Ingenio

ET LABORE

MAGAZINE OF THE UNIVERSITY OF AUCKLAND

SPRING 2004

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

SEA CHANGE

THE BIRTH OF A NEW MARINE INSTITUTE

SELLING OUR EXPERTISE

TOP TERTIARY TEACHERS

MAINTAINING THE BRAIN

WHAT DRIVES OUR DONORS?

Be in to win an objet d'art with your new home loan.

And a trip around the world to find it.

Buying a home is one of the most exciting purchases you will ever make but it can also be one of the most overwhelming. Fixed or floating, one year or two? There are so many decisions to make and so many choices – how do you know what is best for your personal circumstances?

At HSBC we draw on our worldwide resources and local knowledge to help you choose the right home loan for you. We recognise that everyone is different and therefore offer a flexible choice of options at extremely competitive rates that can be tailored to your individual needs.

To celebrate your individuality we're offering you the chance to enter a draw to choose an objet d'art that's uniquely you and a trip around the world to find it – when you select your new home loan and draw it down by 28 February 2005. For a competition entry form and more details -

▸ Visit your nearest branch ▸ 0800 88 86 86 ▸ www.hsbc.co.nz

HSBC

The world's local bank

(NZ) HSB 2827

Issued by The Hongkong and Shanghai Banking Corporation Limited, incorporated in Hong Kong, New Zealand branch. Lending criteria and terms and conditions apply to all our home loans (including a minimum home loan value). Lenders Mortgage Insurance or an application fee may apply where you are borrowing more than 80% of a property's value. All interest rates quoted are subject to change. Early repayment fees apply to fixed rate loans. The competition comprises one draw for a total maximum value of $NZ 20,000 (including a travel voucher for $18,000 and cash for $2,000 to choose an objet d'art). Full competition terms and conditions apply and are available from any branch of HSBC, New Zealand or on our website www.hsbc.co.nz.

Celebrate THINKING

THIS issue of *Ingenio* marks a watershed moment at The University of Auckland. In January, Professor Stuart McCutcheon takes over as Vice-Chancellor at the country's leading university. And the articles in the pages that follow show that his predecessor, Dr John Hood, now the VC at Oxford, has handed over an institution in great heart.

In a piece on page 2 of this issue, Professor McCutcheon makes it plain that he is relishing the challenge of improving the Government's investment in the university sector. At the same time, our main story, about UniServices Ltd, depicts the efforts The University of Auckland is making to maximise revenue from the talent it already has. We also pay tribute to the generous acts of philanthropy – most by alumni of this university – who understand that their acts of generosity are not just gifts, but investments in the future of the nation and the world.

What's striking about the researchers whose work we profile in this issue is their extraordinary variety: a group in the Department of Electrical and Computer Engineering has developed the delivery of wireless power to make road studs light up, and our academics have contributed to a landmark book looking at how translation can shape our perception of the past and our management of the future. Meanwhile, hundreds of our staff are hard at work on other research, driven by a passion for knowledge and a desire to make life better for all of us. Where they work, in the area where we sometimes don't even know what we don't yet know, the future will be found.

PETER CALDER
Editor

INGENIO ET LABORE

Ingenio ET LABORE

CONTENTS

4 AT YOUR SERVICE

UniServices sells The University of Auckland to the world – and business was never better.

10 AN UNDERWATER LIFE

The man spearheading the establishment of an Institute of Marine Science has a distinguished neighbour to thank for his choice of profession.

12 THOSE WHO CAN, TEACH

The University of Auckland has the country's best tertiary teacher.

14 BENEATH THE SURFACE

Bryony James spends her working day in spaces 100,000 times thinner than a human hair.

17 FIFTH CAMPUS

The University of Auckland has a new faculty – and another campus.

18 BRAIN TRAINING

A young scientist wants to teach the brain to fix itself.

22-27 THE WAY AHEAD

Generous donors see their gifts as investments in everyone's future.

- THE ART AND SCIENCE OF TRANSLATION
- ALUMNI ARE SHINING LIGHTS
- FULBRIGHTERS' HORIZONS EXPAND
- NEW PARTNERSHIPS FOR EXCELLENCE

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

Ingenio – a magazine of
The University of Auckland

Spring 2004
ISSN 1176-211X

Editor
Peter Calder

Art direction
Richard Hesom-Williams

Design
Nick Collins
Peter Watson

Contributing writers
Paul Goldsmith
Camille Guy
Angela McCarthy
Jade Reidy
Joanna Wane
Bill Williams
Judy Wilford

Photography
Godfrey Boehnke
John McDermott
Peter Calder

Advertising Manager
Don Wilson

Production
First in Print

Contact details

Ingenio
External Relations

The University of Auckland
Private Bag 92 019
AUCKLAND

University House
19A Princes Street
AUCKLAND
Telephone: +64 9 373 7599 ext 87698
Facsimile: +64 9 373 7047
Email: externalrelations@auckland.ac.nz
Website: www.auckland.ac.nz/ingenio

Advertising enquiries:
Don Wilson – PO Box 38-618, Howick,
AUCKLAND
Telephone: +64 9 535 7275
Facsimile: +64 9 535 7295
Mobile: +64 27 480 1868
E-mail: don_wilson@xtra.co.nz

New VC relishes the chance to make a good thing better

Two months away from taking up his appointment as Vice-Chancellor, Professor Stuart McCutcheon says he is keen to see The University of Auckland providing leadership on national issues of importance to the sector.

In his roles as Chair of the New Zealand Vice-Chancellors' Committee, Vice-Chancellor of Victoria University and Vice-Chancellor-elect of Auckland, Professor McCutcheon has been taking a leading role in the debate about funding levels, and the threats to university autonomy and academic freedom under proposed amendments to the Public Finance Bill.

Professor McCutcheon told *Ingenio* that New Zealand's university sector suffers from gross underinvestment by international standards and "a Government that seems to believe low levels of investment can somehow be overcome by more bureaucracy and centralised control."

"We need to work very actively to change that view, but also to harness the energy of the University's many friends and supporters so as to ensure that Auckland maintains and enhances its place as a leading international university," he said.

Professor McCutcheon becomes the University's fifth Vice-Chancellor in January, succeeding Dr John Hood, who now heads Oxford University.

Announcing his appointment in early June, the Chancellor, John Graham, said Professor McCutcheon had been chosen after an extensive search that attracted several international candidates.

"The calibre was high and we are particularly pleased that we have been able to offer the position to a New Zealander who already commands the respect of the tertiary sector."

Mr Graham said Professor McCutcheon had demonstrated strong leadership skills in improving Victoria's fortunes since taking over in November 2000.

"Student numbers have increased by 20 per cent, revenues are more diversified and operating deficits have become a thing of the past. He has also overseen a major redevelopment of campus facilities, and rebuilt relationships internally and externally."

LEADING ROLE: New Vice-Chancellor Professor Stuart McCutcheon.

Professor McCutcheon previously held senior positions at Massey University – his alma mater – where he became the Deputy Vice-Chancellor in 1999. In the 1980s, he was a postdoctoral fellow and Visiting Assistant Professor in the Department of Animal Science at Cornell University.

Professor McCutcheon said he was excited by the opportunity to lead the flagship of the New Zealand university system.

"The University of Auckland is nationally and internationally acclaimed for the quality of its teaching and research. I am honoured to have been offered this position and look forward to working with the Council, staff, students and friends of the University to further enhance the reputation and achievements of this fine institution."

The Deputy Vice-Chancellor (Academic), Professor Raewyn Dalziel, is serving as Acting Vice-Chancellor during the six months between Dr Hood's departure at the end of June and Professor McCutcheon's arrival.

Hood takes the helm at Oxford University

The former Vice-Chancellor of The University of Auckland, Dr John Hood, has taken up his new position as the Vice-Chancellor of Oxford University.

Dr Hood, the first person from outside the Oxford "congregation" of staff to be appointed to the position in the university's 900-year history, was installed in a solemn ceremony filled with Latin and Maori oration.

Sir Hugh Kawharu and Merimeri Penfold, respectively the kaumatua and kuia of The University of Auckland, led a group of a dozen who supported Dr Hood at the pre-ceremony in the Clarendon Building and an admission ceremony at the 13th-century University Church of St Mary the Virgin.

Sir Hugh wore his Ngati Whatua kahu kiwi (cloak) and Dr Hood the feather cloak presented to the Vice-Chancellor of the day, Sir Colin Maiden, when The University of Auckland marae opened. Speaking first in Maori and then in English, Sir Hugh effectively passed over Dr Hood to Oxford. The new VC took his place among his new colleagues and presented his predecessor, Sir Colin Lucas, with a large greenstone mere. Sir Colin for his part surrendered his insignia of office (book, keys and seal).

At a lunch after the ceremonies, Professor Richard Jenkyns, the Public Orator (and Professor of Classical Tradition), challenged Dr Hood's "outsider" status.

"This foul canard must be struck down at once," he said. "Having been a Rhodes Scholar you are, of course, one of us."

Dr Hood's appointment, announced in June 2003, was a source of pride for The University of Auckland and the country as well as for himself. It was a testament to his achievements during more than five years at The University of Auckland.

Those achievements were marked at a well-attended and occasionally light-hearted farewell function held in June in the atrium of the Faculty of Engineering, Dr Hood's faculty in his student days.

The tone of the evening was set by historian Professor James Belich who noted in a very funny and well-received speech that the outgoing VC had not solved all of the University's problems because the "vocational" faculties still existed "and History's recognition as the master discipline is not quite complete."

But the Hood administration was as notable for the mood that it created as for its more tangible achievements.

"His tangible achievements are enormous," said Professor Belich, "but his intangible achievement – transforming the spirit of this institution – is even greater. John's energy conveys energy. It is kinetic and infectious. He is an antidote to the cynicism that is academia's occupational hazard."

Professor Witi Ihimaera read from his new novel *Whanau II*, likening Dr Hood to the book's gardener: "When he had completed the planting he looked back on his work and he did not feel sad that he would not be here for the harvest … for he had ensured the cycle of life between one season and the next and had rendered unto his people by doing his job and doing it well."

At a ceremony in early August, before he and his wife Ann finally left for their new home, Dr Hood was presented with a Doctor of Laws *honoris causa*. He told the audience at that function that his time as Vice-Chancellor had been as memorable as his student days.

"The reason is the same: the remarkable people who are the University," he said. "Their example has been my motivation. Their impressive achievements have ensured this institution has moved forward, ever more confidently, in pursuit of its mission to be an internationally respected research-led university."

He said that the most important of the "many memorable accomplishments of my former colleagues" was probably the national recognition that the tertiary and university sectors are strongly performance and quality differentiated.

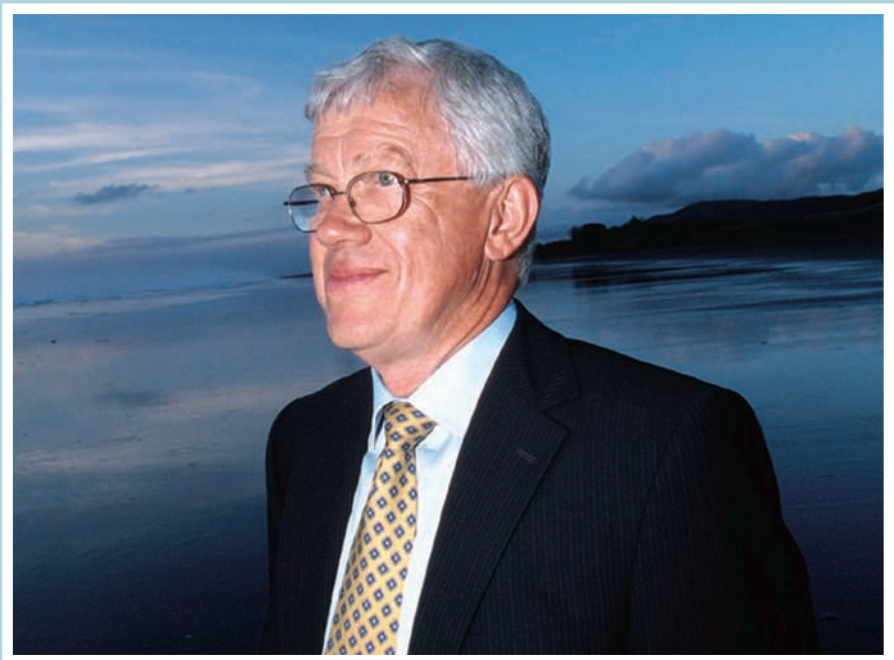
"Colleagues from this University were instrumental in the conception and development of the Performance-Based Research Fund, the Centres of Research Excellence scheme and the Partnerships for Excellence scheme," he said. "Each scheme is designed to provide funding incentives for superior research performance, and in the case of the last, teaching too. This University has amply demonstrated its merits in all of the ensuing assessment rounds."

ONE OF US: A beaming John Hood enters the Oxford ceremony alongside the man he replaces, Sir Colin Lucas.

Dr Hood's contribution to The University of Auckland has been marked by the establishment of the Hood Fund, an endowment fund which will pay for visiting and travelling fellowships across all faculties. The fund, which has an initial target of $10 million, will attract the best academic talent to Auckland and enable the University's academics to travel to prestigious institutions abroad, to continue and complete their research. The Fund will also support annual public lectures by outstanding academics from abroad, including expatriate New Zealanders and alumni.

A brochure backgrounding the Hood Fund and explaining how to contribute is enclosed with this issue of *Ingenio*.

The company charged with selling The University of Auckland to the world has an enviable performance record. **PETER CALDER** reports.



LOOKING AHEAD: UniServices CEO John Kernohan has seen a 40-fold increase in business in 14 years.

SERVICE STATION

John Kernohan is given to leaping up in the middle of a sentence and attacking the whiteboard which dominates his office high on the Symonds Street ridge.

When his interlocutor is a journalist, Kernohan may just be wanting to ensure that a name is spelt right or that the distinction between two streams of research funding is clear. But you quickly get the sense that the marker pen in his hand gets a pretty good workout most days and that it does more than just spell names right. On that whiteboard, with that pen and its exhausted predecessors, the ideas of the best and brightest at The University of Auckland are developed into enterprises that make money and transform lives.

Kernohan is CEO of Auckland UniServices Limited, a standalone company, 100 per cent owned by The University of Auckland, whose job is to manage and develop all the University's commercial activity. And behind that apparently bland phrase lie dozens of instances in which UniServices has created profitable partnerships between academia and commerce.

It is, to judge by the numbers alone, a pretty remarkable story. When it started in 1989, UniServices was John Kernohan and three others working out of a small office based in the School of Engineering. In its first year of operation, it earned $1.5 million.

Last year it earned $62.5 million and it now employs more than 500 of its own staff (about 470 as researchers and related support staff) and works with as many again of the University's staff. In barely 15 years, UniServices has become the biggest organisation in Australasia devoted to the commercialisation of university research.

And while it hasn't done what it's done on the cheap, UniServices has displayed a characteristically Kiwi can-do efficiency. The research income it generates for the University would rank it in the top 15 universities in the United States – without adjusting the figures for population. But in terms of research efficiency – the number of dollars spent for each patent filed – UniServices and The University of Auckland lead the pack: it's three times as efficient as MIT and Stanford, four times smarter than Cambridge and outperforms Johns Hopkins more than six to one.

> "WE ARE LUCKY AT THE UNIVERSITY OF AUCKLAND BECAUSE WE HAVE A FEW WHO ARE WORLD LEADERS AND MORE THAN A FEW WHO ARE WORLD-CLASS."

UniServices has translated University research into business opportunities which are detailed on the following pages. But these success stories are only a fraction of the company's achievements. Others include an infant car seat to protect premature babies from the risk of oxygen deficiency; a sensor that can detect physiological changes in premature babies and other patients who need constant monitoring; and a portable DNA analyser.

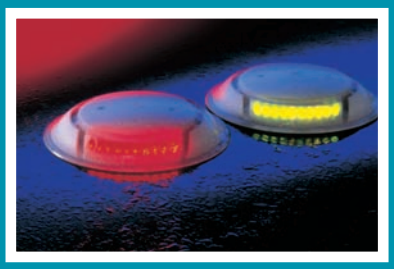
Other research is establishing a way of regulating microbial communities so that waste water can clean itself up; boosting the effectiveness of various drugs and vaccines and improving early diagnosis of emphysema.

It's little wonder that Kernohan, UniServices' founding CEO, looks quietly pleased as he puts the cap back on that whiteboard marker.

Wireless route to safer driving

Electricity without wires may sound like the stuff of science fiction but a team in the Department of Electrical and Computer Engineering is using it to make driving safer. Its research has led to the development of illuminated road studs that can be controlled remotely.

Professor John Boys, who heads the group, says the concept of inductive power transfer is more than 120 years old but until the development of power electronics with high-voltage, high-current transistors, it wasn't possible to generate the currents required.



"The idea lay dormant, partly because it's hard getting your mind around the fact that it is possible, but also because without power electronics you can forget it."

An IPT cable buried under a roadway magnetically transfers power to light-emitting diodes in the surface of the road which can be turned on or off or have their brightness controlled remotely. Ideal in tunnels or on pedestrian crossings, they can be seen through 30mm of snow or 800m of fog.

IPT technology was commercialised by UniServices, and Professor Boys says the studs are being sold in increasing numbers in Europe. They are installed in The Terrace tunnel in Wellington and are planned for other sites including Fitzgerald Glade near Rotorua.

On a much larger stage, IPT is also being used to power vehicles in "clean" factories needed in manufacturing dust-sensitive componentry such as semiconductors.

"Clean factories are 10,000 times cleaner than an operating theatre," explains Boys. "And IPT powers vehicles without sliding contact, so it generates no residues. It's a perfect application which is now a $US1 billion industry where inductive technology is used in 85 per cent of all clean rooms."

New cancer drug has huge potential

A new cancer drug developed by scientists at the Auckland Cancer Society Research Centre may dramatically improve cancer treatment because of its novel mechanism of action.

The team at the research centre at The University of Auckland has brought seven cancer drugs to clinical trial. One, named DMXAA for its chemical makeup, has been shown to restrict the supply of nutrients to a tumour by constricting its blood vessels. At the same time it stimulates the release of immune system chemicals called cytokines that cause the blood vessels to haemorrhage. Thus weakened, the tumour is more vulnerable to existing forms of drug therapy.

Professor Bill Wilson, a member of the research team, said that eight of the nine widely-used chemotherapy drugs produced a significant delay in tumour growth when administered with DMXAA. "In one combination, four out of 11 tumours were cured," he said.

On behalf of the centre, UniServices has established a partnership with a British pharmaceutical company, Antisoma. The agreement means UniServices, the British-based Cancer Research Ventures and the Auckland Cancer Society, which helped pay for the work, will receive royalties if the drug is a success.

The work is a classic example of the way research requires long-term investment of money and human ingenuity: the University of Auckland team has been working on DMXAA for more than 15 years, but its tumour-starving potential has become apparent only recently. Two human clinical trials, known as Phase 1 trials, have been finished in New Zealand and Britain, and Antisoma now aims to start studies using DMXAA with chemotherapy by the end of next year.

"IN UNIVERSITY RESEARCH, IT'S MY EXPERIENCE THAT THE REALLY IMPORTANT DEVELOPMENTS TURN OUT TO BE LARGELY SERENDIPITOUS."

– JOHN KERNOHAN

"We are lucky at The University of Auckland," he says, although it's pretty plain that luck doesn't have a lot to do with it, "because we have a few who are world leaders and more than a few who are world-class. We are able to help them leverage the resources here so that they get what they need to do what we know they can."

A masters graduate in chemical engineering from The University of Auckland, Kernohan did a PhD in Boston before taking a job with General Electric.

"We were doing some really cutting-edge things there," he remembers, "but it was also part of a factory which was a real eye-opener for me. You would come up with a great idea and they would say: 'Great. How are you going to make this? You better get yourself out into the factory and make it' or they'd say 'Who's going to buy this? Here are some plane tickets. Go off and find some customers'.

"It was excellent training for UniServices."

Back in New Zealand, he worked for ICI – at the time the largest manufacturing organisation in New Zealand – until the UniServices job caught his eye. Although he was the founding CEO, he is quick to give credit to the other early players: the then Dean of Engineering, Professor Ray Meyer, the then Vice-Chancellor, Dr (now Sir) Colin Maiden and the first chairman, Sir John Ingram, the managing director of New Zealand Steel, who was Pro-Chancellor and "a great supporter from an early stage."

Since December 1989, UniServices has been the technology transfer company for The University of Auckland, securing research funding and exploring the commercial possibilities of research undertaken by its academics and its own staff.

Kernohan says the nature of the company's operations has changed substantially since it was established.

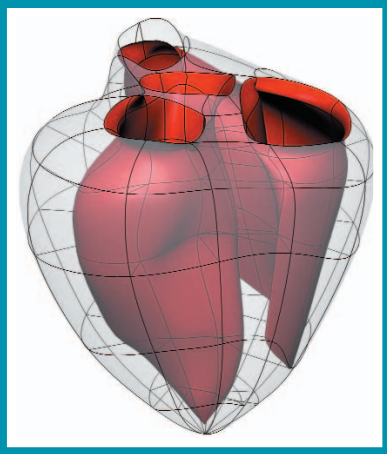
"Those were the heady days of the late 80s," he recalls, "and, even after the crash, it was still widely thought you could come up with a great idea and simply float it on the stock exchange and make a lot of money. But it soon became clear to us that, in terms of commercialisation, the most useful thing that universities can do is transfer knowledge to outside organisations. The most useful way of creating wealth for New Zealand is for us to undertake commercial research contracts, even to the extent of sometimes giving away intellectual property that arises from this work – provided of course that the client pays a decent contract price in the first place!"

In other words, Kernohan says, it quickly became apparent that the University should devote its energy to doing what it does best.

"We should stick to doing research. That's our business. If we can get a research contract that gives rise to publication, gives rise to the training of graduate students, enhances the resources inside the University that are available for research, that is actually as good as making money for the University.

Virtual heart at cutting edge

Professor Peter Hunter's heart stops when he turns his computer off. It's not his own heart of course but an on-screen organ, an interactive model of a heart that behaves almost like the real thing.



The heart is one of several models which are the work of the team at the Bioengineering Institute: Dr Merryn Tawhai's model lung is another and similar work is being done with the musculo-skeletal and digestive systems.

The scientists' work is at the cutting edge of what is known as "computational physiology" which in essence construes human organ systems as a series of mathematical processes. Their models differ from conventional video animations because they are not pictures but working facsimiles: Hunter's heart has translated the organ's intricate functions into mathematical equations that are programmed into a computer and run as simulations.

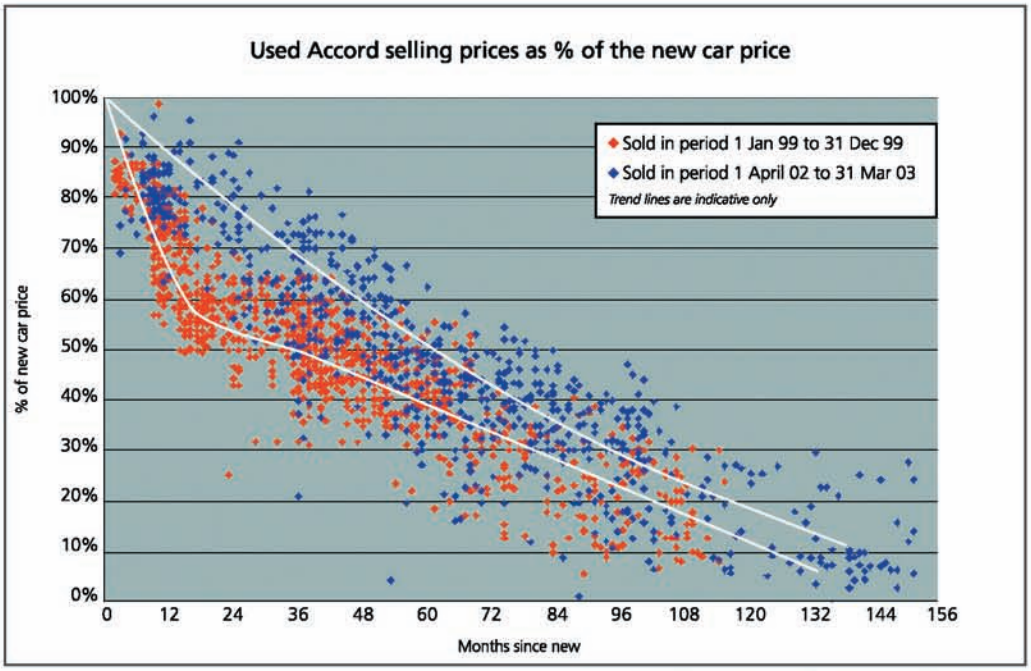
The field has exploded in recent years as computing power has grown to match its demands and Hunter explains that the models are a valuable complement to experimental observations because of the amount of information that can be extracted from them.

"You don't build any engineering system without modelling it extremely thoroughly, based on basic laws of physics. This applies the same approach to biology."

The work at the Institute has put The University of Auckland at the head of the pack internationally and the commercial opportunities being developed in conjunction with UniServices are virtually endless.

"The technology is already being used in diagnostics and the design of medical devices," says Hunter, "but the long-term real spinoffs will be in drug discovery."

Before you buy a new company car, see how it performs in a straight line.



KPMG verified a sample of this information 29 May 2003

When you choose to drive a new Honda, you're investing in some of the world's finest engineering. Recent arrivals, the Jazz, CR-V, Accord Euro and Accord V6 have all received rave reviews for their astonishing performance and refinement. But there's another area in which Honda continues to outperform the competition - resale value.

It is often said that in its first year on the road, a new car can shed up to a third of its value, but not at Honda, we promise.

Prior to the introduction of Our Price Promise, Honda operated just like every other distributor in NZ and as a result, even new Hondas suffered the effects of steep depreciation. But today, it's a different story.

Unlike our competitors, depreciation on new Hondas now approaches a straight line. That means instead of a steep drop, the depreciation rate remains constant throughout the life of the car.

Our Price Promise means that everyone, from the biggest company, to the average private buyer, pays the same fair, sharp price for their new car.

And when it's time to change, the transparency of our pricing enables everyone in the used car market to more simply determine the value of the car as it is consumed by age and use. For proof, take a look at the graph.

The blue dots are the resale prices of Honda Accord models sold by the Honda dealer network in the year to March 2003, where the price is expressed as a percentage of the current new car price.

The red dots represent results from our past. They are the resale prices of Honda Accord models sold in year ended March 1999, before the introduction of Our Price Promise. Today this (red dot) depreciation pattern is still typical of our competitors' vehicles.

So don't be talked into throwing away money on your next new car. Just head straight for your nearest Honda Agent. You'll drive away with a great car, the best possible price and lasting value.

We promise.

OUR PRICE PROMISE

See your Honda Agent	0800 255 666	www.honda.co.nz
For more information on the benefits of Our Price Promise call to request a brochure.		

HONDA

HON4881

"THERE WAS A FEELING THAT COMMERCIAL MONEY IS SOMEHOW TAINTED. BUT IF INDUSTRY COMMISSIONS US TO DO RESEARCH THAT'S AS GOOD AS THE GOVERNMENT DOING IT."

"Very few universities in the world embrace that idea. Most want to start companies and have academics owning shares and so on."

Unsurprisingly, perhaps, UniServices encountered early opposition in some quarters of academia.

"There was a feeling that commercial money is somehow tainted," says Kernohan. "But if industry commissions us to do research that's as good as the Government doing it. People speak about the pressure the commercial world can exert on researchers to get the 'right' result. The truth is that I've not seen it; indeed, the opposite has been the case. The demands of commercial research contracts in terms of the integrity of the results are often very stringent.

"I think we have made a lot of progress in laying those concerns to rest by establishing trust with academics and with the deans. We've always had a good deal of support – it was cautious at the beginning – but now it's outspoken. They have caught the vision.

"We have also proven ourselves to be very supportive of the academics' research interests."

Equally, UniServices ensures that potential clients know the company is working in their interests.

"Working with the folks in universities is a pretty novel concept for people in industry. Overseas there has been a perception that university folk don't always deliver. And one of the roles that UniServices plays is ensuring that the contract can be delivered.

"We have to act commercially. We spend a lot of money going after business and we believe we have to see the whites of their eyes so we take the researchers with us. We spend money in advance of getting any work. Universities overseas don't do that. They are there to make sure the academics behave themselves and to protect the institution."

None of this is to say that the scientists and academics whose work UniServices markets seek only to maximise corporate profit. Kernohan is adamant that there must always be room for fundamental – as opposed to applied – research, for researchers to go looking when they don't know what they are looking for.

"In university research, it's my experience that the really important developments turn out to be largely serendipitous," he says. "An invention, by definition, has got to have some completely new step that wasn't obvious. You can't place an order for it. Regrettably this is not well understood by Governments; they want outcomes. But we lose something precious if we lose the idea of keeping an eye out for the unexpected.

"If it was all about common sense and we excluded the unexpected, the world would still be flat."

Making the smart connection

One day, every home will have one of Mark Titchener's smart extension cords and we'll all be wondering how we ever lived without them. The prototype lead is the answer to the exasperation of anyone – and isn't this everyone? – who has tugged on a cord and lost power when it pulled apart.

Dr Mark Titchener, a lecturer in Computer Science at The University of Auckland, solved the problem by developing a slimline power connector that changes the way appliances connect to power supplies. UniServices is developing what looks certain to be global sales potential.

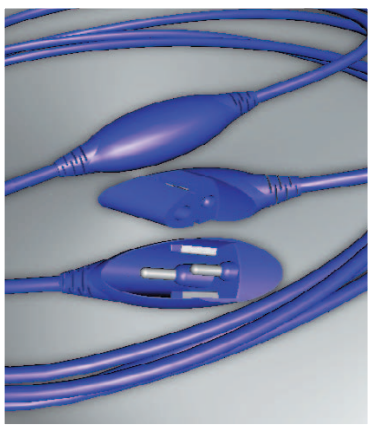
Titchener started thinking about the idea when he was cutting the hedge at the bottom of his garden; the extension cord kept pulling apart and the knot he tied to stop it kept catching on the hedge cuttings. His solution is so simple and elegant it makes you wonder why no one thought of it before: because the connector's pins angle backwards, pulling on the cord makes the connection firmer.

"The connector can't come apart accidentally," Titchener explains, "but it's easy to use and to swap between different tools as you go about your work. Also, because the connector is oval and smooth, it's much less prone to catch on obstacles. It behaves as if it isn't there."

What's smartest about the smart cord is that the new connection is integrated with the tool so, rather than joining the tool's existing power cord to the electricity supply, the extension cord can connect directly to an appliance. Thus it has potential to be a global solution for tools in countries with different plug configurations.

"It eliminates the inconvenience of a dangling cordset when an appliance is stored or handled," explains Titchener. "And if the cordset is accidentally cut or damaged, or becomes faulty, it can be exchanged with one from another appliance."

The invention, which has been protected by patent and design applications, has recently been written up prominently in the leading global appliance magazine, *Appliance Design*. Preliminary market research has indicated a strong interest by potential users, trades people and garden enthusiasts.



PERFECT FIT: The extension cord can't accidentally pull apart.

Assessment 'tool' speeds up evaluation

The phrase "university research" conjures up images of scientists in white lab coats, but some of the most commercially successful research being undertaken at The University of Auckland is in the Arts Faculty.

Researchers at what was then the School of Education – it has now become a faculty in its own right – developed an assessment and analytical "tool" which allowed teachers to evaluate their teaching and their students' learning faster than ever before. The programme tests literacy and numeracy of children in Years 4 to 12 working in curriculum levels 2 to 6.

Within weeks of its release last year, the programme had been requested by 90 per cent of primary schools and a high percentage of secondary schools. The Minister of Education, Trevor Mallard, has described it as "the best new education investment this Government has made" and it won an award for excellence in the use of IT in education.

The programme, known as the Assessment Tools for Teaching and Learning – asTTle for short – comes in the form of a CD-ROM which is free to schools. It contains all instructions, test items, scoring guides, and performance interpretation resources for understanding students' progress compared to national standards and norms. asTTle was developed by Professor John Hattie, Dr Gavin Brown and Dr Peter Keegan in partnership with UniServices, and was funded by the Ministry of Education as part of a $28.4 million package for assessment initiatives. It was trialled with 800 teachers and 90,000 students in 1000 schools.

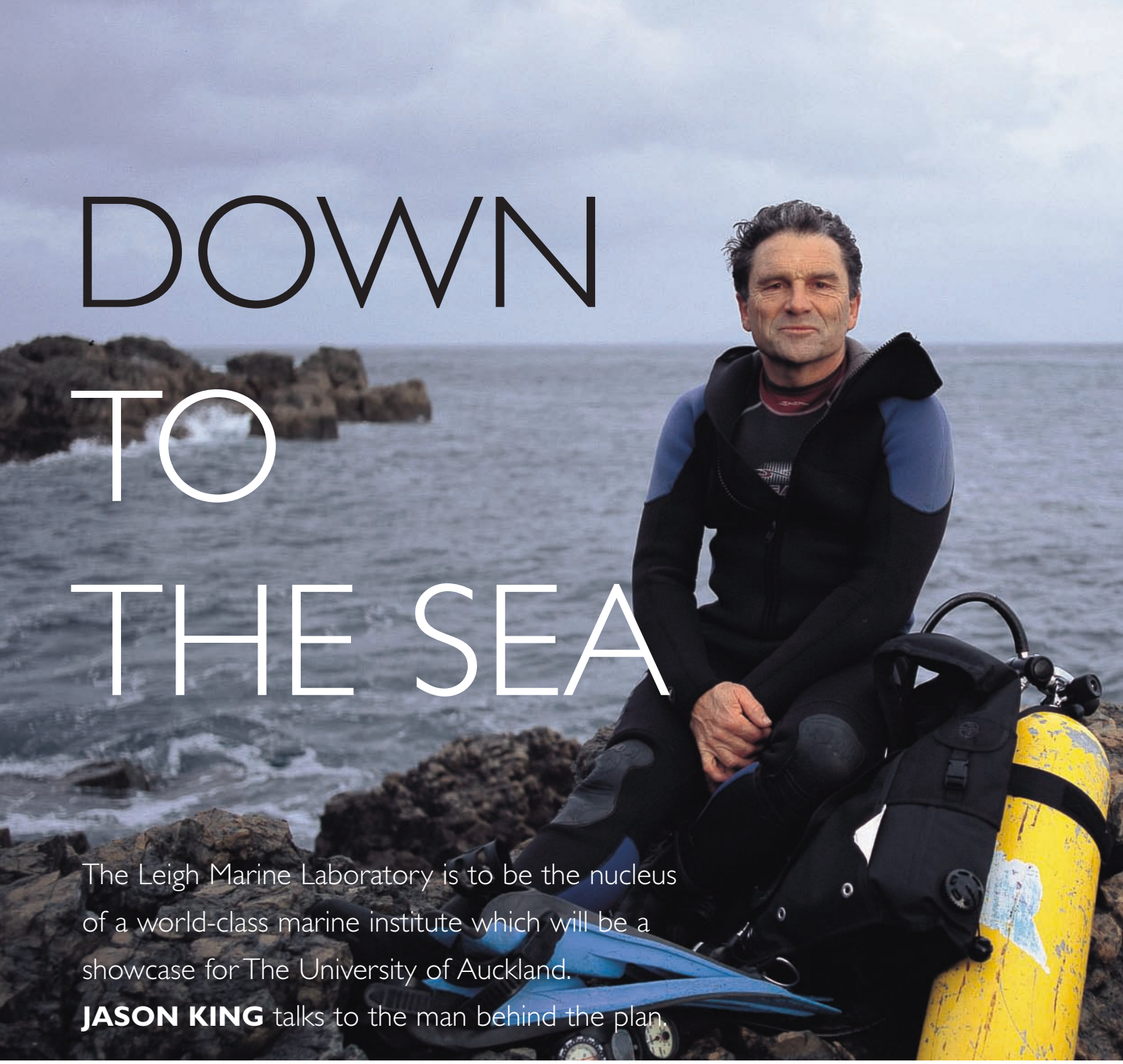
Senior project manager Gavin Brown says UniServices' support has "allowed us to get on with the job of inventing while they take care of all the strategic and legal things."

And UniServices is also exploring international sales potential: demonstrations in Australia, Scotland, South Africa, Malaysia and North America have attracted intense interest.

EDUCATION INVESTMENT: The tool for measuring teaching effectiveness has international sales potential. **PICTURE:** BRUCE CONNEW

DOWN TO THE SEA

The Leigh Marine Laboratory is to be the nucleus of a world-class marine institute which will be a showcase for The University of Auckland. **JASON KING** talks to the man behind the plan.



UNIQUE ECOLOGY: Professor John Montgomery at Leigh.

PHOTO: JOHN McDERMOTT

Scientists tend to keep the most wondrous things on their laptops. Take John Montgomery: the Professor of Marine Science at The University of Auckland and director of the Leigh Marine Laboratory can click on a digital video recording of one of the most incredible sights of the natural world.

In early summer the waters of the Poor Knights, a group of islands off the Northland coast, are home to hundreds of stingrays that congregate at an undersea spot called the Northern Arch. This natural rock formation serves as a gateway through which the rays, some with glorious 2m wingspans, circle in majestic procession for days on end.

Like most marine scientists, Montgomery has become a proficient diver. He has floated in awe under the dense river of undulating rays.

"You're looking up and it resembles a scene out of *Independence Day*," he says, referring to a famous science fiction movie. "They're like an armada of alien spaceships. It really is amazing to watch."

Nobody can say why the rays congregate at the Northern Arch or where they go after they finish their primordial dance. It is tempting to speculate that the community of rays is undergoing some rite of passage before setting out on trans-oceanic travel. But the fact is we don't know.

That's why Montgomery's graduate student, Agnes Le Port, wants to ensure that some of the rays take a small piece of baggage in the form of a geo-location tag when they head off on their mysterious migratory journeys this summer.

"We know from Great Whites [sharks] that the females remain on site. Their mitochondrial DNA has been traced and found strong population structure. So the implication is that the males roam widely, while the females don't. We'd like to see if the rays do something similar."

At Leigh, on the east coast, 90 minutes' drive north of the University campus, PhD student Daniel Egli has become proficient at tagging snapper and tracking their home ranges. The tags – properly known as

archival tags, they are around the size of a potato chip – are packed with computer power. Every 90 seconds, each tag records light and temperature levels and stores the data for up to two years. When the tag is recovered and the data downloaded, the readings allow the calculation of latitude and longitude determined by the time from sunrise and sunset. This provides a record of the fish's position and movement as accurate as that reported by a GPS system – which is not used because it cannot work underwater.

To further record the fishes' roaming, the laboratory also tags them with thumb-sized acoustic "pingers" that emit an ultrasonic signal picked up by an acoustic array of sonic data loggers anchored in the inshore waters of the Goat Island marine reserve. Tracking the movements of fish species is a significant part of marine science at Leigh along with its complement, figuring out how the marine animals know where they are going.

To human ears the world under the waves is muffled silence. To fish and other marine life, the aural world underwater is every bit as rich in sonic detail as the air is for keen-eared mammals. The trick is for human listeners to tune in the low frequencies, Montgomery says.

"Reefs make certain sounds. There's the snapping of shrimps. And kinas make a sort of fizzing noise once you've tuned into it. The noises there are persistent – there's even a dawn and dusk chorus."

A joint programme with Andrew Jeffs from the National Institute of Water and Atmospheric Research has found that larval fish and crabs are able to use the reef noise as beacons to guide them back to destinations crucial to their breeding cycle. The programme has recorded particular reef sounds and then replayed them near the middle of the Goat Island bay. Traps reveal that the fish recognise and home in on the reef sound-signatures.

Montgomery: "In an ideal world if you can find out how the fish are coming back to the reefs you can settle areas that have become depleted and stock marine reserves. The work does provide limited management opportunities."

The research is now examining other questions: the range, the intensity, and the effect of background noise – both natural, like rain, and man-made, like shipping. But the outcome has been a paradigm change: previously people thought larval fish were passive drifters with no control over their destiny. Now it appears that not only are they capable of swimming; they also know where they are going.

TO HUMAN EARS THE WORLD UNDER THE WAVES IS MUFFLED SILENCE. TO FISH AND OTHER MARINE LIFE, THE AURAL WORLD UNDER WATER IS EVERY BIT AS RICH IN SONIC DETAIL AS THE AIR IS FOR KEEN-EARED MAMMALS.

Montgomery, who has been at The University of Auckland since 1978 and became Professor of Marine Science in 2002, admits there was a certain inevitability to his choice of discipline. He grew up in Castor Bay, where the Hauraki Gulf was a constant presence and, as a high school student wondering what to study, he came to the attention of a neighbour by the name of Professor John Morton, formerly head of the Zoology Department. In the space of a 15-minute walk along the beach, the good professor "more or less convinced me that marine science was for me," recalls Montgomery.

The Leigh Marine Laboratory has been a source of scientific adventure but Montgomery has bigger plans. With the backing of the Faculty of Science, he is spearheading a move to replace the existing 1960s buildings with a $16-million, purpose-built facility which will be the centre of an Institute for Marine Science. As well as providing enhanced research facilities, the institute would support an endowed chair of Marine Science, an interpretation and educational outreach centre at the Goat Island marine reserve and a predator-free "mainland island" on the 45 hectares of land behind the current marine lab.

The land, Montgomery observes, is already a natural stopping-off point for bird life en route from Little Barrier; he would dearly love the land to offer sanctuary and knows it would quickly become re-populated once pasture is returned to bush.

The University of Auckland scientists made a great choice when they selected Leigh as a marine biological station in the 1960s. Cape Rodney, the point just east of the township, marks the edge of the Hauraki Gulf. Thus Goat Island offers true oceanic waters in a temperate kelp forest ecosystem and Leigh is one of the few marine laboratories in the southern hemisphere to occupy that important ecological niche. Equally important is the fact that Leigh is barely 90 minutes from the sophisticated laboratories at the City Campus.

The model Montgomery envisages is the Hopkins Marine Laboratory of Stanford University, near Monterey in California. The scale is similar to that of the proposed institute and Leigh researchers already collaborate fruitfully with the Hopkins staff.

Montgomery argues that a properly resourced Marine Institute would prove a great showcase for the University.

New Zealand's exclusive maritime economic zone of four million square kilometres is the fourth-largest in the world and The University of Auckland has the country's most comprehensive science facilities. Montgomery would like the institute to become a cross-disciplinary focus for a multitude of departments – from biology, geography and statistics to chemistry, physics and geology. He already has an engineering student studying the vortices and turbulence left by marine life, which both potential prey and predator can detect and choose to avoid – or follow.

"I'd like to involve the Business School as well in relation to projects with the maritime industries," he says.

The celebrated architect Pip Cheshire is a fan of the idea and has completed preliminary sketches, while expatriate Aucklander Owen Glenn, the chief executive of the US-based container shipping company NACA Logistics Group, has kicked off fundraising for the endowed chair with a contribution of $500,000.

A good analogy for what could be achieved by the planned South Pacific Institute for Marine Science comes from the new vessel commissioned in 2002 for the Leigh Marine Laboratory. The new 45ft vessel, Hawere (the Maori name for Goat Island), has a cruising speed of 20 knots, as opposed to the previous craft, the Proteus, which cruised at just 8 knots.

"The new vessel made a huge difference to what we can do," Montgomery says, "We can go so much further, at least three times further. We can do so much more."

GETTING THE HANG OF IT

The University of Auckland physicist named the best tertiary teacher of the year has generations of student fans. **CAMILLE GUY** sits in on a class and understands why.

The teacher preparing for the Stage Two physics tutorial darts about the podium, setting up his overhead transparencies and PowerPoint presentation, and laying out electronic equipment for demonstrations.

Promptly at five past the hour, his voice commands the students' attention. He dims the lights and directs his attention to the projected transparencies.

"The sea is a very noisy place," he declares. "The attenuation of sound is extremely low."

The style is spare. Every word counts. These fortunate students are being guided – softly, softly – through the complexities of underwater acoustics by a master pedagogue.

Dr Gary Bold is an acknowledged expert in this field. But he knows more than just his material; he is recognised as one of the University's – and the country's – best teachers.

Several generations of grateful students attest to Bold's expertise.

"He makes learning the material easy and interesting," says student Bernadette Waller. "He lectures in such an entertaining manner, inserting jokes, competitions and even songs into the work. He is one of the only lecturers who has managed to get responses to questions from students in class."

Bold's remarkable teaching ability was this year formally recognised by the Prime Minister when she presented him the Supreme Prize in the Tertiary Teaching Excellence Awards. The awards, conferred at a June ceremony at Parliament, paid tribute to his outstanding performance during a lifetime of physics teaching in which he has taught all courses at Stage One and Two, and all courses in geophysics, signal processing, network theory at Stage Three and Honours level.

The man whose class size has ranged from one to 300, was modest about his success. "After 43 years," he said, "I finally feel that I'm getting the hang of it."

Back in his Stage Two class, Bold is playing hydrophonic recordings of humpback whale songs. The arresting sounds help to illustrate explanations that are dense with mathematics. Just as the going gets tough, Bold remarks almost offhandedly that "you can hear whales that are in the Arctic on this side of the equator." The room comes alive.

University of Auckland Deputy Vice-Chancellor (Research), Professor Tom Barnes, a colleague of Bold's for 10 years, says that Bold taught him how to teach.

"His knowledge is encyclopaedic and his enthusiasm boundless," he says. "I have to say that Gary's lecture preparation is simply the best I have ever come across."

This familiarity with his teaching material leaves Bold free to concentrate on class dynamics. But his commitment to his students goes beyond the lecture hour.

"Time and again I have seen him surrounded at the end by a group of animated young people eager to bounce ideas off him and know more," says Barnes.

Bold's office door is always open to students and he happily breaks off whatever he is doing to talk to them.

"He has a continuous stream of young visitors," says Barnes. "He deals with them all in the same friendly fashion. Formal tutorial times are not enough, so he has a blackboard on the wall in the corridor outside his door, and it is not unusual to find him there in animated discussion with an enthusiastic group of students."

Bold was still a student when he started teaching in 1960, while working on his MSc thesis. A head of department, caught short by the sudden death of one of his staff, appointed Bold temporary junior lecturer to teach next term's course in thermodynamics. Even then, Bold's presentation skills were attracting attention.

"I was thought to have the gift of the gab," he says. "I had my own skiffle group, I emceed weddings and dances and I sang and played piano in my own dance-band. Such behaviour by young physicists was unusual."

But the youthful Bold was also aware of the abysmal standard of much of the lecturing, particularly in science.

He knew it could be done better, since he had often attended lunch-hour lectures by luminaries like Dr John Reid and Professor Sydney Musgrove of the English Department and historian Professor Keith Sinclair. He went to talks by classics professor Edward Blaiklock who would read the New Testament in Greek, with interpretation.

"That was fascinating and humbling," says Bold. "It taught me about the importance of presence, of rhetoric, of drama, and of breaking up your presentation. Those English scholars in particular were masterful at that and you could sit through a whole hour just listening to them talk. At the end you would think 'Where did the time go?'

"Well none of our science lecturers were like that, so I determined I would try and inject that energy into what I do."

Bold continued teaching while he finished his Masters thesis and then did a

TOP OF THE CLASS: Dr Gary Bold is the best university teacher in the country.

PHOTO: JOHN McDERMOTT

PhD. He taught by day, did research at night and "six years of my life passed without my noticing."

He was not, however, too preoccupied to notice one Rosemary Bentley, a graduate in languages and history. They married in 1966 and their three now-adult children are all science graduates of The University of Auckland – two are ex-students of their father.

Bold says that teachers have had to adapt to satisfy the demand for coursework assessment and to cater to a much wider range of student ability.

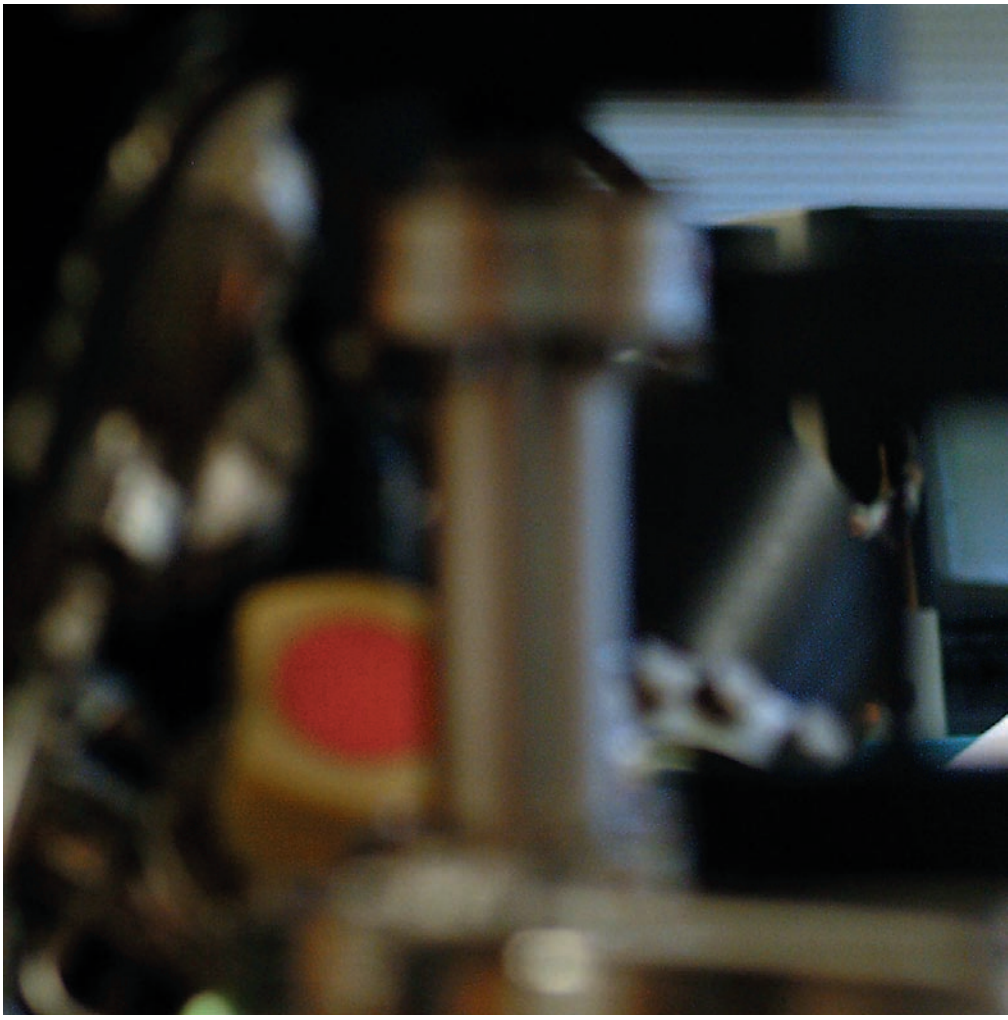
"The top 10 per cent of a class would have been idling along, rather bored with what I am doing, if I had not given them an interesting problem to think about. That is why I am often doing so many disparate things. Some people learn more visually, others by looking at the blackboard and working out what I am doing."

Idling along seems unlikely in Bold's action-packed classroom. Midway through the hour, one of the Chinese students leaps up to announce the solution to the testing problem Bold had set at the start of class. Even this jaded reporter shares the sense of epiphany.

• Dr Gerard Rowe of the Department of Electrical and Computer Engineering at The University of Auckland won a Sustained Excellence prize at the Tertiary Teaching Excellence Awards

SURFACE AREA

The decision to award a big research grant to the young director of a University of Auckland research centre was a vote of confidence in her potential, reports **JADE REIDY.**



SKIN DEEP: Bryony James in the lab: "Even when I was a kid I was taking things apart."
PHOTO: GODFREY BOEHNKE

The very idea seems like a paradox: surfaces have hidden depth. The surface of an object, by definition, has no thickness. But surfaces are composed of many layers of complex atoms. Equally, although objects cannot be said to be alive, when one surface comes into contact with another, the chemistry of each may be profoundly and unpredictably altered by the interaction.

Studying what takes place within and between surfaces as much as 100,000 times thinner than a human hair is Dr Bryony James' daily work. The Director of The University of Auckland's Research Centre for Surface Materials Science (RCSMS) spends her days plumbing those invisible depths. Her work, which is attracting substantial funding, may provide the basis for cost-effective processes of coating and protecting industrial equipment. New technology could mean, for example, that the scraper blades on ice-cream making machines would remain sterile and serviceable for far longer than they do. These innovative processes would also have a lower environmental impact, making what's known as "clean technology".

James' research was boosted by a $1.3 million, four-year grant from the Foundation for Research, Science and Technology, announced in March. Awarding that level of funding to a 33-year-old is an unusual step, but the criteria of the foundation's New Leaders Initiative gave more weight to James' future potential than her established research track record.

The grant will pay for a team of researchers, led by James and colleague Dr Margaret Hyland, to experiment with coating equipment with polymers at varying heats, speeds and distances in a thermal spray booth using high-velocity guns. They'll then return to the lab with samples and study the results under sophisticated X-ray spectroscopes.

"There's scope as surface scientists," James says, "to take an engineering product and advance our understanding of why it does – or doesn't – work."

Thermal spray is applied as opposed to pure science – which is to say that it applies principles already established by scientific inquiry – but James says there are still fundamental questions to be answered about how polymer particles stick to metals.

"To date, most coatings have been optimised by trial and error," she says. "By understanding the underlying concepts we can offer industry the opportunity to make quantum improvements to the durability of their products."

Though she's considered something of a rising star in her field, James has been dismantling composite objects for nearly 30 years and finding out how they work.

"Even when I was a kid I was taking apart people's watches, fiddling in the back of toasters. Starting out in mechanical engineering at Bath University, I thought I'd made a huge mistake but when a friend introduced me to materials science I switched courses and never looked back."

"BY UNDERSTANDING THE UNDERLYING CONCEPTS WE CAN OFFER INDUSTRY THE OPPORTUNITY TO MAKE QUANTUM IMPROVEMENTS TO THE DURABILITY OF THEIR PRODUCTS."

Born in the UK, James came to The University of Auckland in 1993 to start a PhD. On completion, she was offered the job of technical director of the RCSMS. Last year, she was also voted one of the Faculty of Engineering's top 20 lecturers for her ability to teach concepts in compelling ways to the 560 first-year students on the material sciences course.

"I don't rely on formulae but rather take a systems approach," she says. "Students need to understand why something happens, not just the mathematics of it – which isn't my strong point anyway – and I enjoy demonstrating ideas visibly. I'll take with me a ball of silly-putty, for example, to explain viscoelasticity."

Surfaces interest her particularly because at the atomic level they can bond with each other in one of two ways, either mechanically or chemically. In mechanical bonding the two surfaces adhere but do not interact, while chemically bonded surfaces may alter each other's structure and affect what lies underneath.

That fact will be of fundamental significance to the thermal spray project. The standard industry method is to dip industrial equipment in molten (liquid) polymer, which gives off volatile chemicals. The facilities for dipping also require large capital investment and the process' track record for protecting equipment against wear and corrosion could, says James, be significantly improved upon.

At stake are intellectual property rights: research results will specify how best to prepare and spray a surface for optimum polymer coating and that modification to the existing gun-based technique will be licensed.

Probing minute atomic layers requires state-of-the-art technology. In the six years of James' leadership, the RCSMS in the School of Engineering has gone from possessing two items of imaging equipment to being a $3.4 million facility, whose equipment is unrivalled in New Zealand and equal to that of any university in the world.

Sample analysis times will be radically improved with the delivery, next month, of a new $1.25 million X-ray photoelectron spectroscope. Its sophisticated imaging capability also means that, for the first time, the researchers will be able to pinpoint the location of elements on a surface.

Early next year, the centre will become the only one in this country to possess an environmental scanning electron microscope, which will offer unique possibilities for examining surfaces as they change.

"As far as I am aware," she says, "no other coatings group in the world will be probing surface chemistry as closely. We'll be getting intimate with the atoms to find out what's going on."

The centre aims to be self-funding by attracting up to 60 industry clients annually and it will lure leading academic researchers from other New Zealand universities. Industry clients range from small, start-up companies to corporates such as Bluescope (formerly BHP) Steel and Nestlé. Typically, requests fall into two categories: analysis of foreign particles in products and ongoing technical support for developing new technologies.

Researchers from Victoria University's McDiarmid Institute for Advanced Materials and Nanotechnology, and from Canterbury and Waikato Universities, make regular use of the centre's facilities, as do eight departments within The University of Auckland itself.

"It's a great model for New Zealand," says James. "We're too small to have duplication and I don't want these shiny pieces of expensive equipment sitting idle."

EMERITUS PROFESSOR ROBERT (BOB) CHAPMAN

PROFESSOR JIM HOLLYMAN

OBITUARY

One of the two eulogies at the funeral of **Emeritus Professor Robert (Bob) Chapman** was delivered by the Prime Minister, the Rt Hon Helen Clark, his former student and academic colleague who was also a long-time friend. The PM's presence underlined the deep and widespread respect for Professor Chapman, who died in May. The Political Studies Department, which he founded in 1964, is now one of the largest in Australasia, with 18 permanent academic staff including three professors. Professor Chapman pioneered the study of New Zealand – and especially electoral – politics and was the acknowledged expert in the field for 30 years. Moreover he began this work, as one commentator wrote, "in an era where there were no opinion polls, no computers, and little readily available social data".

His MA thesis on the significance of the 1928 election was "at the cutting edge of political science research internationally" said Professor Barry Gustafson, another colleague, in his funeral tribute. Professor Chapman was head of department for almost 25 years. As well as teaching, researching and writing about New Zealand politics he gave frequent broadcasts and was prominent in television coverage of election-night results in 1966, 1969 and 1972. His expertise on the media was recognised in his appointment to the 1973 ministerial committee to restructure broadcasting and his chairmanship of a Royal Commission on broadcasting and telecommunications in 1985.

Professor Jim Hollyman, a French scholar who died in August, was an early pioneer of the ethos of research-led teaching that is now the norm at The University of Auckland. Professor Hollyman, who retired in 1986 after 32 years at the University, had an international reputation in medieval French, French language in the Pacific, and languages in the Pacific more generally. He published widely in international journals and played a key role in establishing linguistics as a field of teaching and research in New Zealand. He continued his research work in retirement, undertaking studies of, among other things, French convict slang in New Caledonia and the vocabulary of the fauna and flora of the island.

As well as heading the department for a period he served as Deputy Dean and Dean of Arts, and as Assistant and then Deputy Vice-Chancellor.

In 1981 he received from the French Ambassador the title Chevalier dans L'Ordre National des Palmes Academiques in recognition of his many significant contributions to the promotion of French language and culture.

Merger creates a new faculty – and a fifth campus

The recent amalgamation with the Auckland College of Education has given the University its eighth faculty and its fifth fully-fledged campus in Auckland.

The new Faculty of Education's formation on September 1 was marked by ceremonies on the Epsom Campus, as it is now known, and on the City Campus (where the faculty will also have a presence).

Dr John Langley, formerly Principal of the College, is foundation Dean of a faculty which starts with 3834 full-time equivalent students and 837 academic and administrative staff.

COMBINED RESOURCES: The new faculty's Foundation Dean, John Langley, and the Acting Vice-Chancellor, Professor Raewyn Dalziel.

The College's origins go back to the establishment of the Auckland Teacher Training College in 1881 and it has occupied the Epsom site since 1926. Since the 1980s the College and the University's School of Education have co-operated in teaching. In 2002, the College and the University created an Institute of Education to manage a limited range of collaborative projects.

The Acting Vice-Chancellor, Professor Raewyn Dalziel, says the faculty has an important role to fulfil in New Zealand's education sector.

"If New Zealand is to become a knowledgeable society, our education system must equip our young people with the knowledge, skills and attitudes that enable them to participate fully in society, in lifelong learning. This faculty will take a leadership role in making this possible for future generations."

The integration of research and professional practice is central to the faculty's vision, says Professor Dalziel.

"Our researchers will address significant educational problems in ways that will influence educational policy and practice. Our educators and practitioners will incorporate research values and skills into their own practice."

Dr Langley says the new faculty brings together excellent researchers, educators and experienced practitioners from across the early childhood, primary, secondary, kura kaupapa Maori, Pasifika early childhood, special needs, social work and human services sectors.

"This combination of knowledge, skills and experience will provide a rich research and learning environment for our staff and students. The vision for the faculty is that it becomes recognised nationally and internationally as New Zealand's leading provider of professional education and educational research."

The former College's Tai Tokerau Campus in Whangarei will continue, as will its presence in Kaikohe.

FALE PASIFIKA OPENING FULFILS A DREAM

PROUD DAY: The fale will be the focus of the Pacific curriculum.

PHOTO: GODFREY BOEHNKE

The opening of the Fale Pasifika – the second-largest such structure in the world – brought one step closer the vision of a headquarters for the University's Pacific academic and research programmes.

The fale was filled to overflowing for the October 2 opening, which was attended by the Prime Minister, Helen Clark, and the Prime Minister of Samoa, Tuila'epa Sailele Malielegaoi.

The Government was also represented by Phil Goff, Minister of Pacific Island Affairs; Taito Phillip Field, Associate Minister for Pacific Island Affairs; and MPs Luamanuvao Winnie Laban, Pansy Wong and Richard Worth. Pasifika communities were out in force for the occasion, led by Eseta Fusitu'a, Chief Secretary and Secretary to the Cabinet of Tonga and Arthur Iaveta, Consul General for the Cook Islands.

In a speech that had many people visibly moved, Dr Melani Anae, director of the Centre for Pacific Studies, said the fale – which is sited near the Waipapa Marae – fulfilled the dreams of "parents and grandparents who came to Aotearoa so that their children and their children's children would have a better education."

"My parents, like many other migrants, worked on factory floors, but they had dreams for us, their children, that New Zealand would be a better place for succeeding generations."

From 2005 the fale complex will be the focus for a new Pacific curriculum at the University, with a centre for excellence in Pacific research also planned.

STOPPING THE BRAIN DRAIN

What if the injured brain could repair itself? **JOANNA WANE** meets a young scientist whose research aims to stimulate stem cells to go on fix-it missions.

In the universe of the human body, the brain is largely uncharted space which has only in recent years begun to surrender its deepest secrets to scientific inquiry.

A highly complex command centre controlling memory, movement and even our moods, it was always believed to have one fatal flaw: that it lacked the capacity for self-repair.

This theory was finally debunked in 1999. Researchers in California analysing brain tissue from cancer patients who had been injected with a dye that labels dividing cells, stumbled across something unexpected: not only did the adult brains contain stem cells, those cellular building blocks thought to exist only in the brains of newborn babies; they were able to divide and create new brain cells.

Then University of Auckland pharmacologist Dr Bronwen Connor dropped a bombshell of her own. In research funded by the New Zealand Neurological Foundation, she discovered that, in adults with brain disease, stem cells responded to a distress call from the area under attack by sending out reinforcements on a rescue mission to replace brain cells that had died.

That, says Connor, was a revolutionary concept. "The whole regenerative side of the brain was thought to be non-existent. But this opened up a whole new set of ideas about the potential treatment of brain disease and injury."

In brain tissue bequeathed by patients suffering from the degenerative neurological disorder Huntington's disease, a team led by Connor and Professor Richard Faull (of the University's Anatomy Department) found more stem cells than normal in the brains of Huntington's patients. New brain cells had started to form.

Next, she tracked the development of stem cells in brain tissue from rats with Huntington's lesions. Again, the cells began to replicate. Then they went on the move, spreading like an invading army into the damage zone. The brain, it seemed, was trying to fight back.

Connor, who spent three years in Chicago doing her post-doctoral fellowship, says it was particularly satisfying to share such a significant breakthrough with colleagues in the United States. "It absolutely polarised views," she says. "Some thought it was incredibly exciting; others were a bit sceptical and said, 'Show us more'. When people react like that, you know you're onto something."

In September, she launched a $700,000 project, funded by the Health Research Council, to prove the sceptics wrong.

"IT ABSOLUTELY POLARISED VIEWS … SOME THOUGHT IT WAS INCREDIBLY EXCITING; OTHERS WERE A BIT SCEPTICAL AND SAID, 'SHOW US MORE'. WHEN PEOPLE REACT LIKE THAT, YOU KNOW YOU'RE ONTO SOMETHING."

Connor, 31, a senior lecturer in the Faculty of Medical and Health Sciences, is widely respected as one of the University's most talented young scientists. A keen athlete who represented New Zealand in rowing, she initially planned to do sports physiology before being drawn into pharmacology, then deciding to specialise in neurological research.

"The brain is a fascinating organ that does so many different things," she says. "We keep finding that it has more and more potential. And because it's associated with our individuality and our personality, it's always thought of as something special. The only other organ that comes close is the heart."

The project that Connor is heading will focus on Huntington's disease, an inherited disorder that affects about one in 15,000 New Zealanders. Currently untreatable, it short-circuits the part of the brain that controls movement, causing a slow, insidious deterioration of motor function over a period of 10 to 15 years.

The reason for focusing on Huntington's is that the part of the brain destroyed by the disease sits right alongside the strip where stem cells cluster, so new migrating brain cells don't have to travel far to do their work.

Connor believes the brain already goes into fix-it mode when damaged by trauma or disease – but it's too little, too late. The focus of the research is to enhance that natural process, by stimulating the formation of new brain cells and luring them to where they are needed to replace the functions being lost.

If successful, the same technique could be applied to the treatment of brain injuries and a whole range of neurological disorders, including stroke, epilepsy, and Alzheimer's and Parkinson's diseases.

Two experiments, both using gene transfer techniques, will run in parallel during the three-year project. In the first, stem cells in a cultured brain tissue from rats with Huntington's lesions will be "tagged" with a viral vector. The virus itself is harmless – its disease-causing elements are carefully removed before insertion – but it infects dividing cells and makes them glow under a fluorescent light.

What happens next tests the belief that specific proteins in the brain play a role in stimulating stem cell renewal. A dot of these proteins will be dropped on to the diseased tissue and also onto a sample of healthy tissue. Both will then be videotaped, using time-lapse imaging, every three hours to track the migration of the labelled cells in response to both the delivered protein and to cell loss in the diseased tissue.

In the second experiment, a gene carrying the proteins' DNA will be injected directly into the striatum of rats with Huntington's. The striatum is the part of the brain that controls movement and is affected by the disease. This time, instead of infecting only dividing cells, the virus on the gene will distribute proteins indiscriminately, in an attempt to encourage the creation of new brain cells and attract them to the key site of cell destruction.

"THE BRAIN IS A FASCINATING ORGAN THAT DOES SO MANY DIFFERENT THINGS."

Equally important is finding out whether this fresh supply of brain cells is of the right type to start taking over brain functions that have been impaired. One way of testing this will be to analyse the rats' motor skills, to see if there is any reversal or slowing in the degenerative effects of the disease.

The migrating brain cells make relatively speedy progress, says Connor. In rats, they've been tracked from the middle of the brain to the olfactory bulb in the nose in less than seven days. Inching along like microscopic caterpillars on their heroic journey, they stretch out feathery-looking feelers, constantly searching for a new connection.

Connor's own career pathway has been all about making the right connections, too. Her research team co-leader, Professor Richard Faull, was one of her PhD supervisors and is the director of the New Zealand Neurological Foundation Brain Bank, which stores tissue bequeathed for medical use – an invaluable resource that Connor has drawn on for her ground-breaking research.

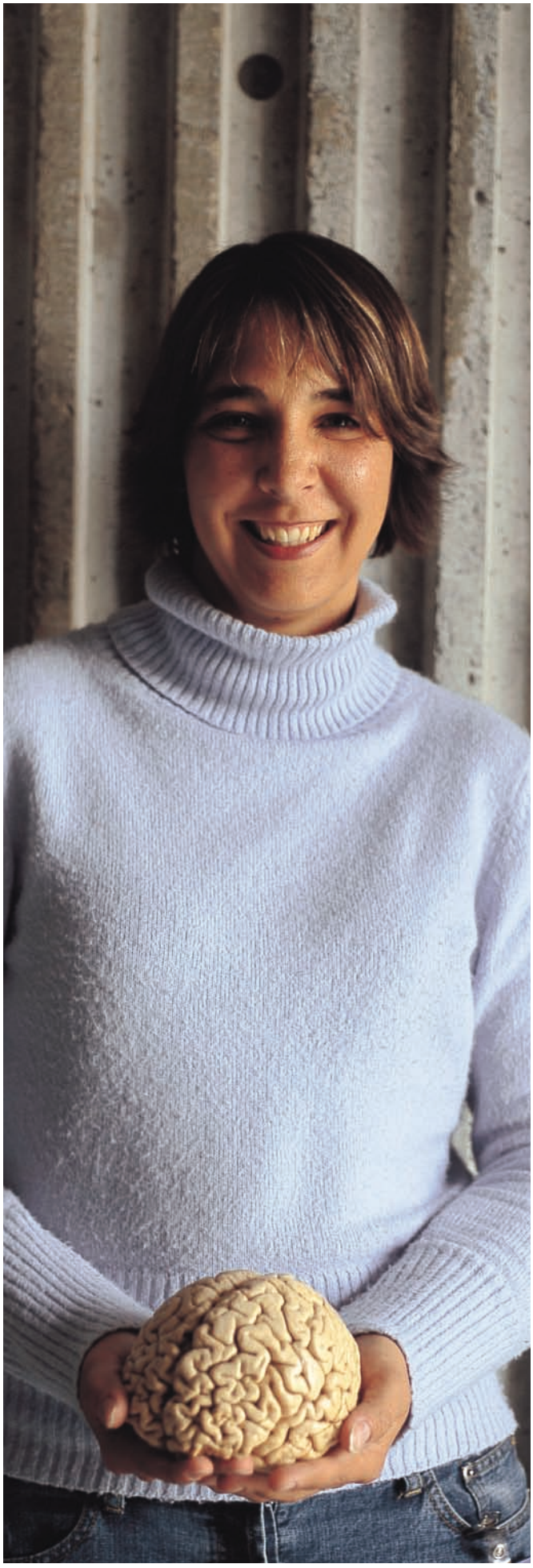
In Chicago, Connor spent three years at Northwestern University at a time when the controversial field of gene therapy first erupted onto the scene – becoming trained in techniques which are at the heart of her brain-repair project today.

From there, she returned home in 2000 to set up her own laboratory where she now leads a team of 10.

Still in its infancy, research on brain repair is a fast-moving field internationally and the potential for limiting or reversing critical damage is enormous.

Although not directly involved in clinical trials, Connor says that she never loses sight of the human cost of neurological disorders. Her grandmother suffered from Alzheimer's and she has regular contact with families affected by Huntington's disease.

"They remind you exactly what you're doing and why," she says.



UNCHARTED SPACE: Dr Bronwyn Connor wants to unlock the brain's secrets. **PHOTO:** JOHN McDERMOTT

THE MEANING OF MEANING

New research by University of Auckland academics is commanding worldwide attention from those who study the complicated processes involved in translation.

WORDS' WORTH: The Pacific is terra incognita, says Dr Sabine Fenton.

PHOTO: GODFREY BOEHNKE

Humpty Dumpty knew what he meant and insisted that was all there was to it.

"When I use a word," he said scornfully to Alice in *Through the Looking Glass*, "it means just what I choose it to mean – neither more nor less."

Translation – part science, part craft and part art – has gone a long way in the last three decades towards proving how wrong the egg-shaped gentleman was. Any English speaker who has tried getting to grips with the Maori word "kaupapa" or the German word "Zeitgeist" has had a glimpse of how difficult it can be to translate a word while preserving all the nuances of its original meaning.

"When they first learn a foreign language, people just change one word into another," says Dr Sabine Fenton, the Director of the Centre for Translation and Interpreting Studies at The University of Auckland. "A translator on the other hand knows that we don't translate words; we translate the ideas that the words contain – and nobody works in a vacuum. The context of the translation, the ideology of the time and the personal motives of the translator all come into play in the process."

The power of translation to create, rather than simply imitate, is the concern of a new book, edited by Dr Fenton and featuring work by several University of Auckland academics. *For Better or For Worse: Translation as a Tool for Change in the Pacific* published this year by St Jerome Publishing in Manchester, is making big waves in the international field of Translation Studies.

The discipline began in the 1970s and has traditionally been dominated by European, and more recently American, academic writers. But Dr Fenton explains that the Pacific, which has up to now been unknown territory in the field, is proving an exciting new field of study.

It's rich territory. The Pacific – in particular Melanesia – is one of the planet's most linguistically diverse regions (Papua New Guinea alone has some 860 distinct languages, more than 20 per cent of the world's total). But it is also an area, as Dr Fenton explains, where translation has powerfully affected cultural identity.

The last two decades have seen the rise of post-colonial theory – an approach to academic study which explores the idea that colonialism changed the cultures with which the colonists came into contact. And Dr Fenton says that the study of the power of translation to change the views of people and create identity is a new and exciting area of study.

"Translation is a tool of conquering," she says, "but it's also a lightning rod in the period that follows and most importantly it can also be a tool of decolonisation."

The book has had the effect of bringing Translation Studies in this region into the scholarly mainstream. Dr Fenton says that *For Better and For Worse* was keenly sought by publishers and that when she gave a paper at a recent conference, she received three approaches within two hours from editors of prestigious journals keen to include it in upcoming issues.

"The Pacific is *terra incognita* in this area," says Dr Fenton. "It's a new world and the work being done here is making the world sit up and take notice."

The New Zealand experience with the Treaty of Waitangi is an enormously instructive example of how highly charged – historically, politically and philosophically – translation can be, and it forms the basis of two of the eight papers in the book. In "The Humpty Dumpty Principle at Work", Professor Margaret Mutu of the Department of Maori Studies examines how the mistranslations into Maori of the 1835 Declaration of Independence and the 1840 Treaty meant that the two sets of Treaty signatories had entirely different understandings of what they were agreeing to.

"The Maori version did not say what the English version said," Dr Fenton says. "If it had, the Maori would never have signed it. The translator made certain adjustments and the difference was intentional. It was written in such a way that the Maori did not think they were giving away much."

But a second paper, co-written by Dr Fenton, argues that the existence of the Maori version has inspired the Maori cultural renaissance in the late 20th century.

"Because of the mistranslation, Maori lost their sovereignty and lost their land. But they always clung to their translation. It was a focus for the resistance movement and now it is a tool of decolonisation because Maori are laying claim to what is said there. It is a world-class example."

Other University of Auckland academics whose work is included in the book are Professor of French Raylene Ramsay, who examines the relationship between French and indigenous Kanak languages in New Caledonia, and Dr Melenaite Taumoefolau of the Centre for Pacific Studies who looks at the difficulties of rendering into English the poetry of Queen Salote, the mother of the king of Tonga.

PARTNERSHIP APPROVALS CONFIRM AUCKLAND'S STATUS

The University of Auckland is the home of two new initiatives in a major new scheme for funding large-scale research projects. Under the "Partnerships for Excellence" scheme, the Government matches – dollar-for-dollar in the form of interest-free loans – private-sector funds raised by institutions for approved programmes.

The University's new Business School was the first project to benefit from Partnerships for Excellence; in 2002 it gained a Government pledge of $25 million in return for raising the same amount.

Institutions put forward 11 proposals in this latest funding round and only two – both from The University of Auckland – were approved. The University will receive up to $20 million for an initiative in biotechnology and towards a programme to transform educational outcomes for students currently under-represented at tertiary level.

The partnerships are a model of the way elite university research can connect directly with community and national needs and confirm the position of The University of Auckland's place as the engine room of an innovation economy.

The Acting Vice-Chancellor, Professor Raewyn Dalziel, said that the funding decisions acknowledged the university's outstanding capacity to contribute to world-class research.

"The extensive knowledge and expertise the University can bring to these projects will advance national needs in areas identified as priorities by the Government."

The establishment of an Institute for Innovation in Biotechnology within the School of Biological Sciences will be supported by Government funding of up to $10 million. The Institute will need to raise an equivalent $10 million from the private sector and the University will raise the balance of $12 million.

The Institute will provide a world-class centre for graduate training, research and entrepreneurship in biotechnology. It will be the first of its kind in New Zealand – and one of only a few such centres internationally – where graduate students work in an entrepreneurial environment to develop both research and commercialisation skills.

The partnership underlines the Government's conviction that a vibrant biotechnology sector is a key to returning New Zealand to the top half of the OECD countries in terms of GDP per capita, said Professor Dalziel. She pointed to estimates by the Government's Biotechnology Taskforce that, over the next decade, biotechnology could create jobs and new businesses and approach $1 billion a year in export earnings.

Professor Joerg Kistler, Director of the School of Biological Sciences, said the new Institute's researchers will collaborate with researchers from other tertiary institutions, Crown Research Institutes (CRIs) and industry, making it an invaluable national resource.

"One of the Government's goals for the biotechnology sector is to shorten the time between discovery and commercialisation by building centres of critical mass, which bring together academics involved in basic research and discovery with applied researchers from industry," he said.

"Establishing this critical mass will make it easier to build international relationships, and reduce the catch-up phase required for New Zealand to become a competitive player on the global biotechnology stage."

Professor Kistler said the Institute would also help attract top international talents and entice leading expatriate academics to return.

The other project to receive Partnerships for Excellence funding aims to deliver high quality research that will precisely identify the barriers to participation and success in tertiary study.

The project, known as "Starpath: Project for Tertiary Participation and Success", will be profiled in the next issue of *Ingenio*.

HIGH-LEVEL PARTNERSHIP: Professor Joerg Kistler and Prime Minister Helen Clark.

PHOTO: MARTIN SYKES / NEW ZEALAND HERALD

TAKING CARE OF BUSINESS

An innovative partnership dreamed up by a water tycoon will help train tomorrow's entrepreneurs, reports **ANGELA McCARTHY.**

GENEROUS GESTURE: "We're all born entrepreneurs," says Tony Falkenstein.

The head of the country's leading supplier of drinking water has donated six million shares in his business to stimulate business education.

Tony Falkenstein, the managing director of Just Water International Ltd, passionately believes that business and entrepreneurship education hold the key to our economic prosperity. And he has put his money where his mouth is, giving $3 million in Just Water International shares to three institutions, including The University of Auckland, where he gained a commerce degree, and his old high school.

The company listed in June on the NZX alternative market (NZAX) with an initial public offering of 16.5 million $0.50 shares, and Falkenstein donated two million shares each to The University of Auckland Business School, Onehunga High Business School and Unitec School of Management and Entrepreneurship. The shares are expected to yield dividends of around $80,000 to $90,000 a year.

The unsolicited donation is a very important gift from an alumnus of the University, says the Business School Dean, Professor Barry Spicer. "He simply gave it because he clearly believes in putting something back."

Although no definite plans have yet been made, Spicer says the donation will probably be used to further develop entrepreneurship, innovation and business growth in the Business School. "This is in line with Tony's vision and the underlying purpose of the gift."

The seeds of Falkenstein's generous gesture were sown three years ago when he read a report by the respected Global Entrepreneurship Monitor which said Kiwis were good at establishing entrepreneurial activities but not so good at hanging in for the long haul. The report disturbed him and set him wondering what would happen if schools gave the same emphasis to business as to compulsory subjects like science. To him it seemed "criminal" that business was not a compulsory subject in the secondary school curriculum.

"It's all back to front," he says. "Business should be a mainstream subject because everyone ends up in business one way or another."

So Falkenstein decided to explore the concept of a business school that encouraged entrepreneurial aspirations in secondary-school students. He got together with Chris Saunders, principal of his old secondary school Onehunga High, and 18 months later the first New Zealand high school business school opened. Falkenstein provided $300,000 start-up funding and remains actively involved as a member of the board.

Saunders is full of praise for Falkenstein's commitment. "We are a low-decile school and it is unheard-of in the state sector to get this kind of endowment. It allows us to maintain a high standard of staff, facilities and other projects for our business school."

To Falkenstein, the Onehunga project is one of the most satisfying ventures he has been involved with. Seeing students with a limited appreciation of business "wake up" to the enormous possibilities of business in the wider world is particularly rewarding, he says, and was the catalyst for his donation of shares.

"It is not every day you float a company and I was so pleased with what was happening with Onehunga, I wanted to take it further."

Falkenstein emphasises that the gift of shares was not simply a philanthropic gesture but was prompted by The University of Auckland Business School's support for the fledgling Onehunga Business School.

"Barry [Spicer] and his colleague [Associate Dean] Susan Laurenson helped me live my original dream for Onehunga."

The University provides curriculum advice, visiting speakers and scholarships for teachers to attend extensive short course programmes, as well as academic scholarships for students.

Spicer describes Falkenstein as a visionary and leader. "I think he wants to help make the world a better place and he's passionate that the best way to do that is through education."

The scheme is part of a growing partnership between the private sector and The University of Auckland to improve educational opportunities but Falkenstein has attached no strings to the gift of shares: "They can sell them if they believe that is the best use of them," he says.

"BUSINESS SHOULD BE A MAINSTREAM SUBJECT BECAUSE EVERYONE ENDS UP IN BUSINESS ONE WAY OR ANOTHER."

His bottom line is that quality business education is essential for New Zealand's future economic prosperity. "Whatever you do in a job, whether going into business or working for someone else, you need business skills. There are some really interesting courses now and fantastic learning programmes and I want to encourage young people to follow that process."

Falkenstein himself didn't make an early start in business. His first job out of school was as an apprentice pastry cook. On gaining his trade, he headed off to The University of Auckland to do a BA in German, his parents' mother tongue, and changed to commerce because his mates said it would be easier.

Though he doesn't regret the convoluted career path that led him to the top of a family company with an annual turnover of around $150 million, he wants to see young people getting into business early so they can fully capitalise on their drive, energy and creativity.

"I believe we're all born entrepreneurs. Watch a three-year-old find something to do in an empty room. Our imagination is enormous when we're little. But then we lose a lot of that. I think entrepreneurs are just big kids."

And though he is reticent about discussing his generosity, he does admit that it makes him feel great.

"I guess part of my motivation is a desire to give back. People do what they need to do to get a buzz and this is it for me. I need to keep moving ahead, looking at how to get to the next step. It is fun to think outside the square about these things."

Boston Consulting is ICEHOUSE partner

The story on the Business School in *Ingenio*'s Autumn 2004 issue omitted Boston Consulting Group from the list of partners of The ICEHOUSE.

PHILANTHROPY

The man whose efforts helped unlock $25 million in Government funding for the new Business School tells **PAUL GOLDSMITH** that the University has a key role in taking the country forward.

RAISING SIGHTS: Douglas Myers with Sonia Bracegirdle, this year's recipient of the scholarship to Cambridge: "Business is the mechanism for delivering wealth to the community."

Douglas Myers' grandfather, Sir Arthur Myers, carried out his philanthropy on a grand scale. He gave land for a park and kindergarten in the centre of Auckland, and the Auckland City Council expressed its appreciation by putting his name on it; he donated a great clock for the Town Hall in 1911; and he gave big money to Plunket and numerous other charities.

Sir Arthur Myers followed a path well trodden by generations of successful Jewish merchants who believed that anti-Semitism would never gain a foothold if the community saw them performing bold acts of generosity. The strategy worked. Sir Arthur Myers was a much-loved mayor of Auckland. There was a huge send-off for him when he retired.

The postwar world in which Douglas Myers grew up was more egalitarian, and not so well disposed to displays of wealth. In a small community, it was thought advisable for a young man to keep his head down and not flaunt his riches. It was important to be generous, but gifts should be made quietly and, preferably, anonymously.

Such was Douglas Myers' approach until the late 1990s. By then anti-Semitism had abated – Myers is not Jewish, in any case, since his mother was a gentile – and the new challenge came from anti-capitalism.

"Following the reforms of the 1980s and early 1990s, the antipathy to business in New Zealand had been so intense, and the antagonism to capitalism so great that most of the rich went to ground," he recalls. "That wasn't a healthy or sustainable situation."

Myers saw a way out of the situation when he read an article advocating that the rich make a noise about their giving.

"Visible philanthropy shows people that business is the mechanism for delivering wealth to the community," he explains. "Money isn't just siphoned off by capitalists. It's either spent, taxed or given away."

More broadly, he was convinced that New Zealand "badly needs a stronger culture of philanthropy, as part of a wider project of building a stronger civil society."

Thus inspired, Myers, who had not long before sold his shareholding in Lion Nathan, gave away $10 million in 2000:

A FAMILY TRADITION

some went to King's College to send teachers overseas regularly; some to his alma mater Caius College, Cambridge, to endow an annual scholarship for talented New Zealanders; and some to The University of Auckland to refurbish the old television studios on Shortland Street as the Kenneth Myers Centre.

The first two gifts were about keeping New Zealand engaged with the rest of the international community, while the last was a memorial to his father, Sir Kenneth Myers. The fact that the Kenneth Myers Centre was midway between the University and the city seemed appropriate to Douglas; it symbolically bridged the gap between the academic and business worlds.

Myers and Dr John Hood, the Vice-Chancellor at the time, kept talking and conversation soon turned to the University's Business School.

"The feeling around the business community was that the school needed a shot in the arm," says Myers. "To the degree that you have any hope for New Zealand, there needs to be a top-quality business school in the commercial capital, plugged into the best international networks and thinking, and engaged with the wider community."

So in 2001, Myers undertook to raise some money in the business community, but hit a brick wall.

"My feeling was that at the time the new Labour Government had got so offside with the business community that their goodwill had evaporated. The business people I talked to needed a sign from Government that they were willing to work with business on something that would benefit the wider community".

It was from many such discussions over many months that the idea of the Partnerships for Excellence programme was born: in early 2002, the Government announced that it would match, dollar-for-dollar up to $25 million, private sector donations to The University of Auckland Business School project.

So there was a gratifying symmetry to the moment in June when Douglas Myers' personal donation of $1 million took the Business School past its initial fund-raising target of $25 million and allowed the University to draw down the full $25 million pledged by the Government.

"It's satisfying to see business people and Government working together on something useful," Myers says.

The world-class Business School project is now well under way: the funds raised will be spent on programmes and staff, and a new building which is scheduled for completion in 2007. Several newly endowed academic positions have been announced since the project began, the most recent being New Zealand's first chair in Logistics and Supply Chain Management, funded by the Ports of Auckland.

With more than $50 million in hand already, the Business School is now seeking to raise a further $25 million from the private sector.

The Business School project has also established the viability of the Partnerships for Excellence model as a means of funding large-scale tertiary projects. In August, it was announced that the University had secured two new partnerships: the Institute for Innovation in Biotechnology within the School of Biological Sciences and Starpath, led by the Equal Opportunities Office. The funding awarded for these projects is again on the basis of matching funds for money raised by the University.

The prospect of raising the many millions required seems daunting, particularly as people with Douglas Myers' capacity to give are rare in New Zealand. The University works on the principle, however, that every little bit helps. It is also conscious of the fact that the process of raising money has brought unexpected benefits. In talking to more than 200 business groups and individuals over the past two years the Business School has begun a conversation with a broader section of the community than in the past. Not every meeting has ended with a donation, but each has connected the University in new and constructive ways with its communities of interest.

Myers is convinced that the University has a key role in taking the country forward.

"My main concern is that New Zealanders should raise their sights to see the world outside New Zealand as opportunity, not a threat. New Zealanders don't think enough in a global sense; they don't see the rest of the world as relevant to their survival, which of course it is. That's why a university with high aspirations, one that expects to part of the international mainstream, is so vital to the country's prospects."

"MY MAIN CONCERN IS THAT NEW ZEALANDERS SHOULD RAISE THEIR SIGHTS TO SEE THE WORLD OUTSIDE NEW ZEALAND AS OPPORTUNITY, NOT A THREAT. NEW ZEALANDERS DON'T THINK ENOUGH IN A GLOBAL SENSE; THEY DON'T SEE THE REST OF THE WORLD AS RELEVANT TO THEIR SURVIVAL, WHICH OF COURSE IT IS."

– DOUGLAS MYERS

HOME THOUGHTS: Dr Greg Brick has not forgotten his alma mater.

NEW SCHOLARSHIP REPAYS FORMER STUDENT'S DEBT

A University of Auckland graduate who is now one of the United States' top doctors has endowed his old university with a generous scholarship.

The gift from Dr Greg Brick – a leading orthopaedic surgeon in Boston and an assistant professor at Harvard University – and other members of his family will allow some financially strapped medical students to complete their studies without running up huge debts.

The Brick Family Scholarship will be awarded annually from next year to a financially needy New Zealand citizen who has successfully completed a first year at The University of Auckland and has been admitted to the MBChB programme in the Faculty of Medical and Health Sciences.

It will pay the fees of a new second-year student each year while continuing to fund the previous scholarship recipients up to and including their fifth years of study. Thus by 2008 the scholarship will be funding four students at any one time.

It's a handsome endowment from a man who almost chose engineering over medicine. When his application for medical school was accepted, the teenage Greg, then at Te Puke High School, was in a quandary because he had also applied for engineering.

"I eventually ended up in the engineering part of medicine anyway," he says.

Brick describes the scholarship as an opportunity to give something back to New Zealand medicine and also to repay the taxpayers who had paid his fees.

He graduated from The University of Auckland School of Medicine in 1976 and from the New Zealand Orthopaedic Association Training Programme in 1984. A year later, he moved to the United States where he completed fellowship training for a year in total joint replacement at the Brigham and Women's Hospital in Boston and spent a further fellowship year training in spine surgery.

Now a leading orthopaedic surgeon, Brick and his Dunedin-born wife Jane return to their Wanaka holiday home once or twice a year and one of their five children is studying at Otago University.

Other members of the Brick family contributing include his sister Hillary who graduated from The University of Auckland with a Master of Arts in Japanese, and two brothers – Martyn, a graduate of Lincoln College and kiwifruit farmer, and Matthew, also a graduate of The University of Auckland School of Medicine and, like Greg, an orthopaedic surgeon.

The Boston-based Brick's skills are sometimes put to the service of New Zealanders: on his most recent visit, he was scarcely off the plane before he was performing a six-hour knee operation at Middlemore Hospital. As Assistant Clinical Professor in Orthopaedic Surgery at Harvard Medical School, Brick is famous for "re-dos" and is often asked to tackle problem cases.

His research interests include the fate of allografts (tissue grafts from genetically dissimilar donors) in total hip replacements and total knee replacements. He has also pioneered a new surgical technique for the treatment of pigmented villonodular synovitis – a tumour-like condition affecting the knee that is particularly difficult to eradicate.

Surgically, his interests are reconstructive surgery and spinal surgery. "The latest thing in joint replacement is trying to do it through the smallest possible incision, and sometimes doing it as day-stay surgery. We used to do hip replacements through 15cm to 20cm incisions, now we have them down to about 9cm."

Smaller incisions are quicker to suture which cuts operating time but it is post-operatively that the real benefits show: at six weeks, the patients are walking a lot better.

Joint replacements are also lasting longer.

"Even revision surgery is lasting longer," says Brick. "Every time you do a joint replacement you take away some of the patient's bone. So we use bone from the bone bank. Sometimes you will have a patient who is missing half a femur, so you will take a femur from the bone bank and use that as part of your reconstruction.

"I started doing that 16 or 17 years ago. We've got some patients who are still walking on someone else's femur so it's reasonably successful."

In 2002 *Boston* magazine voted Brick among the best orthopaedic surgeons in a city not short of surgical superstars and Castle Connolly Medical Ltd – a research and information company founded in 1992 to help consumers find top doctors and top hospitals – has listed Brick as one of the United States' top doctors for the past five years.

– CAMILLE GUY

HOPE FOR CURE: Gus Fisher and his wife Rene in their Remuera garden.

PHOTO: PETER CALDER

RESEARCH FUND HONOURS DONOR'S MEMORY OF HIS MOTHER

At the time his mother Fanny succumbed to Parkinson's disease, Gus Fisher had not even heard of the fatal degenerative affliction.

Still in his 30s, Fisher was the busy head of top-end Auckland women's fashion firm El-Jay. His design talents had been recognised by Paris designer Christian Dior who had asked the Aucklander to reproduce his fabled collection under licence.

"I was still living at home," recalls Fisher, who will be 84 in December. "In those days you didn't leave home until you got married. And when Mother was diagnosed I hadn't even heard of Parkinson's."

He says he cheered his mother up with many a funny story – "She had a terrific sense of humour and she loved to laugh" – but his jokes were, of course, powerless to stop the advance of the terrible disease to which she succumbed in 1959.

But the Auckland philanthropist's latest act of generosity is an expression of hope that a cure might be found – and a vote of confidence in researchers at The University of Auckland that they are the people to do it. He has established a post-doctoral fellowship which will allow a neuroscientist to work on research specifically aimed at finding a cure.

Parkinson's is a progressive disorder of the nervous system marked by tremor and impaired muscular coordination; among high-profile people afflicted by it are Pope John Paul II, boxing legend Muhammad Ali and champion runner John Walker.

The Gus Fisher Research Fellowship is a long-term renewable arrangement which will pay for a postdoctoral fellow to lead a research team of international calibre. Recipients will work full-time for two years and the hope is that it will encourage talented researchers to stay in this country.

In advertising the position, the Faculty of Medical and Health Sciences sought a neuroscientist who has gained a doctorate within the last four years with "a research track record pertinent to Parkinson's disease".

The Fellowship is the latest of numerous gifts by the benefactor to the arts and to drug education and rehabilitation. The University of Auckland has been the beneficiary of his generosity before: he contributed to the acquisition and refurbishment of the old NZBC television studios in Shortland St, the ground floor of which houses the gallery that bears his name.

"That was always one of my favourite buildings in Auckland," he says. "In my bachelor days I had a flat over the road at the Shortland Flats and I used to look down on it."

The Fellowship will fund research into all neurodegenerative disease, but Fisher says that he wants recipients to concentrate on finding a cure for Parkinson's first.

"I know there are many terrible diseases that afflict people but you can't cure the whole world. Parkinson's has taken so many friends and people I know. If they found a cure in my lifetime it would be like a dream come true."

A selection panel will be convened to award the first Fellowship, and Fisher looks forward to meeting the first recipient and hearing reports of the research. But he waves away any compliments on his generosity in funding research and education.

"Everything I've ever done for The University of Auckland I've felt privileged to be able to do."

– PETER CALDER

MAKING A NEW START

The University of Auckland's pre-degree programme is transforming the lives of people who never expected to be students, writes **JADE REIDY.**

NEW LIFE: Laura Williams' studies have enabled her to re-invent herself.
PHOTO: GODFREY BOEHNKE

In the mid-1990s Laura Williams spent four years behind the counter of a fashion retail store in Queen Street watching the annual processions of university graduates pass by. Her part-time assistants were students, too, and she had the feeling that everyone else was going somewhere as she remained mired in the past.

"I was 33, and dying a slow death from intense boredom," she says.

It was during the autumn procession of 1998 that she noticed for the first time that among the graduates were people of her own age. Something clicked. She picked up the phone and began the process she now refers to as "killing the shop girl."

That phone call was to New Start, The University of Auckland's pre-degree programme for adults. Unlike the Centre for Continuing Education, which offers individual, subject-focused courses either for personal pleasure or work skills, New Start dedicates itself to preparing those who left school, often without a qualification and unprepared for the challenges of full-time student life.

Laura's average grade in high school had been a lowly 30 per cent and she felt intimidated at the very idea of enrolling at university.

"I had to send a 50-word paragraph describing why I wanted to go," she recalls. "It took me two weeks to write. The panic about failing that I felt at school all came flooding back when I tried to put pen to paper."

But her paragraph plainly caught the imagination of those considering her application. She was accepted for entry and embarked on a mid-life university career which will eventually earn her an MA degree in Sociology.

She was astounded when her first essay received an A+. "The tutors actually appreciated the originality of my ideas," she says.

Some 10,000 adults new to tertiary study have been through courses since New Start's establishment in 1976. The programmes offer an introduction to arts or business degrees; grounding in study skills; and transition courses to help Maori and Pasifika students make the leap into university education.

Cath Henderson, the programme's group manager, says the most important quality New Start students need is an open mind.

"They usually already have motivation well in place but have to grapple with past failures, and partners and family telling them they're not up to it," she says. "What they learn on New Start may also challenge the personal opinions they've held for most of their lives."

New Start is tailored to appeal to a wide constituency. Courses are part-time so students don't have to give up work and the fees, which range from $35 to $215, mean study is affordable. Good grades can enhance the chances of admission to sought-after degree programmes such as those in law and commerce.

"Being able to put your toe in the water is great," says Laura.

Studying gave Laura a sense of achievement that the shop girl never felt. Suddenly exposed to people of different ages, ethnicities and backgrounds, she found her social skills grew.

Last year she had a job tutoring students in an intercultural communications course. Now she works as a tutor and research assistant in the Sociology Department.

She also works at the Kate Edger Information Commons, taking calls on the helpline for the University's online resources – an impressive achievement for someone who had no computer skills when she started studying.

The shop girl may have reinvented herself but she lives on in Laura's thesis, an investigation into "emotional labour" – the demands on retail employees to appear bright and cheerful even when they don't feel that way.

On the first day of each New Start year, Laura seeks to inspire prospective students with her message that they must not let their past weigh them down. Her new start means the 38-year-old is optimistic about her future.

"I feel like I've had my mid-life crisis."

MUSIC TO THEIR EARS

An appointment as ensemble in residence at the University will give an exceptional piano trio room to grow. Meanwhile the Music School gets three brilliant young teachers.

It's not easy making a living as a chamber musician, so it's hardly surprising that the members of the country's newest chamber music group are relishing the chance to develop under the patronage of The University of Auckland.

The members of the New Zealand Trio – Justine Cormack (violin), Ashley Brown (cello) and Sarah Watkins (piano) – who took up an appointment as Ensemble in Residence at the University in July, have been performing together for the past two years, making a name for themselves in New Zealand and in the United States

"These intuitive musicians are splendid champions of the chamber music of New Zealand," said the *Christchurch Star,* and the *Independent* in Santa Barbara, California called them "remarkably gifted musicians" whose performance was "a wonder to behold and hear."

Before they took up their new position, the Trio had trouble getting together. Because Watkins was US-based – she had positions on the staff of colleges on both east and west coasts – and Cormack and Brown lived here, they assembled only for a week of frantic rehearsals before concert dates.

"We would get together once or twice a year," says Brown. "Now we can practise together at least three times a week. That is a really new thing for us and we are still revelling in it."

The appointment of the Ensemble in Residence is a model of the arrangement whereby a university can both sponsor and take advantage of the nation's creative talents. The trio members spend half their time teaching instrumental students at the School of Music and the rest developing new programmes to showcase and extend the skills that have seen them described as among the most accomplished performers of their generation.

Life as a chamber musician can be something of a feast-or-famine affair: "Even when things are going well," Brown says ruefully, "you never know what's happening next."

The style of music demands intimate venues so, even if they sell out, concerts are not major moneyspinners.

"To make a decent living you usually have to be in an orchestra," adds Cormack, a former Auckland Philharmonia concertmaster who has also led the NZSO in concerts and recording sessions. "This is a great opportunity to make a living as an ensemble."

TOGETHER AGAIN: Trio members Cormack, Watkins and Brown.
PHOTO: GODFREY BOEHNKE

Part of the Trio's mission – as its name suggests – is to commission and play local music. Typically, their programmes include four pieces – two from the classical repertoire and two by New Zealand composers.

The intriguingly named "Dirty Pixels", written specially for the trio by Wellington composer Michael Norris, will be one of several on a CD of New Zealand works to be released in late summer. Other commissions in the pipeline include pieces by John Psathas, also from Wellington, and Christchurch-based Rachel Clement.

"It's the point of difference we've got from any other international group," explains Cormack. "Naming ourselves the New Zealand Trio we were very conscious of taking on that whole idea of being proud to be New Zealanders."

The presence of the Trio has enormous benefits for The University of Auckland as well, apart from the members' teaching work.

"A big part of our role is to represent the University at special events – which may mean going overseas with the Vice-Chancellor, being cultural ambassadors for the University and the country. It's an investment from the University's perspective."

– PETER CALDER

An article in the Autumn 2004 issue of *Ingenio* attributed to the music critic of the *New Zealand Herald,* William Dart, a comment that the New Zealand Trio is "an innovative and energised ensemble bringing varied and inspired performances to audiences here and abroad." Mr Dart was in fact quoting these words from the Trio's mission statement as part of his generally warm review of a single performance. The error is regretted.

Alumni of The University of Auckland make waves at home and abroad. **BILL WILLIAMS** keeps track of some of our shining lights.

DR CHARLES ALCOCK [BSc (Hons) 1973] has taken over as director of the Harvard-Smithsonian Centre for Astrophysics in Cambridge, Massachusetts. The President of Harvard, where Alcock has now become Professor of Astronomy, describes him as "an extraordinary astrophysicist and scientific administrator". Another senior colleague at Harvard says he combines the "scientific savvy and management know-how necessary for continuing our tradition of excellence in a field dealing with some of the most fundamental questions about our universe".

Alcock gained his PhD at the California Institute of Technology in 1978. Before his latest appointment, he was Reese W. Flower Professor of Astronomy and Astrophysics at the University of Pennsylvania.

His primary research interests are massive compact halo objects, comets and asteroids. He has long been at the forefront of the search for faintly detectable "dark matter" in the outer reaches of the Milky Way. This involves observing "lensing", a temporary increase in the brightness of a background star while dark matter passes in front of it.

IAN ATHFIELD [DipArch 1964] one of the country's most prominent and influential architects, won the NZ Institute of Architects Gold Medal for 2004.

The Gold Medal is the Institute's highest honour, bestowed for an outstanding contribution to the practice of architecture.

Athfield's innovative and often provocative work has done much to shape Wellington's cityscape over the last 40 years; his projects there include Civic Square and the Wellington Library, Victoria University's Student Union Building and public spaces such as Taranaki Wharf.

Elsewhere he has been responsible for Jade Stadium in Christchurch and Nelson Polytechnic Library, and he was involved in the concept design of the rapid transport system in Bangkok.

He pioneered a distinctive style of hillside house, rough and earthy in texture with rounded shapes.

He has won more than 60 national and international awards, including 13 NZIA Supreme Awards. In 1997 he received one of the Distinguished Alumni Awards from The University of Auckland.

PRIV BRADOO [BTech (Hons) 2002] was accorded the signal honour of being invited to address graduates in Business and Economics at one of the Spring 2004 graduation ceremonies.

She is currently completing a PhD in the University's Liggins Institute on the subject of "Neuronal regeneration peptides" under the supervision of Professor Peter Gluckman. She holds a Bright Futures Fellowship awarded by the Foundation for Research, Science and Technology.

Born in India and raised and educated in Muscat, Oman, Bradoo has distinguished herself not just academically but as an entrepreneur and leader in her six years at the University. She was the inaugural CEO and is now chairperson of spark*, the University of Auckland Entrepreneurial Challenge. spark* is a project, led by students, that aims to equip students, graduates and staff to turn their first-class ideas into real, world-class businesses.

She is founding CEO of "Chiasma: The NEW Link in Biomedical Enterprise" launched in September. This initiative, also student-led, aims to foster a spirit of enterprise amongst the biotech student community across the University.

Bradoo, who has been a teaching and research assistant, was chosen as a Royal Society of New Zealand Science Communicator. She has presented posters and spoken at several local and international conferences on her research as well as her passion for an enterprise culture. She has served on high-level student and University bodies such as the University's Student Council, and this year she was selected to participate in the NZ Emerging Leaders Forum through the New Zealand Leadership Institute.

MAURICE GEE [BA 1953, MA (Hons) 1954, DLitt 2004] is enjoying a vintage year. The writer's fantasy classic *Under the Mountain* won the 2004 Gaelyn Gordon Award for a much-loved book that did not gain an award when published but has remained in print and popular with readers.

His recent novel *The Scornful Moon* was a finalist in the Montana New Zealand Book awards. Films based on his novels *Crime Story* and *In My Father's Den* have been released this year.

In June his alma mater bestowed on him an honorary Doctor of Literature degree. The Public Orator, Professor Vivienne Gray, said he was being honoured "as one of New Zealand's outstanding writers, as one also who has made a significant contribution to the Department of English in the University, both as a subject for literary research and teaching, and as a colleague and mentor to those who conduct it".

Gee already holds one of the Distinguished Alumni Awards from the University presented in 1998. He was among 10 of New Zealand's greatest living artists named as Arts Foundation of New Zealand Icon Artists at a ceremony in 2003.

JANET HUNT [MA (Hons) 1996] has won the New Zealand Post Book of the Year Award for Children and Young Adults 2004 with her book *A Bird in the Hand – Keeping New Zealand Wildlife Safe*. It was also placed first in the non-fiction category and has recently won the LIANZA (Library and Information Association of New Zealand Aotearoa) Elsie Locke Award for a distinguished contribution to children's non-fiction.

A Bird in the Hand, her second book, is about our endangered species and habitats and people who work to save them.

As well as conceiving and writing the book, Hunt did the design and layout. The New

Zealand Post judging panel praised its "colourful and evocative illustrations, carefully written text that tells us enough but not too much, a subject that lets us look at ourselves while we are looking at it and a design that combines all of the above into a beautiful 'book in the hand'."

Hunt works from Waiheke Island as a graphic designer and writer. Her biography of the poet Hone Tuwhare was published in 1998. Her latest book, released in September, is *From Weta to Kauri: a guide to the New Zealand Forest.* It is a simplified reference book that includes insects, reptiles, birds, and the range of plants from toadstools to kauri.

PROFESSOR NICK JONES [BE (Hons) 1980] has been appointed as fourth Dean of the Whiting School of Engineering at Johns Hopkins University in Baltimore.

After graduating from Auckland he earned masters and doctoral degrees from Caltech. He was at Johns Hopkins from 1986 to 2002, rising through the ranks to become a professor and then chair of the Civil Engineering Department.

For the last two years he headed the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign, one of the largest and most distinguished such departments in the United States.

His research has focused on wind engineering, in particular the performance of long-span bridges. He has won three Johns Hopkins teaching awards and was named a National Science Foundation presidential young investigator.

Jones said he was honoured and excited by the appointment. "There are not many places I would leave Illinois for but Johns Hopkins is certainly one of them."

JANE NORTON [BA, LLB (Hons) 2002] is the inaugural recipient of the 2004 Fulbright New Zealand Alumni Award, given to the top graduate student of the year. She is going to the Columbia University in New York to study towards a Masters in Law, specialising in the role of constitutional rights in administrative decision-making. Her Auckland BA was in Political Studies and she worked as a Judges' Clerk at the High Court in Auckland.

At Columbia Norton wants to examine how the judiciary can uphold constitutional rights while adhering to the rule of law and principles of democracy. She hopes to bring back new perspectives on her areas of specialisation along with the skills and enthusiasm for legal teaching and research.

VINCENT O'SULLIVAN [BA 1959, MA (Hons) 1960] the distinguished poet, fiction writer, biographer and editor, has been awarded the Creative New Zealand Michael King Writers' Fellowship.

It is worth $100,000 and will enable him to write a collection of short stories and two novels.

The Creative New Zealand Writers' Fellowship was established last year to support senior writers wishing to work on a major project over at least two years. It has been renamed in recognition of the late Dr Michael King.

O'Sullivan, who retired as Professor of English at Victoria University of Wellington in 2002, says he is honoured that the fellowship carries Michael King's name. The fellowship gives him "total liberty to spend a couple of years devoted to researching and writing the three works".

His biography of New Zealand writer John Mulgan, *Long Journey to the Border*, was shortlisted in the biography category of the 2004 Montana New Zealand Book Awards. His latest poetry collection, *Nice morning for it, Adam*, was published this year. One critic wrote that it "shows O'Sullivan in superb form: he just keeps getting better".

PROFESSOR PETER PHILLIPS [BA 1969, MA (Hons) 1971] has taken up an extended appointment at the Department of Economics at The University of Auckland Business School.

Currently Sterling Professor of Economics and Professor of Statistics at Yale University he has held a fractional appointment at Auckland as Distinguished Alumnus Professor since 1992. He begins his extended two-thirds appointment in December 2004, spending semesters one and two at Auckland and the North American fall semester at Yale.

His main research interests are in econometric theory, financial econometrics, time series and panel data econometrics, and applied macroeconomics. The Dean of Auckland's Business School, Professor Barry Spicer, describes him as "an extraordinarily productive and accomplished researcher who has an international reputation as one of the world's leading econometricians".

Phillips says he is looking forward to coming back in a more significant capacity and becoming more involved in teaching, supervision and research. One of his goals is to build a more productive relationship between Yale and Auckland.

DR BRIDGETTE SULLIVAN-TAYLOR [MCom (Hons) 1994] now at the Warwick Business School in England, has been awarded a prestigious Leverhulme Fellowship (2004-2006) to examine the "strategic management implications of global terrorism".

Her research will investigate the intricate inter-relationships between international tourism and terrorism. She will look at how international service organisations cope with the ongoing uncertainty and ambiguity posed by terrorist activities, and how terrorism and security policy affect international tourism patterns and flows (comparing the United States and Britain in particular).

This comparative study builds on her previous research in international strategy and the emerging trends in the global travel and tourism sector. It will prove useful to government agencies and business organisations in planning their post-9/11 strategies. Often it is only motivation that distinguishes the terrorist from the tourist, a major concern for the world's national carriers.

Sullivan-Taylor has held management positions in both the private and public sectors in New Zealand and Britain. She has also had visiting academic appointments at Oxford, Cambridge and Durham Universities, Vlerick School of Management (Belgium) and The University of Auckland. As well as being a member of the Strategy, Organisational Learning and Research Unit at Warwick Business School she teaches across a broad range of management areas to undergraduate, MBA, masters and executive programme students.

• These pages feature graduates who have chalked up significant achievements in academia, their careers or in the community. Suggestions for inclusion are most welcome. Please email them to wrs.williams@auckland.ac.nz

SCHOLARS RELISH NEW PERSPECTIVE

No one in New Zealand lives far from a faultline, so we have more than a passing interest in making buildings safer during earthquakes.

That's why Fulbright fellow Liam Wotherspoon has headed to the other side of the world to undertake research that will make life a little safer in these shaky isles.

Wotherspoon, 23, left in July for a year at Iowa State University in Ames, where he aims to develop a computer model that will predict the movement of the concrete piles supporting a building during an earthquake.

The research, which will be the subject of his PhD, involves outdoor simulations which use hydraulic jacks to test piles embedded in soil. The work uses a newly developed software which simulates the performance of structural and geotechnical systems subjected to earthquakes.

"I am comparing the computer modelling with the experimental results of the pile pushover tests," Wotherspoon says. "This will determine the accuracy of the modelling and see if any improvements are necessary."

The results will help develop a common design strategy for use by civil engineers, making for more efficient building designs.

The facilities to undertake this sort of work are not yet available in New Zealand so Wotherspoon is excited at the award which has given him the opportunity to carry out full-scale testing as part of his PhD research.

Wotherspoon has met plenty of other "Fulbrighters" from around the world and is taking the opportunity of ensuring they understand that there is more to this country than *The Lord of the Rings*. He's also joined the university rugby team and is teaching the locals a thing or two about the football game where the 15-man sides don't wear crash helmets and shinpads.

He says life in the landlocked state makes him appreciate New Zealand. "You don't realise how huge a part of your life the beach and ocean are until they are suddenly thousands of kilometres away."

But the Fulbright award is "a once-in a lifetime opportunity", he says.

"I am loving every minute of the experience and I have gained access to the huge knowledge base of the American university network which is a huge help in my study."

Fulbright scholar Justin Drake was already showing enterprise at undergraduate level: he tutored a fellow student in a course he hadn't studied.

Now he's refining that entrepreneurial spirit by doing a Master of Business Administration degree at the Darden Graduate School of Business at the University of Virginia at Charlottesville.

The business and law scholar, who is of Samoan, Chinese and New Zealand descent, helped pay his way through University with tutoring work. One of his students was doing a finance paper that Drake wasn't due to take until the next semester, so the tutor got a head start on himself.

Drake says he has really enjoyed his first few months there. He has been struck by the variety of the students' backgrounds.

"We range from people who were analysts for investment banks and accountants to a former cheerleader for the Washington Wizards NBA team!"

Born and raised in Samoa, Drake came to New Zealand in 1991 and graduated with honours as a Bachelor of Commerce (Finance) and Bachelor of Laws in 2001.

"I don't consider myself the most academic of persons but I have generally done well in the areas that interest me and when I set myself a goal," he says. "The lecturers at The University of Auckland were great at recognising students' individual strengths and working with them to develop those areas."

Drake is finding the workload heavy at Darden. "I am averaging about five or six hours' sleep a night. Preparing for class usually takes about four or five hours if you want to do it properly – and you really need to if you don't want to be exposed the next day."

He is finding time for recreation though.

"Charlottesville is a beautiful city and there is heaps to do. I have hiked to the top of two mountains in the Shenandoah Valley and gone caving."

Drake is full of praise for the "awesome" support of Fulbright New Zealand which has financed his US study and says that his new surroundings have deepened his appreciation of his time at The University of Auckland.

"It really helped prepare me," he says, "and I understand now how good the education I received there was. Many of the professors were really helpful and obviously loved their jobs."

Once he has finished his MBA, Drake plans to come back to New Zealand and, as he describes it, "go fishing."

"There is a world of opportunity out there and I just want to see what opportunities come my way."

IN AMERICA: Fulbright scholars Liam Wotherspoon (left) and Justin Drake.

Around 25 New Zealanders each year receive Fulbright scholarships to carry out study and research in the US. Notable New Zealand Fulbrighters include former Prime Minister and Ambassador Sir Wallace (Bill) Rowling, Nobel Prize-winning scientist Alan MacDiarmid, educationalist Dame Marie Clay and current University of Auckland staff members, historian James Belich and anthropologist Dame Anne Salmond.

The Fulbright programme was established in 1946 as an initiative of US Senator J. William Fulbright. He believed the programme could play an important role in building a lasting world peace in the aftermath of World War II. Since the program's inception, more than 250,000 participants have had the opportunity to observe each other's political, economic and cultural institutions.

SIMPLY CLEVER

SKODA AUTO

Amazing how quickly you get over a name

People go gaga over our wee baby. It's not surprising, the Skoda Fabia RS is one of the most unique small cars on the road. It's a dynamic little sports car that surprises everyone. Out on the tarmac its neck snapping 6 speed gearbox and 1.9 litre turbo engine combine to whip you from 0 to 100k/ph in a trifle under a flash. The interior is simply gorgeous and its exterior is as cute as cute can be. The Fabia RS. Oh, and it won't cost you moonbeams.

Mum, meet Moonbeam

0800 4 skoda

www.skoda.co.nz

GILTRAP PRESTIGE, 120 Great North Road, Grey Lynn, Auckland. Ph. 09 920 6420.

MR SMITH 1444

You've earned your holidays. With AMI, you can relax in the knowledge that we're taking care of things at home should the unexpected happen.

stress-free holidays – another reason why people stay with AMI

AMI INSURANCE

0800 100 200