Famous partnerships in history prove that we are better when we work together.

Think of Gilbert and Sullivan, Hanna and Barbera, Simon and Garfunkel – creative partners who all came together to create something exceptional.

So it has been with the enduring relationship between The University of Auckland and Manukau Institute of Technology (MIT) who last month celebrated ten years of a productive partnership in delivering the University’s Bachelor of Education (Teaching) Primary to the greater Manukau community.

The Deed of Co-operation formalising this relationship was signed on 21 October 1999, and the celebration of a successful ten-year association took place at (MIT) exactly ten years later to the day. This event was attended by graduates, University and MIT staff, and representatives from schools in the area involved with the programme.

From small beginnings with just 23 students, 300 have gone on to graduate and fill teaching positions in the local community. The programme has provided valuable opportunities for a diverse range of students from a variety of backgrounds to complete a teaching degree offered within the Manukau region. Graduates of the programme are now teaching in 88 schools as far south as Waiuku, while nearby Mayfield School in Otara and Mangere Central School employ eight graduates each.

“Supporting the community in this way was one of the objectives of the programme, as it enabled each of the partners to further their commitment to equal opportunities and the Treaty of Waitangi,” says Manager of The University of Auckland at Manukau Programme, Claire Morrison-Rooney.

“I believe this is a flagship programme and that we are doing groundbreaking things here,” she adds. “By making this programme accessible we are supporting a whole generation and a community to value education, and they in turn pass this onto their children and their families.”

This year, 150 full-time students are enrolled across the three years of this degree. Students have access to the best of both worlds and use student services at both MIT and the University, while Central University Library services are available to the students via a delivery service to MIT Library. Many of the students are parents,

“WHEN A MATCH HAS EQUAL PARTNERS THEN I FEAR NOT.” AESCHYLUS, GREEK DRAMATIST

so the timetable has been designed with their needs in mind. Classes are held four days a week from 9am to 3pm, which allows for them to both care for their families and succeed at their studies.

“Faculty staff love teaching because the students are so engaged,” says Programme Coordinator Dr Pam Millward (Teaching, Learning and Development, Faculty of Education). “The students are like sponges – they...”
In 2006, the University embarked on its first comprehensive, institution-wide fundraising Campaign, following on from the very successful Campaign for the Business School, with a fundraising target of $100m by the end of 2012.

The “Leading the Way” Campaign was a response to our Strategic Plan objectives to “Engage alumni and friends in mutually supportive and productive relationships” so as to “Increase and diversify the University’s revenue”. This we must do in order to create an internationally recognised university in an environment where public funding of universities is very low by international standards but where top New Zealand students and academics are in strong demand overseas.

Over five years we have put together the systems needed to support our philanthropic activities and developed strong partnerships with donors and the students and staff they support. Through these systems, we have been able to better coordinate philanthropic activities and ensure all donations are appropriately recorded and acknowledged.

As a consequence it has become apparent that the level of philanthropic support for the University, particularly through the Research and Scholarships Offices, is about $8m per annum higher than we had previously appreciated. This support comes mainly from other philanthropic organisations or individuals who fund research projects or scholarships by giving directly to the University rather than through its associated foundations. Taking that giving into account, the current total of gifts received since the Campaign commenced in 2006 is close to $120m, compared with the previously recorded total of around $80m. We have therefore decided to increase the Campaign target to a new figure, recognising all sources of philanthropic support. The new target of $150m by the end of 2012 was announced on 4 November at the Chancellor’s Dinner, an annual event at which we acknowledge the University’s most significant donors. That target, should we attain it, will make this undoubtedly the most successful Campaign in New Zealand university history. It will have increased the University’s endowment, helping secure our future as a university of international quality. And, most importantly, it will have changed for the better the lives of New Zealanders and people around the world through the support of outstanding teaching and research.

The minister’s visit was part of a tour of government-funded Centres of Research Excellence. He said that it was an extremely valuable opportunity to find out more about the Maurice Wilkins Centre’s work.

As well as visiting the new facilities Dr Mapp met with the current and former directors of the centre and several of its principal investigators.

Director Associate Professor Rod Dunbar explained that the Maurice Wilkins Centre’s research clusters in three disease areas – cancer, infectious disease, and diabetes.

“Our researchers discover and develop new drugs as well as new diagnostics and vaccines. So our portfolio of projects extends from disease prevention and early detection through to new treatments for advanced disease,” he said.

“We are a multidisciplinary centre bringing together expertise in biology, chemistry, and computation and strength in all of these areas is necessary to make advances in medicine now.”

“The Maurice Wilkins Centre is unique in the world in having its chemistry so deeply embedded with biology. It’s what makes us able to progress these fantastic research programmes and is the envy of many of our colleagues overseas,” added principal investigator Professor Peter Shepherd.

Rod said the centre now links all of the New Zealand researchers who have taken new drugs from the laboratory to clinical trial. As well as bringing together a wealth of skills and experience the goal is to build an industrial-scale pipeline of new drugs across the country.

“The range of drug discovery activity around New Zealand now means that we’re getting to the scale where it is like investing in a portfolio of companies – at least one of them is likely to be extremely successful,” he said.

“There are huge opportunities now because the large pharmaceutical companies are looking to universities and research organisations like ours to do a lot of the initial drug development work,” said Peter Shepherd.

“Traditionally it may not have been thought that people in New Zealand could develop new drugs for cancer, but they can and are, and these are drugs that have the potential to make a huge impact on people’s lives.”

Pam believes the programme provides a valuable pathway for mature students, many of whom are former teacher aides who have decided to qualify as teachers. She also feels the location of the programme has been vital in ensuring these students have been able to gain access to education. “This programme has provided opportunities for students who may otherwise not have been able to study education because it would have been impractical or impossible for them to travel,” says Pam. “These students are really serious about their study, they work hard and do very well.”

“They are incredibly motivated and focused and their pass rates are very comparable to the students at Epsom Campus,” she adds. “They want to make a difference for their children and the community, and they are dedicated to lifting Māori and Pacific Island achievement.”

Penny Frost
(published in Te Kuaka)

Dean of Education Graeme Aitken was MC at the celebration. Speakers were Professor John Hattie (Teaching, Learning and Development, Faculty of Education), Professor John Morrow, Deputy Vice Chancellor (Academic) and Dr Helen Anderson from Manukau Institute of Technology.
The works of award-winning war photographers examining the suffering and dignity of those affected by war and conflict are on display at the Fale Pasifika this month.

The "Our World at War" exhibition, organised by the New Zealand Red Cross, features the work of five renowned photographers shot in countries either at war or living through its aftermath.

in a collaboration between the International Committee of the Red Cross (ICRC) and the VII Photo agency, photographers James Nachtwey, Franco Pagetti, Antonin Kratochvil, Ron Haviv and Christopher Morris were sent to eight countries affected by armed conflict – Afghanistan, Colombia, the Democratic Republic of the Congo, Georgia, Haiti, Lebanon, Liberia and the Philippines.

The exhibition marks the 60th anniversary of the Geneva Conventions which form the cornerstone of international humanitarian law, or the "laws of war". The Geneva Conventions, agreed by all countries, protect those not or no longer taking part in hostilities and place limits on how warfare is waged.

As Treasa Dunworth (Faculty of Law) explains, the "laws of war" are not concerned with the reasoning for war but more for its humanitarian consequences.

"The laws of war are as relevant as ever, working on a daily basis to save lives and provide vital protection for civilians, journalists, prisoners of war and other non-combatants who find themselves caught up in the armed conflict around the world."

John Ware, Chief Executive of the New Zealand Red Cross, agrees. "These laws are universal and remind us of our common bonds. It doesn’t distinguish between whether the armed conflicts are ‘right’ or ‘wrong’ but on the base level of humanity that applies even during war."

Also featuring at the exhibition will be works from "Wars of dignity in the Pacific", an ICRC exhibition featuring historical text and old and recent photographs, demonstrating that constraints on the waging of war existed in the Pacific centuries ago, including the protection of women and children, and captured warriors.

The Pacific exhibition was inspired by the findings contained in the book Under the Protection of the Palm: Wars of Dignity in the Pacific, published by the ICRC in 2009.

"Our World at War" is a global exhibition and has been on show in more than 40 countries around the world, most recently at Parliament House, in Wellington. The exhibition is on display at the Fale Pasifika from 11 to 20 November. It is open Monday to Friday 9.30am to 5pm, and Saturday 4pm to 8pm.

Universities as leaders
A symposium that aims to further enhance excellence in sustainability-related teaching and research will be hosted by The University of Auckland on 16 November. This has been organised as part of the Vice Chancellor’s Strategic Development-funded Universitas 21 Sustainability Project, with the theme of “Universities as leaders in the transition to sustainable societies”. The symposium, to take place from 8.30am-5.30pm at the General Library Lecture Theatre LIB15, will focus on how universities can provide the intellectual leadership necessary to drive the transition towards more sustainable ways of life. For more information, contact Dr Lesley Stone (lj.stone@auckland.ac.nz) or Dr Rachel Wolfgramm (r.wolfgramm@auckland.ac.nz).

Superbugs symposium
On 16 November from 9am to 5pm the Maurice Wilkins Centre for Molecular Biodiscovery will host the New Zealand Superbugs’ Symposium at the Fisher & Paykel Appliances Auditorium, Owen G Glenn Building. This will bring together scientists, clinicians, and other health professionals, to highlight current bacterial threats faced by New Zealand. Sessions will focus on bacteria identified as posing significant risk to New Zealand, on clinical perspectives on emerging microbial threats including antimicrobial resistance, and on ways scientists and health professionals can most effectively collaborate to combat each of these bacteria. Contact p.lai@auckland.ac.nz or see the symposium website.

AMPED Festival
This is an end-of-year creative showcase of staff and student work from The University of Auckland’s National Institute of Creative Arts and Industries, to be held from 19 to 21 November. This spectacular programme of events includes art and architecture exhibitions, dance performances, pop and jazz gigs, classical concerts and presentations. The programme includes firm annual favourites such as the Elam Graduate Show and ArchPlan Show as well as a wide array of new events including a jazz picnic on Old Government House Lawn and contemporary dance performances inspired by the Owen G Glenn Building. Full programme at www.amped.auckland.ac.nz
Doron Hickey (25), a trainee intern based at The University of Auckland’s Waikato Clinical School, is one of three students around the country who have been awarded prestigious scholarships and valuable Woolf Fisher Scholarships.

These scholarships recognise students who have demonstrated outstanding academic ability as well as such qualities as integrity, leadership, vision and capacity for work. They cover four years of postgraduate research at Oxford or Cambridge University at a value of up to NZ$100,000 annually.

Doron entered the medical (MBChB) programme at the University in 2004. After his fifth year he gained a Bachelor of Science (Honours) degree at the Australian National University.

Following his house surgeon year in 2011, Doron will continue his education at Oxford where he will study for a doctorate and join the Retina Gene Therapy Project to help restore vision to people living with inherited blindness.

“Inherited blindness effects one in 4000 people worldwide, including about 1000 New Zealanders. My studies will hopefully lead to restoring vision for those born with inherited eye disease, and possibly one day help to treat people who live with age-related, macular and visual degeneration,” said Doron.

“Using the DNA of two different light sensitive proteins to create a hybrid protein will hopefully enable us to produce light sensitive cells. Once the DNA sequence is optimised, we will undertake clinical trials on people suffering inherited blindness.”

*There are over 200 genes which could go wrong in the eyes so our approach is very wide. Potentially it could be applied to age-related disease too.*
Elvis to the rescue

When trying to understand the complex and problematic issue of Boundary Layer detachment Dr Richard Clarke, fluid dynamicist in the Department of Engineering Science, is turning to “Elvis” in his search for answers.

Solving the problem of Boundary Layer detachment is a big challenge in fluid dynamics, and one which remains poorly understood despite some groundbreaking progress in the 1970s. Since Richard’s arrival at the University in 2008 he has continued his work in this area by helping develop new equipment and experiments to help solve this complex puzzle.

The Boundary Layer is a region close to surfaces where fluid experiences high shear so when aeroplanes, for example, move at speed then most of the flow around them will act as if friction is not important. This helps the aeroplane to move efficiently but only if the Boundary Layer stays attached, says Richard.

“If the Boundary Layers stay stuck to the plane’s wing then their effects are usually very localised, but where they become more influential is when they detach from the surface. This can create a large low pressure wake behind the wing, which can reduce aerodynamic performance and trigger flow instabilities and turbulence. However a plane cannot take off until the Boundary Layers have become detached – which happens as the plane reaches take-off speed. This generates flow circulation around the wing which in turn produces lift.”

So one of the great ambitions for Richard is to understand how, why and when this detachment occurs. “If you can control the separation, you can control the wake behind an object and as a result control the drag it experiences,” he says.

With a Faculty Research Development Fund (FRDF) grant Richard and collaborators, Andrew Tabener, Peter Blythe and Catherine Roberts, built a novel machine - Elvis - that would enable them to study Boundary Level detachment in a controlled environment.

Elvis consists of a doughnut-shaped container of fluid attached to a motor. Once in action the container is spun to a high rotation rate, which creates high speed flow containing Boundary Layers. Then the brakes are slammed on which causes the Boundary Layers to collide and detach. What differentiates Elvis from a sister machine currently operated by Richard’s collaborators at the University of Manchester, UK, is that it enables researchers to see directly into the flow, to enable the best possible view of the separation event.

“The new configuration allows us to make extensive and very detailed experimental measurements to see what’s going on at the point when the Boundary Layer becomes detached from the solid surface.”

The experiments will be accompanied by computer simulations and mathematical analysis, the outcome of which could have applications not only for designers trying to achieve maximum efficiency but also for researchers trying to quantify blood flow, which has been a topic of interest to fluid dynamicists for decades. “Blood flow forms Boundary Layers on the inside of arteries and if these Boundary Layers become detached this will completely change the nature of the blood flow.

“If I have a fatty plaque in an artery, to what extent does that enhance the prospect of separation and does this separation significantly accelerate the subsequent growth of that deposit? If I want to introduce an arterial stent to keep the vessel open what is the best design?”

To aid in his search for answers to these vital questions Richard has recently been awarded a Marsden Fast Start grant which will help fund the project for the next three years. He understands this opportunity may not have been possible without the initial FRDF grant.

“The FRDF grant was the key to building the machine which enabled us to obtain the data to base our research proposal upon.

“I believe this proved to the Marsden panel that we were serious and committed to the study, and had some interesting ideas on which to proceed. FRDF funding almost certainly gave the project that vital edge.”

Jared Heffernan

Invitation

Growing Up is an exciting longitudinal study of more than 7000 New Zealand children and their families born in 2009 and 2010. Young Investigators are invited to attend a seminar at 12.30-2pm on 3 December to mark the release of its first findings. Professor Iain Martin will introduce the seminar and Research Director, Dr Susan Morton, will present. The seminar will be in Room 22, School of Public Health, Tamaki Campus.

Research Funding News

New Zealand Fire Service
The Contestable Research Fund supports research into the priority areas below, relevant to faculties across the University, and also open to any research proposal which aligns with NZFS’s strategic areas:

Targeting Vulnerable Groups; Built Environment; Measuring our effectiveness; Incidence and control of vegetation fires in rural areas.

We have had previous University of Auckland success. Application by expression of interest (three pages); deadline is 22 November 2010. For details contact Gemma Patton, ext 87070.

Sport and Recreation New Zealand
Research Grants Round 2010. Grants average $20,000. Deadline for expressions of interest is Tuesday 30 November 2010. SPARC advises to relate the research proposal to its strategy and to read the example reports on their website. Key themes are: Delivery; Costs and funding of community sport and recreation; Development and capability; The future.

For details contact Gemma Patton, ext 87070.

NARSAD - The Brain and Behavior Research Fund (US)
This supports research into serious psychiatric disorders such as schizophrenia, depression, bipolar disorder, anxiety disorders such as PTSD and OCD and childhood disorders that include autism and ADHD. Awards are:

• Young Investigators (USD $30,000 p.a., 1-2 years postdoc),
• Independent Investigators (USD $50,000 p.a., 2 years, Associate Professor),
• Distinguished Investigators (USD $100,000, 1 year established scientist).


Research Professional Funding Database
The University of Auckland subscribes to this database which can be found at www.researchprofessional.com. You can log in by clicking on “Campus Access” if you are on the University network or alternatively register, which is recommended since you are able to save your own searches and set up email alerts. It is global in coverage, and particularly strong on funding opportunities available in Europe and we recommend using Research Professional alongside the COS (Community of Science) database (http://fundingopps.cos.com). For advice on setting up please contact David Saunders, Research Office, d.saunders@auckland.ac.nz, ext 84886.
of the boat shed in Pukekura Park are a study in line and proportion which show the artist navigating away from his signature realism towards abstraction. The ostensible subject was occasioned by the artist’s residence in The Gables, New Plymouth’s historic colonial hospital, situated in Pukekura Park. Dubbed “The Wonder Years” in 2006 by Auckland Art Gallery curator Ron Brownson in his survey of Smither’s work from the New Plymouth period (1964-1970), the period spent living in the park was characterised by enormous productivity. Smither’s academic career began in 1959 but was brief. He lasted only eighteen months at Elam School of Fine Arts, where he was taught by John Weeks, Lois White, Robert Ellis, Peter Brown, Kees Hos and Peter Tomory and met contemporaries Stanley Palmer, Don Binney, Suzanne Goldberg and Malcolm Warr. Returning to New Plymouth to work as a trawlerman in 1963, he met Elizabeth Harrington (known then as Harry, and now as the poet Elizabeth Smither) who converted to Catholicism to marry him. Their first child, Sarah, was born the following year at The Sarah Train and her third, The Sarah Train in 1980. The marriage ended in 1983.

In 1966, however, domestic harmony prevailed. Michael Smither composed and painted, his wife wrote. Landscape and domestic subjects dominated in both her poetry and his painting. Smither himself describes his own approach to motifs and imagery for his work at this time as “patching items from the scrapbook of life”, often with symbolic purpose. His work from this period often features children’s antics and the rocks of Taranaki, as well as including the inevitable Christian imagery occasioned by his commission for new Stations of the Cross for the modernised St Joseph’s Church in New Plymouth where the family worshipped.

Referring to a more abstract work from the same year, Tale of the Fish, Smither commented that the patterns of fish fins and light patterns on the surface of the lake reminded him of the line breaks and stresses of a poem. “Pukekura Park has a boatshed that makes a quiet place for the lake’s carp to hang out in. Their quietly undulating fins fascinated me. I spent hours drawing them. Their repeated movements were like the lines of a poem.”

Another version of this same subject, entitled Boats at Pukekura Park, painted in 1967 and including red and yellow rowboats, is in the collection of the Christchurch Art Gallery.

Linda Tyler

Books

Mauri Ola: Contemporary Polynesian Poems in English is the follow-up volume to the highly acclaimed Whetu Moana, the first anthology of Polynesian poems in English edited by Polynesians. The new book includes poetry written over the last 25 years by more than 80 writers from Aotearoa, Hawai‘i, Tonga, Samoa, the Cook Islands, Niue, Tokelau, Tahiti and Rotuma – some living in these islands and some dispersed around the globe. Together with works by established and celebrated poets, the editors here introduce the fresh voices of a younger generation.

The anthology, published by Auckland University Press, includes selections from poets including Alistair Te Auki Campbell, Sia Figue, J.C. Sturm, Konai Helu Thurman, Haunani-Kay Trask, Hone Tuwhare and (Emeritus Professor of English) Albert Wendt. The late Hawaiian poet Wayne Kaumuai Westlake is represented by a unique set of concrete poems and experimental verse. Tusita Avia tells tales of Nafanua in different settings around the world; Rangi Faith imagines “First Landing”; Imaikalani Kalahele writes a letter to his brother; Brandy Nālani McDougall discusses “cooking Captain Cook”; Karlo Milo, eating chocolate, watches “paul holmes apologise for calling kofi annan a darkie”; Robert Sullivan writes against the grain; and Apirana Taylor follows zigzag roads. Ranging from the lyrical and sensual to the harsh and gritty, from the political to the personal: the poems in Mauri Ola are infused with vivid imagery, claims of identity, laments, rages and celebrations that confront again a colonial past and a global present.
Classifieds

ACCOMMODATION AVAILABLE

2011: Three-bedroom house for rent in Devonport, for the academic year, dates negotiable. Brick and tile house, nice view over water, children’s playground nearby. Email cjl@hug.co.nz or phone 445 6621.

Apartments for rent. Call us for your rental requirements; we offer city furnished/unfurnished, all sizes and prices, great rental deals for long-term leases, call 09 303 0017 or City Sales or email rentals@citysales.co.nz or log on to www.citysales.co.nz/rentals

Bijoux beach to let, Rocky Bay, Waitheke Island. A fully furnished, 4 bedroom summer lodge available 1st November to end of May. One bdrm (two beds) = sleepout. Five-minute walk to beach, close to town. Walks $290/wp. Phone 372 8266.

Flat to rent - 2011. Two-bdrm, fully furnished flat with carpark available mid-March. $190pw mid May 2011. Close to bus routes and shops (five minutes). Period of occupancy and rent negotiable. Contact Jac on 885 9637 or jac@jmagrealter.net

Flatmate wanted: Just the two of us. Fully furnished bungalow in St Lukes. $275 pw. Inclusive of all bills and cleaning, separate bdrm, two living spaces, sunny garden, OSP, close to shops and public transport. Short or long term. Please contact Josie Hepburn (021) 119 2251.

Friendly housemate (preferably Chinese speaking) for fully-furnished large house in St Johns. Quiet, quality living. Available for share. Rate $275 at new price per week. Includes bills, spacious lounge and dining area, flat screen TV. Close to Tamaki Campus. Tidy and professional housemates. Sharers over 30. No pets, no children, 09 284 8500.

Monday 22 November

Researching the doctoral student SLC Seminar, Level 3, Kate Edgar Information Commons. This research in progress seminar dissolves the doctoral student through several vectors. To register email cedwards@unisauckland.ac.nz

Women to Watch seminar 5pm FGW Rm, Otago. The Kate Edgar Educational Trust will continue this seminar series with a presentation by Prof Jane Kelsey, Faculty of Law. RSVP to janekell@ityrata.co.nz

TUESDAY 23 NOVEMBER

Department of Anthropology seminar Bruno Tschuschke, PhD, Research Associate, National Museum of Natural History, Smithsonian Institution, Washington DC. How to solve the mysteries of the Straitsian woods, explain deformed faces in Medieval Mongolian mummies, and much more. 6pm, Library Bldg 5, Alfred St.

WEDNESDAY 24 NOVEMBER

Korean Studies in Shift: The 10th Pacific Asia Conference on Korean Studies. For details of the conference contact Ms Sinmin Ahmed, email packs2010@gmail.com

THURSDAY 25 NOVEMBER

Perspectives on energy: Dean’s lecture 6-7pm Lecture Theatre 1 439, Faculty of Engineering. Speakers: Paul Hogan, Chief Executive Officer, National Energy Research Institute; Tony Robinson, Ministry of Research, Science and Technology; Luisa F. Cabeza, Ph.D., Professor of Electrical Engineering, University of Lleida, Spain.

RVP to fee.deans@lecture.auckland.ac.nz

ACCOMMODATION REQUIRED

Flat wanted for mature academic couple with a four-year-old son. Mt Albert or surround preferred, and an enclosed yard is essential. Would consider location 15km (12+ months) house sit. Contact Barry on b.milne@auckland.ac.nz

Seeking apartment or house close to University. A professor and family from the USA are seeking to rent or house sit a 23 bdrm apartment or house between Jan and May 2011 (dates flexible). Happy to care for plants and garden. If you can help please contact Eamonn O’Brien at eamonn.oconnor@unisauckland.co.nz

Seeking furnished North Shore home, 5 Jan-5 April (ish) for a stable, non-smoking, middle-aged couple. Call Kerry on (027) 202 1211 or email kerryhawkinzay@yahoo.com

Visiting junior academic from Edinburgh (plus significant other) is looking for accommodation for Semester One, 2011 (March-June) or part thereof. Preferably within easy commute by bike or bus of Otago Campus (downtown). Very reliable tenants / house-sitters; references available on request. Please contact Anna at anna@inventory.auckland.ac.nz

MISCELLANEOUS

Editing and proofreading services

- Writing, copywriting, promotional/advertising material
- Corporate publications
- Research articles and reports
- Newsletters
- Theses
- Journal articles
- Instruction manuals and tutorial documents
- Books - biographies, novels, children’s literature, historical accounts

Quotes available on request. No obligation.

Claire Morrison-Rooney, DipEdit, GradDipBus, MaMt. Business. (Ph 09) 486 4246 or (021) 739560 (cell) claire.morrison-rooney@xtra.co.nz

For sale: Shea butter has nourishing, heating and anti-inflammatory qualities. We are selling cream made locally (other luxury products contain 25% or less), coconut oil, beeswax, organic rosehip oil and shea butter. Samples are available at 50ml packs ($15). The shea butter is made by a women’s cooperative in a Malian village, and all income from sales pays for their nurse and health-related materials. Ideal for gifts and personal use, your purchase will make a real difference. Contact Karen Hyama, sheabutter4u@gmail.com

FREE ORAL & VITALITY ELECTRIC TOOTHBRUSH (RRP $39.99) for new patients to Lumino The Dental Centre. Contact Karen at karen.emberton@lumino.co.nz or phone (09) 303 0017.

For sale: A great assortment of rubber bands, witty and otherwise, and many other forest-related materials. Contact info@lumen.co.nz or phone (09) 303 0017.

Cost $20 (incl GST).
Professor of Chemistry Margaret Brimble has been recognised internationally for her “outstanding contributions to the synthesis of biologically active natural products, their derivatives and analogues”.

Margaret has won the UK Royal Society of Chemistry’s 2010 Natural Product Chemistry Award and recently travelled to the UK and Ireland to receive the award and deliver the Simonsen lectures associated with the award.

A modern-day alchemist, Margaret turns natural products such as shellfish toxins and compounds isolated from rare fungi into new drugs to fight cancer, Alzheimer’s and heart disease.

The natural products her research is based on are produced by microorganisms that inhabit extreme environments, including an abandoned copper mine in Montana where the pit has filled up with a soup of acidic, metal-laden water. “This is an incredible source of fungi that produce anti-cancer compounds,” Margaret says. “From these we are making compounds based on a unique natural product called berkelic acid, which works on enzymes involved in the spread of cancer.”

Margaret and her team at the University’s Medicinal Chemistry Laboratory study and construct the cancer-fighting molecules synthetically. “Nature throws up complicated chemical structures that have evolved over millions of years for a specific purpose. If we can fine-tune their molecular structure we can create potential drugs even better than nature can provide.”

The laboratory is also studying the potential of natural products produced by marine algae during coastal algal blooms. “The algae produce natural toxins as a defence mechanism against predators but these toxins also activate specific receptors in the human brain,” explains Margaret. “This has implications for people suffering from schizophrenia and Alzheimer’s so we’re synthesising the toxins in the laboratory. We then model the active features of the molecule and try different versions, in different positions, until we come up with the ideal drug.”

About 60 percent of all new drugs approved by the US Food and Drug Administration are inspired by or made from natural products. Margaret compares creating a synthetic compound from nature to composing a piece of music or creating a beautiful artwork. “It demands academic and manipulative rigour, creativity, dedication, persistence and hard work.”

A trailblazer for women in science, Margaret was the first, and remains the only, New Zealander to become a L’Oréal-UNESCO Women in Science laureate.

More than 20 top PhD students now work in her laboratory and several of these students are collaborating with researchers in Hong Kong and China to come up with new drugs for neurodegenerative diseases. Earlier this year the lab received an International Investment Opportunities Funding Grant (IIOF) from FRST to collaborate with Chinese scientists who are working on traditional Chinese medicines. “It means we can now access their specialist bioassays and test our natural product derived compounds,” says Margaret.

The Medicinal Chemistry Lab together with Associate Professor Rod Dunbar’s immunology lab in the School of Biological Sciences has also received funding from the Health Research Council as part of a larger programme led Dr Ian Hermans at the Malaghan Institute of Medical Research to make peptide-based components for melanoma vaccines. “The components synthesised in our laboratory will be sent to Glycosyn IRL, a manufacturing facility in Wellington, to be formulated for human clinical trials.”

Through a contractual agreement with Auckland Uniservices Ltd, the lab has already delivered a commercial drug candidate called NNZ2566 for the New Zealand biotechnology company Neuren Pharmaceuticals. NNZ2566 protects brain cells from dying after traumatic head injury. With $18 million in funding from the US Army, the drug is now in phase 2b human clinical trials and is being tested in trauma centres around the world.

“If it goes to the market it will be the first drug for traumatic brain injury,” says Margaret. “It will put The University of Auckland and New Zealand on the international map as a world class hub for drug discovery and development.”

www.che.auckland.ac.nz/staffsites/BrimbleM/margaretbrimble.html