key stakeholders and politicians. They will discuss ideas and policy relating to the prevention of childhood obesity as an essential first step in the prevention of chronic disease.

Postgraduate student named 2010 Iris Fisher scholar

AUT UNIVERSITY masters student Anthony Cribb is the recipient of the 2010 Iris Fisher scholarship.

The scholarship has been established in the name of Iris Fisher, a founding member of the Pakuranga Arts Society and the driving force behind the creation of the Fisher Gallery, later renamed the Te Tuhi Centre for the Arts. The Iris Fisher scholarship, which awards a grant of \$5000 to one recipient annually, is intended to encourage and assist a tertiary-level visual art student with their studies.

Anthony Cribb is an emerging artist in the second year of a Master of Art and Design (Visual Arts) at AUT. "We are thrilled that the scholarship has been



Anthony Cribb's work *Untitled weight, 2009*

awarded to such a talented artist and to a student of another of our city's highly regarded art institutions, reflecting the caliber of art students in postgrad study," says the director of Te Tuhi, James McCarthy.

"Anthony demonstrated a great alignment between his artwork and artist

statement, and we're looking forward to working with him over the coming year to help develop his practice."

The selection panel this year included Te Tuhi director James McCarthy, Te Tuhi curator Stephen Cleland and Elam School of Fine Arts senior lecturer Peter Shand.



Glenn Yungnickel's menswear collection *In the Red*, as seen at last year's AUT ROOKIE show

Menswear success at iD Dunedin fashion awards

AUT FASHION graduates Sandra Tupu and Glenn Yungnickel took away awards with their menswear collections at the iD Dunedin Emerging Designer Awards in March.

Tupu won the Otago Institute of Design sustainability award for her collection of menswear based on the Samoan tatau (pe'a). Her collection 'Tatau' is full of natural fibres and includes coats made of recycled woollen blankets with interior features using old cotton flour bags.

"I want to make unique menswear pieces that will last a lifetime, instead of throwaway fashion," says Tupu.

"It is fantastic to have my work

recognised with this award". Tupu plans to continue designing menswear for the foreseeable future.

Yungnickel, an honours graduate who now works as Assistant Designer at Crane Brothers in Auckland, won the *Pulp* magazine pulp fashion culture award, which guarantees editorial coverage for his striking menswear collection, 'In the Red'. "Winning the award has been awesome and I am looking forward to the extra exposure," says Yungnickel.

Twenty-eight finalists from New Zealand and across the world sent their creations down the runway in the iD Dunedin show, hosted by TV3's Samantha Hayes.

AUT expertise helps out at DDB Shop

WHEN THE retail services arm of advertising agency DDB Tribal needed help with radio frequency identification (RFID) it turned to AUT lecturer Judith Symonds.

Symonds, from the School of Computing and Mathematical Sciences, is an expert in RFID, a technology that uses tags consisting of a computer chip and antenna which wirelessly transmit information to a scanning device.

DDB Shop creates point of sale (POS) and marketing interiors and specialist in-store campaigns for retailers. It wanted an interactive kiosk to provide attendees at an upcoming conference with information about the conference programme and locations.

Symonds set up the project with senior research lecturer Dave Parry and recent AUT graduate Wriju Bhattacharya. Bhattacharya worked with DDB Shop using his programming knowledge to create a kiosk where guests could scan their name tags into the kiosk to get helpful information. The name tags contained a personalised chip with encrypted information about that person.

DDB Shop innovation manager Craig McKay says he was extremely pleased with the result and is looking to expand the technology to facial recognition, scent-based system and movement-activated stations.



Wriju Bhattacharya

Designer molecules enabling major advances in biomedical science

AN AUT PROFESSOR is developing ways to modify the surface characteristics of living cells to achieve a range of biomedical benefits. Professor Stephen Henry, Director of AUT University's Biotechnology Research Institute and CEO of KODE Biotech Limited, has developed a technology enabling breakthroughs in quality control systems for blood grouping and diagnostic research, and a range of novel therapeutic applications.

While studying blood group systems, Henry invented a biomedical platform called KODE Technology using a natural molecule with an ability to 'hop' onto cells.

"It is the combination of dispersibility in water, spontaneous incorporation into cell membranes, and low toxicity that make KODE Constructs such a valuable research tool," says Henry.

The first major product arising from the use of KODE Technology is a blood grouping quality control system. AUT scientists were able to control the attachment of specific amounts of blood group A and B molecules onto group O cells, and thereby create a blood grouping analytical quality control system.

Research into the attachment of other carbohydrate and peptide molecules onto red blood cells has now created a range of designer cells ("kodecytes") that can be used in existing blood grouping platforms for diagnostic purposes. The capital and training costs associated with establishing new laboratory assays are thereby reduced.

Work in the area of assisted reproductive technologies has seen the development of KODE modified "sticky" embryos.

"Early results are showing that these "sticky" embryos have the potential to improve implantation rates, but a lot more research is required before clinical product eventuates," says Henry.

Further advances in the area of immunology, both diagnostic and therapeutic, are anticipated to have substantial impact on transfusion and transplantation. Early work has also shown potential of KODE Constructs as therapeutics to inhibit viral infection, including HIV, possibly by acting as non-functioning receptor mimics.

More recently KODE Constructs are



'Sticky' embryos have the potential to improve implantation rates

being used to manufacture prototype diagnostic assay kits using standard desktop ink jet printers, by simply replacing the ink in a spent cartridge with a solution of KODE Constructs.

"The KODE Constructs can then be printed onto a substrate in much the same way that one might print a letter or drawing on a sheet of paper," says Henry.

"In addition to costs savings the versatility of this manufacturing methods provides additional benefits especially for research laboratories."

Standout masters student scoops top awards

BACHELOR OF BUSINESS graduate Xavier Black collected three awards at the AUT Business School awards ceremony held at the Auckland War Memorial Museum in March.

Black took home the Pearson award for the top Māori graduate in the Master of Business; the IAS New Zealand award for the top Master of Business student majoring in management; and the Lexis Nexis award for the top overall graduate in the Master of Business.

Black graduated in December last year with a Master of Business degree majoring in management, marketing and sustainability, specialising in corporate

social responsibility. Her thesis explored the role of managers and manager-owners in decisions to engage the community.

Dean of the Faculty of Business and Law Professor Des Graydon says Black, of Ngati Whatua descent, is an asset to the university and New Zealand.

"As organisations look at new and different ways of operating, it's critical we have brilliant thinkers like Xavier behind the scenes investigating how all organisations and their employees impact our country," he says.

"Xavier's critical eye and thorough examination leaves a legacy that will inform New Zealand at every level all

the way to our policy-makers."

This is the second year in a row Black has taken home three awards for academic achievement. Last year she won three awards for her undergraduate Bachelor of Business degree.

The AUT Business School Awards acknowledge AUT's highest achieving students and celebrate New Zealand academic excellence. Eighteen undergraduates and eleven postgraduate students collected 32 awards at the ceremony.

Winners included top Bachelor of Business graduate Yulia Bogatova. She received the Consortium award for the top overall graduate in the Bachelor of Business and the NZ Institute of Chartered Accountants award for the top graduate in the Bachelor of Business majoring in accounting.

Internet now integral to New Zealanders' daily life

THE DIGITAL DIVIDE is disappearing in New Zealand, with social differences in internet usage shrinking by the year.

The second biannual survey by AUT's Institute for Culture, Discourse and Communication (ICDC) of more than 1200 New Zealanders shows that New Zealand has reached a point where most are using the internet, and there's no longer a 'typical user'.

The survey results demonstrate how ingrained the internet has become in daily life, says the Director of ICDC Professor Allan Bell.



"In two years broadband usage has jumped to over 80 percent of users, taking internet presence over a threshold, which makes it an established part of most New Zealanders' lives," says Professor Bell.

Most New Zealanders, regardless of age, ethnicity, gender or socio-economic status, are increasingly using the internet for a variety of activities such as social networking, buying and selling goods online, internet banking, accessing information, learning, and entertainment.

The World Internet Project first collected internet user data in 2007, and is now able to map the trend in internet usage in New Zealand, thanks to the second round of surveying last year.

"The social, economic and cultural barriers that existed previously with internet use are gradually diminishing as more New Zealanders incorporate the technology into their lives in new and different ways," says Professor Bell.

Report findings at a glance

- The number of internet users rose from 79% in 2007 to 83% in 2009.
- Broadband usage jumped to 82% compared with 67% in 2007.
- 18% of people access the internet from mobile phones (up from 7% in 2007).
- Two thirds of users said the Internet was so important to their everyday lives that losing access to it would be a problem.
- Nearly half of users are members of social networking sites. Facebook is the most common.
- Asian New Zealanders had the highest level of internet use at 97%, while Māori, Pasifika and Pakeha hovered around the 80% mark.
- Males and females used the internet equally.

"These changes are not happening overnight and are somewhat reliant on advances in technology, such as faster broadband speed or internet access via mobile phones."

New Zealand 'not a bed of roses for immigrants'

ACADEMIC and author Dr Edwina Pio says many New Zealanders think immigrants long to stay in Godzone, but this simply isn't the case. The AUT associate professor of management recently launched her new book *Longing & Belonging* on Race Relations Day at Te Papa in Wellington.

"It's not all a bed of roses living in New Zealand. Immigrants face huge

challenges around gaining equal access to employment, and are finding that their friends and family are not excelling with the world's elite achievers."

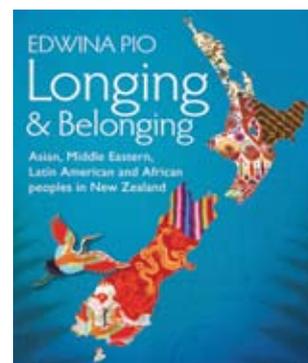
Dr Pio adds that while New Zealand is a very generous country, New Zealanders continue to be startled by migrants, particularly those who look, speak and behave differently.

"While New Zealand

provides many wonderful opportunities for migrants, the best of the best cannot achieve their full potential here."

The book traces the origins of Asian, Middle Eastern, Latin American and African (MELAA) peoples in New Zealand, lingering on migration stories and aspects of work experience and identity.

The launch was hosted by the Office of Ethnic Affairs which hosts an event to



celebrate Race Relations Day each year. Speakers at the launch events included Minister of Ethnic Affairs Pansy Wong, Race Relations Commissioner Joris de Bres and Mayor Bob Harvey.