

Serendipity and science communication

AWIS member Diane Dinnis describes how she got involved in science communication and became project manager for the Biotechnology Learning Hub.

One day in the lab - whilst repeating the same experiment for the third time that week - I realised that I would like to try something new. It dawned on me that the highlights of my post-doctoral work were teaching and communicating science to others. At the time I was managing a bioprocess engineering lab at the University of Queensland. From that moment on I devoted more time to my science writing and presentation (and that of my colleagues!). I attended local science communicators meetings and constantly asked the same question of people "How did you get into science communication?" The answer often seemed to include a mix of persistence, passion and "being in the right place at the right time".

I returned to New Zealand in 2005 and knew it was the right time to pursue my dream to explore science communication. I had persistence, the desire to make a change and a passion for writing. However, it was my partner's serendipitous seating next to Professor Alister Jones on a long-haul flight that began my career change.

Alister was from the University of Waikato's School of Education, and a Councillor at the Royal Society of New Zealand. Subsequently, he drew my attention to a job working as a Research Assessor for the Marsden Fund. The Marsden fund supports research excellence in science, technology, engineering and maths, social sciences and the humanities. I worked there for 6-months to cover for a staff member on maternity leave. It was a fantastic opportunity to immerse myself in some of the best research projects in the country and work as part of small,

efficient, and friendly team. This role was an important stepping-stone for me – out of the lab and into a whole new work environment.

Recently, I became project manager for the New Zealand Biotechnology Learning Hub (www.biotechlearn.org.nz). The Hub is an initiative of the Ministry of Research Science and Technology and aims to strengthen links between the biotechnology industry and the classroom.



Diane on New Brighton beach in Christchurch with her dog Gabe (a Rhodesian Ridgeback)

The Hub team provides science and technology teachers with up-to-date examples of New Zealand biotechnology and teaching resources.

The University of Waikato manages the Hub, although I work from home in Christchurch. Working from home has advantages and disadvantages. Overall, I find it a productive work environment, with the added bonus of having the beach close-by when a breath of fresh air is needed.

I enjoy the diversity of my new role. So far I have been involved with developing two 'focus stories' for the Hub. One looking at 'Future foods' with Crop and Food Research and another called 'Honey to heal' with Comvita. A typical day for me can involve writing and editing articles; talking to researchers and teachers; and helping to develop multimedia resources for the website, such as interactives, video clips, and video conferences.

Everyday I learn more about science and the applications of biotechnology in New Zealand. The site has grown beyond original expectations and is proving a popular resource. We are currently re-organising the content and will 're-launch' a new look Hub later this year, with an emphasis on easy navigation and connections between content. I can't wait!

Navigation between science and policy

Navigation Network project manager Dr Barbara Nickolas and co-manager Karen Cronin tell us about their scanning network project used to forecast science technology trends.

The sun is beating down on the deck of the Royal Port Nicholson Yacht Club in Wellington's Oriental Bay and a bright light glints off the water and the boat riggings, as a group of thirty people in lively discussion groups meets for the latest workshop of the Navigator Network.

Set up with the support of the Ministry of Research, Science and Technology (MoRST) as a two year pilot project in 2005, and managed by independent consultants Dr. Barbara Nicholas and Karen Cronin, the Network of around 20 scanners tracks new developments in science –



Barbara Nickolas

particularly in biotechnology and nanotech - which may be significant for New Zealand's future. Scientists from many of the country's top CRIs and universities have been working with private sector experts and departmental officials to identify the top trends in science and to provide policy alerts for the Government. At national workshops the process has expanded to include participants as diverse as farmers, neuroscientists, lawyers, ethicists, seed savers, journalists and biotech investors.

“We've taken a long term view, to look at trends in the science and the context in which science will operate over the next 10-20 years,” says Dr. Nicholas. With degrees in microbiology and ethics, Barbara has extensive experience in the science and health policy arena, including roles with the Royal Commission on Genetic Modification and the Bioethics Council. She is also an entrepreneur, currently developing a new business in the tree crop industry. As a consultant, Barbara has seen the potential to link science and business priorities with the policy agenda. “The Navigator project has been looking at both opportunities and risks. We have reported significant trends in areas such as neuroscience and synthetic biology, and the rapid convergence between different applications. The scanning has also alerted us to important trends in the institutional base for science, including the commercial demands nationally and globally shaping science practices – and the urgency of meeting the challenges around sustainability and climate change.”

As co manager, Karen Cronin has drawn on her background in environmental science and communication. “We set this up as a unique, New Zealand-style futures project. The emphasis has been as much on networking and building relationships between sector groups, as on creating a data set from our scanning reports.” The project has created a valuable asset in terms of the science expertise represented in the scanners and a national network of over 150 members, in science, industry, government and the news media, along with 4 major scanning reports.



While working as a consultant part time, Karen has recently submitted her PhD in risk communication at the Victoria Management School. Her research focused on the use of dialogue methods for resolving conflict around technological risk, using the GE debate as a case study. “Exploring future trends in biotech and nanotech has shown me how important our present social values are in the formation of science trajectories. One of the challenges raised by this project has been to recognise the wider context in which science is done and to look for new methods for public engagement in science policy and decision-making.”



Karin Cronin

Barbara adds that a key outcome of the project has been to highlight the importance of science to so many areas in New Zealand's future, from public health care, to water management, and new energy

fuels. “We may not be a big enough internationally always be at the forefront of new discoveries and breakthroughs. But what we do have is a unique capacity to see the context for science, to integrate between different fields of inquiry and to move quickly to apply scientific solutions to important problems, especially in social and environmental sustainability.”

For the two women, the Navigator Network project has been an opportunity to use their knowledge in science and policy – along with their skills in networking to draw connections between different sectors of expertise and

interest. “We’re both people who think outside the square, and tend to focus on the wider view,” says Barbara.

One of the recommendations of the project has been to initiate an in-depth inquiry on future trends in food. “We see ourselves as a food exporting nation. But with major disruptions in climate, transport fuel and changing market preferences, the long term horizon will look very different from what it is today. We need to start thinking now about the strategic implications and how we can adapt early, using our scientific and entrepreneurial expertise,” says Karen.

With a commitment to action learning, the Navigator Network project used several different futures methods⁽¹⁾. Along with periodic scanning, a major highlight was the national symposium on future trends and issues in neuroscience held in March, drawing on an in-depth review prepared by the international neuroscientist Prof. Steven Rose of the UK.

Reflecting on the project so far, Barbara concludes that there is now a high level of interest in the issues surrounding emerging technologies and what science and technology can contribute – and the importance of futures thinking in decision-making. She hopes that the insights from the Navigator Network will not only contribute to national science objectives, but also to wider areas of public policy.

From the end of June, MoRST is picking up the next phase of the future scanning process and intends to focus on key issues for the policy sector. To find out more about the key trends reported by the Navigator Network, visit the website at www.navigatornetwork.net.nz, accessible also through www.morst.govt.nz.

⁽¹⁾An article on the futures methodology used in the Navigator Network has recently been accepted for publication by IEEE Technology and Science Magazine see: http://ieeessit.org/technology_and_society/



Waiora with Dr. Paparangi Reid, Te Ahorangi, Tumuaki, Faculty of Medical and Health Sciences and Dr. Lorna Dvall.

PhD at the age of 74!

*While most graduates were in their 20s, one graduate, **Waiora Port**, stood out and took the media attention at the May University of Auckland graduation ceremony.*

Although reluctant to speak of her own sweetness, "E kore te kumara e korero motona reka" "The kumara does not speak of its own sweetness" Ramari Viola (Waiora) Port answered some question about how she came to be awarded her PhD at the tender age of 74.

Officially known as Ramari, she was always called Viola by her school friends. As there is no V or L in Maori, her Maori grandmother called her Waiora for Viola and that is why she prefers to be called Waiora.

Waiora Port is of Te Aupouri and Te Rarawa descent and is a woman who has inspired many by her ability to be a researcher, wife, mother and grandmother.

Born in Auckland 17th October, 1932 and returned to Manukau, Herekino soon after. Waiora began her education at Ahipara Native School in 1937. After attending Auckland Girls' Grammar School from 1946-50 she then attended Auckland Teachers' College 1951-52 and began her teaching career at Richmond Road School in Ponsonby in 1953. At the end of that year she married Garth Port and they had five daughters. In 1973 Waiora returned to teach at Richmond Road School. In 1988 with her youngest daughter Louise (in her second year) she began University studies hoping to have a BA by the time she was 70. Waiora graduated with her BA majoring in Education and Maori Studies in 1992 (at 60!), and was awarded a Masters degree in Education in 1995. At this time, the need was apparent, to understand Maori views on genetic testing, especially as a predictor of cancer. Waiora was approached by Associate Professor Ingrid Winship of the Faculty of Medical and Health Sciences, at the University of Auckland to undertake a project to assess the cultural perspectives of predictive DNA testing in familial cancer in the Maori people. The project was funded by the Health Research Council (HRC) and Waiora was the principal investigator.

Through Waiora's research insight has been gained of the impact for Maori of genetic knowledge and genetic technologies in familial cancer, grounded in *tikanga* and *matauranga*. This will inform attempts to create culturally responsive clinical genetic services.

She was appointed Kai Aritaki, cultural advisor to the Northern Regional Genetic Service and was invited to be a member of the Bioethics Council Toi te Taiao, following the Royal Commission on Genetic Modification.

Waiora has been supported through her ground breaking work by her family, husband Garth, and daughters Mary Rose, Anne, Ruth, Gareth and Louise, and now eleven grandchildren.

Marsden recipient 2006

Art in Oceania: A new history

\$480K

Deidre Brown

School of Architecture and Planning
University of Auckland



Deidre with her son Max

According to my mother one of my first words was 'house'. Although I'm not entirely sure of the truth of this statement, I've certainly been interested in the design of buildings and their social significance since I was a child, and this led me to study architecture at the University of Auckland. Less than a third of the students were female when I started in 1988, this percentage since evening out. My interest in Maori architecture grew as my professional degree moved towards completion and, with the encouragement of some of the staff, I decided to embark on an academic, rather than a practice-based career. This required the completion of Masters and PhD theses in Maori architecture, specifically the religio-political architecture of Maori pan-tribal movements from the beginning of the Kingitanga, in the mid nineteenth century, to the founding of the Ratana Church, one hundred years latter. The postgraduate degrees, added to the five year undergraduate degree, kept me in full-time study for the best part of a decade. If the plan when I entered University was to get a professional degree which would lead to an established career path, albeit in a non-traditional area for a woman (and a Maori!), this had been completely turned on its head by the time I had finished.

There aren't many academic jobs for people with my area of speciality, so in 1998, after my PhD was completed, I grasped the opportunity to be a lecturer in Maori art history at the University of Canterbury. The new role

necessitated a role change from architectural historian to art historian and, even more of a challenge, embarking on what was to become a six year commuter relationship with my long-term partner based in Auckland. Professionally, the Canterbury environment allowed me to grow as a teacher, curator, researcher and administrator. The first of four books that I have written on Maori art, *Tai Tokerau Whakairo Rakau: Northland Maori Wood Carving* (2003) was written here and won a Montana Book Award. It was also at Canterbury that I first met Drs Annie Potts and Philip Armstrong, and together we were awarded a Marsden Grant in 2004 for the project 'Kararehe: The Animal in New Zealand Society'. So much of New Zealand identity rests on our relationship to animals as food, economic resources, popular culture and high culture icons and as companions. My part of the project deals with the animal in art and in particular the role of animals as signifiers of identity, human psychology, spirituality, wealth, settlement and cultural change in work by Maori and Pakeha artists. I am also examining depictions of human-animal hybrids as these occur in Māori and in contemporary Pākehā art.

In late 2003, I finally returned to Auckland, my partner (who I married that November), and my alma mater, to teach at the Architecture School at the University of Auckland. Maori art and architecture remain my passion and vocation, and this year I received another Marsden Grant to write a new history of Oceanic art under the leadership of Dr Peter Brunt (Victoria University of Wellington) and in association with Sean Mallon (Te Papa), Prof. Nicholas Thomas (Cambridge University), Dr Lissant Bolton (British Museum) and Suzanne Kuechler (University College, London). The project, which will be realised as a book, attempts to set Pacific art in an international and academic context whilst maintaining a Pacific-centred, rather than an ethnographic, approach to the material. Customary art will be an important element, and previously marginalised areas -- such as women's art, art influenced by colonial contact, and contemporary art -- will receive equal treatment.

The translation of research into teaching is an important aspect of academia. My research work has focussed on understanding indigenous culture. Together with my colleagues, Drs Diane Brand and Rosangela Tenorio, we have developed an interdisciplinary design teaching model that uses the cultural diversity of the class as a resource (rather than an 'issue' or 'problem') and a design generator. Around half of the students at the School of Architecture are of Asian origin or descent, and two-thirds of the student body were not born in New Zealand. Our efforts have been recognised this year with a University of Auckland Teaching Excellence Award for Collaboration in Teaching. Together with other colleagues from the Faculties of Medical and Health Sciences and Education, as well as the Careers Centre and Centre for Academic Development, Dr Te Oti Rakena (Music) and I have recently received a Teaching Research and Learning Initiative Fund Grant to investigate the drivers for Maori and Pacific student success in non-lecture based learning situations.

Despite my concerns when I finished my PhD almost ten years ago, the last decade has been a bit of a dream run in terms of my career. Admittedly I have had to work hard and, with some retrospective regret, sacrifice parts of my personal life. But I have also worked with and taught some amazing people, been given the opportunity to think freely and to develop new ideas, as well as travel all around the world. I could not have achieved any of this without the understanding of my husband, and in the last six months our lives have been transformed – like some kind of reward for hanging in there –with the arrival of our beautiful son, Maximilian. Recently I returned to work part-time, in anticipation of a full time return in August. As a breastfeeding mum I am my son’s primary caregiver and so do much of my work at home. He receives my full attention for the hours that he is ‘up’, and after this I work for three hours before I go to bed, which most often means turning in around 2 am. It is sometimes frustrating that work I could have once done in a day now takes up to a week to complete as I fit it around care-giving. But the reward is being a parent to a lovely child, and I can only but wait to hear what his first words will be!

RSNZ teacher fellows

Thank you to Jessie McKenzie from the RSNZ for help in collecting these profiles

Kate Norton

In his mouth Ben (orca) carried the stingray he had just caught and brought it over to show me.



Kate in Argentina holding the socks that Dr. Ingrid Visser (her host) gave her when she saw her first orca.

What an amazing experience and one that I would probably have missed if it weren’t for the fact that this year I am not a teacher in the classroom. This year I am a 2007 New Zealand Sciences, Mathematics and Technology Teacher Fellow. I am working with Dr. Ingrid Visser, New Zealand’s only orca researcher.

I can now say I have met Ben, an incredible, stunning orca who has not only survived a stranding but also a serious injury after being struck by a boat propeller. To see him hunt and to do this so well is an incredible experience.

In March I spent three weeks in Punta Norte, Peninsular Valdes, Argentina and saw orca come right up onto the beach to snatch baby sea lion pups. It is a spectacular sight to see huge orca manoeuvre themselves up onto the beach and then back again into the water with a sea lion pup in their mouths. It is not until you see the white eye patch of the orca against the shiny black body coming out of the water do you actually comprehend what an amazing sight you are seeing.

I have helped rescue and name a sheep in Argentina. I have patted a hairy armadillo and got close to a tarantula. I have photographed orca swimming close to the beach and I have filmed orca breaching. I have been adopted by two sea lions who chose to sit next to me instead of their colony further up the beach. I have seen fox and guanaco. I have helped release a Wandering Albatross, I have leaned over the bow of the Orca Research Boat as Common dolphin swam along with us.

The experiences I have had with Dr. Visser as my host have been ‘orcasome’. I hope to continue seeing New Zealand orca, to build my scientific knowledge and orca experiences so that I can continue to teach children about these amazing mammals.

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Go to www.awis.org.nz for more information and to download a membership form.



Mel the orca

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Helen McCallum



2007 Science, Maths and Technology Teaching Fellow Helen McCallum never dreamt for a moment that she would ever be accepted for a teaching fellowship as she says she is just an ordinary person with no claim to fame in any field. Helen has envied others who have had a fellowship and finally thought she should apply. She figured even

if she wasn't successful she would have nothing to lose as she would still have her job, family and health so she applied and here she is now writing about her fellowship year.

This means Helen is no longer the food technology teacher at Waimea Intermediate for 2007 but a teacher fellow. This has given her a year of opportunities to pursue her chosen field of study which is food technology, in particular product development of fruit and vegetable products.

This fellowship year has given Helen the opportunity to up skill in many areas and be involved in all aspects of product development (including aspects of food science) within industry. She is also undertaking some academic research and is in the process of doing her first ever literature review on the topic factors that influence fruit and vegetable intake in children and adolescence. Her work load has been large but the knowledge and confidence she have gained has been even greater.

The one message Helen would like to give readers is that while it is really hard to do things well outside your comfort zone it is also really rewarding. *Don't let opportunities go by and then think I wish I had tried that. Ask yourself "what have I got to lose?"*

Helen has had some great experiences with the places she has had access to and the people she has met along the way, all of whom have been happy to share their knowledge with her. Helen says her fellowship wouldn't have been possible without the support of her academic host Dr Grant MacDonald at Nelson Marlborough Institute of Technology who really encouraged and guided her in her research and Fresh-a-peel her industry host who have let her be fully involved in every aspect of the development of a new food product .

Helen describes 2007 as "her" year, not only because it's the year that she turns 50 (an achievement itself given she had breast cancer at ages 28 and 40), but mainly due to the fellowship and all the learning opportunities that come

with it. Also the freedom to have time to smell the roses. She feels so privileged to be having an extraordinary year.

Sutapa Mukund



Sutapa at work using liquid nitrogen to carry out different RNA extractions

My work at HortResearch involved a smattering of Bioinformatics, Molecular Biology lab techniques, tissue culture and field work in researching Transcription Factors (TF) that are involved in switching on flavour genes in apples.

Complicated bio-synthetic pathways produce a farnesene, a volatile compound that produces the typical "grassy fragrance" in granny Smith Apples. The gene is switched on by certain specific TFs that bind to it. Research involved looking for these particular TFs from the family - the bZIP - basic region/leucine zipper motif that regulate flavour production. Since apples take a long time to grow, most of the work was carried out on the model plants Arabidopsis and Nicotiana that have short growth periods.

Lab work included carrying out different RNA extractions using liquid nitrogen (as seen in the picture above) and making cDNA in the lab. I also had the opportunity to carry out qPCRs, electroporations and infiltrate Nicotiana (tobacco) to study the effects of transient assays of gene expression.

BLAST - the Basic Local Alignment Search Tool - finds regions of local similarity between sequences - nucleotide or protein - using databases. Using the software at HortResearch and their own apple and kiwifruit databases, I learnt to use some of these Bioinformatics tools.

Highlights of my Teacher Fellowship also included attending the Queenstown Molecular Biology Conference and COMBIO in Adelaide where I had the opportunity to attend symposia by some eminent speakers, including Nobel Laureates.

Margaret Vlassoff



Margaret has always had a strong interest and commitment to a multi-cultural approach to learning. Her interest in tapa stems from the community she teaches in and she felt that this research would enhance the learning and contribution from Pacific Island families, students in Upper Hutt and the greater Wellington area.

Early in the year she established a wide number of links with the Pacific Island Community. Through many discussions with

these people it was evident that they did not have access to traditional resources to use in tapa making. This gave her the impetus to research the availability of alternative local materials that could be used. Because of her background in pottery she looked at natural earth pigments, the bark from trees and a variety of readily accessible flowers.

She used four schools, ranging from year 4 to year 8 to participate in the making and testing of these dyes and paints. Her first trials were tested on hand made paper as it is cellulose based like tapa. She gained knowledge of tapa making and traditions at Whitireia Community Polytechnic by attending lectures on the topic. Throughout the year she held many interviews gleaned knowledge from experts in this field.

In November Margaret travelled to Tonga to observe the local villagers at work. Despite the language differences the people were very willing to share their knowledge. To have had this opportunity to visit Tonga made her realise the importance of keeping the tapa tradition alive. The work involved in producing a small piece of tapa is very labour intensive and the islander's resources are very limited.

The trials she has done have shown that there is a wide range of dyes and pigments that can be used in classrooms to switch pupils onto science and provide some basic knowledge for tapa makers of the future.

Margaret has appreciated the support and time given by Liz Richardson and Dr Gerald Smith at Victoria University. She found their knowledge and expertise helped her immensely and their encouragement has stimulated her into further investigation into Pacific Island Culture.

Sally Richardson



Sally with a Tuatara

New Zealand Science, Mathematics and Technology Teacher Fellow, Sally Richardson of Kadimah College, Auckland, has been hosted by the Auckland Zoo and by the Ti Point Reptile Park. She has also enjoyed support from the Department of Conservation, Warkworth.

Her programme has been centred on learning about the tuatara and also about New Zealand wide variety of lizards - geckos and skinks. Much of New Zealand reptile population is under increasing threat of extinction due to habitat loss and introduced mammalian predators. People often mention having seen lots of lizards as a memory of their childhood days. This does not happen so often now, and as a result, there is less awareness of these lizards.

The purpose of this Fellowship programme has been to raise their profile a little and in doing so, perhaps to encourage more foresight when developing real estate blocks and roading. Highlights included assisting in the (permitted) capture and measuring of shore skinks and later helping with their relocation on an island sanctuary.

Discovering more about tuatara has been a wonderful experience - what a privilege to understand this ancient creature better. Looking at the Headstart incubation programme, learning about care of the young animals, observing tuatara up close and seeing them returned to the wild - this was an enriching experience that I look forward to sharing with students that they might become guardians of the future.

Marie Curie fellowship

Annick Masseot talks about her European Commission, FP6-2005-MOBILITY-6, Marie Curie Outgoing International Fellowship and her project entitled “Gender Mobility and Career development in the European and the New Zealand Scientific Markets”, or in short “GeMCap”



Annick and her daughter on the beach in Canterbury.

I have been granted a Marie Curie Outgoing International Fellowship under FP6 for three years, which started on 1 February 2007. During the first two years of this fellowship, I am based at the National Centre for the Research on Europe (NCRE) at the University of Canterbury in Christchurch (New Zealand) and on the third year, I will be returning to the Centre for the Study of Law and Policy in Europe at the Law School (CSLPE) of the University of Leeds (United Kingdom).

The project is entitled “Gender Mobility and Career development in the European and the New Zealand Scientific Markets”, or in short “GeMCap”. My aim is to study the relationship between scientific excellence, human mobility and gender equality in the context of the European Union and the New Zealand scientific markets. The project considers the tension present in the development of measures to secure the recruitment and retention of highly skilled women through the promotion of family-friendly policies on the one hand and the increasing relationship between career progression and mobility on the other. I am building on previous work to address issues of gender equality and life-course in terms of the differential opportunity mobility presents and its impact on recruitment, retention and progression in scientific career, principally with regard post-doctorates. This project gives me a chance to combine a range of research methods including legal and policy analysis at EU and New Zealand levels. My ultimate aim is that the conclusions reached in the framework of this research should feed directly into science policy at national and EU levels to ensure that current policies do not compound processes of inequality and social exclusion.

GeMCap

GeMCap is inter-disciplinary in nature and requires the involvement of stakeholders. In particular, I am conducting quantitative interviews with policy makers, legal experts as well as with scientists and their families to identify policy concerns and best practices in this area. **I am looking to interview scientists from New Zealand who are doing or are about to do a post-doc in the UK and scientists from New Zealand who are doing a post-doc in New Zealand. If you are in this situation, I would really like to interview you. Could you get in touch with me: annick.masseot@canterbury.ac.nz**

From a personal point of view, the Marie Curie fellowship allows me to acquire and develop substantial training such as quantitative analytical skills and substantial applied knowledge in scientific migration. An important part of my training as a Marie Curie fellow is to build up solid and lasting networks of academics and policy makers in this field of research with a view to further collaboration over the long term between the EU and New Zealand. I do not consider that my Marie Curie fellowship will be an end in itself. On the contrary, it constitutes a springboard to further research projects and collaborations for me as well as for the members of my research centre. Through the fellowship, I am hoping to contribute to develop links between members of my research centre of origin (CSLPE) and members my host centre in New Zealand (NCRE). The interests and expertises of the research centres CSLPE in the United Kingdom and NCRE in New Zealand are already similar and complementary, focussing on issues such as diversity, identity or migration. It is almost inevitable that following the success of the Marie Curie fellowship, collaboration between the two centres will strengthen. I am also hoping that my Marie Curie fellowship will lead to exchange between European and New Zealand policy makers.

AWIS listserv (free!)

A low volume forum for announcements and discussions relevant to women in science.

To join, visit

<http://lists.otago.ac.nz/listinfo/awis-list>

Many thanks to **Liz Carpenter** who traced this article for us at the *Women in Cell Biology* webpage. The article complements discussion held at the last Waikato AWIS Branch meeting joined with *BioLadies* which Liz describes in the *Branch News*.

This article is reprinted from the **ASCB Newsletter**, May 2007, with permission of the **ASCB**

A Network of Our Own

Susan L. Forsburg for the *Women in Cell Biology Committee*

Many WICB columns have addressed the importance of mentoring relationships between junior and senior scientists. What's missing is the view from our peers who face challenges similar to our own in both time and place. Peer networks not only contribute mutual support but also group intelligence, and are particularly important for scientists who may be isolated or set apart from their colleagues (for example, by being the only woman in a department, or the only single father). This column describes two strategies: one, a formal network described by Ellen Daniell in her recent book, *Every Other Thursday*,¹ and the second, an informal network called the X-Gals, authors of a continuing series of columns in *The Chronicle of Higher Education*.² Although very different in structure, these two networks share several features. First, they are safe places for their members and maintain confidentiality. Second, they are noncompetitive: The members aren't trying to establish rank within the network. Third, they are problem-solving groups, with a focus on professional issues. Finally, they are friends, encouraging the members to enjoy the good as well as confront the bad.

A Structured Group

"Group," the network in Daniell's book, was founded by several University of California, San Francisco, faculty over 30 years ago. It was inspired by a psychology movement that promoted a collective approach to problem-solving. Originally including men and women who were working toward tenure, Group eventually evolved into a group of eight women scientists from different Bay Area institutions. Many of them have now spent over 25 years together. Some readers may recall a presentation from Group members at a WICB event during the 1994 ASCB Annual Meeting.³ Daniell writes: "*The objective of Group ... is cooperation in the competitive world. Group members seek both practical solutions for specific problems (such "as dealing with a difficult boss or employee) and broader perspective on our lives. Group helps counter the all-too-common experience of professional life as a combat zone in which nobody seems to be on your side Anyone who feels isolated in a professional or competitive setting or who wants honest feedback can benefit from a group, a safe testing ground where everyone is on your side."*⁴ Group has regular,

structured meetings. Each member asks for a certain amount of time to discuss an issue. The members use code-words: a *pig* is a negative self-perception; a *contract* is a concise description of goals; a *stroke* is an encouraging compliment to another member. Members are discouraged from *rescues*, or taking responsibility for another's problems. Daniell's book is not a how-to manual in setting up a formal network, although it provides that information.³ Reading the book provides a virtual network itself, with Daniell explaining strategies for common problems and describing "pigs" that many of us harbor. As these high-achieving women describe the challenges they have faced, the reader may feel a jolt of familiarity. The book also describes setbacks in professional careers and real lives, as when Daniell describes her tenure denial, or another member describes the loss of her beloved partner. Thus, it's a fascinating biography of a cohort of women scientists and what it took for them to survive and thrive.

An Ad Hoc Network

In contrast to the formality and history of Group, the X-Gals are young women beginning their independent careers who have a long-distance, *ad hoc* network. They are: "*nine female biologists who began meeting weekly over a few beers in 2000, as several of us wrote up our dissertations.... As we graduated and took far-flung jobs and postdocs ... we have continued the dialogue through an e-mail discussion list.... What began as a survival mechanism for a few female graduate students has become an incredible motivational force and a sounding board vital to our lives and careers."*² In their series of columns in *The Chronicle of Higher Education*, they take turns discussing issues of mutual concern. Strikingly, most of their members are not on the "traditional" academic path, and they ask "are women 'choosing ourselves' out of an academic career, or is the traditional path of the academic profession so hostile to women that we feel we do not have a choice?"⁵ The series of XGals columns⁶ reflects on these and other issues, informed by the views of the network. *The Chronicle* columns do not reflect the support function of the network *per se*, but evolve into broader reflections about careers in biological science that come from their network experiences. "*We all have searched locally for mentors but found few. Perhaps that is one reason our e-mail group is so important to us: We help one another negotiate the competing demands of our roles, in no particular order, as scientists, partners, and mothers...."*² The X-Gals network was begun in proximity but continues, thanks to email, over long distances. Thus, a network need not be formal or local to be functional. As Daniell reminds us, "intimacy and reliance on others for encouragement and advice is a source of empowerment, not a sign of weakness."⁷ Both Group and the X-Gals encourage their members to achieve their goals, even though their strategies are different. Their experiences make it clear that all scientists, from junior students to senior professors, can benefit from a peer community. No one needs to do it alone.

References

¹Daniell, E. (2006). *Every Other Thursday*. New Haven: Yale University Press.

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⁷ Daniell, p. xii.

From the editors

This will be the last newsletter that I am directly responsible for as I am very pleased to be handing the editing duties over to Slavica.

I'd like to say thank you to Tamsin and Julia who have edited numerous issues whilst Christchurch has been responsible for the newsletter. A big thanks is also due to other Christchurch branch members who have helped with the folding and mailing, we've got it down to a fine art now but it was an interesting process in the beginning.

The AWIS newsletter would not be possible without your contributions so thanks to everyone who has responded so positively to our requests for articles and provided their own suggestions. I know it makes my day when I get an unsolicited suggestion for an article so keep those coming, Slavica will love to hear from you.

Malina Storer

Introducing...

Slavica Pavlinic, the new AWIS Newsletter Editor



I am based in Hamilton and have been a member of AWIS since 2004. Some of you may have met me at the Science Fever – 2005 AWIS Conference, held at Waikato University. I am taking up the role of

editor for the AWIS Newsletter, so you may see my name on emails and requests for your contributions with articles, news etc.

Many thanks to Malina, Tamsin and Julia in Christchurch, and Barbara in Hamilton who have been such excellent newsletter editors before me and have shared their experiences collected over time.

The success of AWIS and the AWIS Newsletter depends on small contributions from many of us. To keep it running that way I invite you all to help me in doing this job. I would like to hear from you whenever you:

- come across good news for our newsletter
- would like to introduce yourself and your work
- would like to introduce someone else from your workplace
- have spotted an interesting article that others might like to read
- have met an interesting woman/group at a conference.

Please email me with your ideas and I'll be happy to follow up on your suggestions (pavlinic@slingshot.co.nz or awisnewsletter@gmail.com). The AWIS newsletter reflects the interests of our members, so please help to sustain this vibrant voice of AWIS.

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**Holiday Inn on Avon
Christchurch**

July 2-4, 2008

www.awis.org.nz/conferencespage

The Association for Women in the Sciences invites women working with, or interested in, all fields of science to attend ‘Striking a Balance’ in Christchurch, July 2-4, 2008. The conference will consider how to balance the roles we occupy from researchers to partners/mothers to entrepreneurs to teachers/science communicators. The programme includes mini symposia, plenary speakers and numerous workshops aimed at skill development for attendees. Speakers will represent the spectrum of work in the sciences from media people to social scientists to science managers. There will also be a number of sessions where researchers from diverse backgrounds present overviews of their research plus tell of how they have balanced their careers with other aspects of their lives.

Keynote speakers include:

Professor Margaret Brimble, University of Auckland, L’Oreal UNESCO winner of Women in Science Award
Dr Jilly Evans, Vice-President of Amira Pharmaceuticals, San Diego

Workshop themes include:

- Presentation skills for scientists
- The Art of Mentoring - how to be a mentor and how to get the most from your mentor
- Running your own scientific business
- Writing scientific articles for mainstream media
- Juggling work and preschool children's needs

Please contact the conference organising committee Fiona (CarswellF@landcareresearch.co.nz) if you are attending any conferences in the next year and would be prepared to take some wonderful AWIS 2008 promotional flyers to distribute to interested women in science.



A warm welcome to the following new AWIS members:

Palmerston North

Christina Moon,
Rachel Anderson
Lee Deighton

We have 127 members

Julia Wilson-Davey
Membership Secretary

From the National Executive

The national exec is now also the conference committee so that is keeping us very busy. We are in the process of getting organised for the AWIS AGM for the end of July. The details of the AGM will be distributed via email, if you are in the Christchurch area please come along. We need 12 members present to reach quorum and you wont end up with a job as we hope to be able to pass the exec duties onto another branch.

We are still keen to hear from any branches who might want to take over the exec duties. They aren't strenuous and it's a great excuse to get together with like minded women in science for a catch up every month. Contact me mkstorer@gmail.com if your branch has some enthusiastic members who want to help out with exec duties.

Membership for 2007 is now due. There is a membership form on the last page of your newsletter so please fill that out and get it back to us as soon as possible. Membership is still a very reasonable \$25 (\$15 for students) and pays for the newsletter and branch activities. Please feel free to photocopy the form to give to other interested people who don't get the newsletter, or download the form from the website (www.awis.org.nz).

Malina Storer

Obituary

Dame Jean Herbison

The first woman to be appointed as a university chancellor in New Zealand – died in Christchurch recently.

For her contributions as an academic, educator and researcher in tertiary education over several decades, she was made a Companion of the Order of St Michael and St George (CMG) in 1976, and was awarded the Queen's Silver Jubilee Medal in 1977. She was appointed a Dame Commander of the Order of the British Empire in 1985.

Herbison was elected to the University of Canterbury's council in 1970. Nine years later, she became the first woman to hold the office of university chancellor in New Zealand, a position she also relinquished in 1984. In 1987, she was awarded an honorary doctorate of letters by Canterbury University.

Canterbury's current chancellor, Dr Robin Mann, said that Herbison was a "tremendous" figure in New Zealand's education history. "As a woman, she certainly would have brought a different perspective and also a lot of chancellors were not from an education background. She made a major contribution to the university and to education in general."

Congratulations

Queens Birthday Honours O.N.Z.M.

A huge congratulations to **Janet Grieve** who was awarded the Order of the NZ merit in the recent queens birthday honours for services to marine science.

Janet is now retired after a 40-year career at NIWA where she was manager of the Oceanographic Institute and principal scientist.

Our warmest congratulations to Janet!

L'Oreal-UNESCO For Women in Science 2007

Professor Margaret Brimble has been named as the is the Asia-Pacific Laureate in the L'Oreal-UNESCO For Women in Science 2007 awards. Margaret received the award for her contribution to the synthesis of complex natural products, especially shellfish toxins. Professor Brimble has focused on the synthesis of shellfish toxins that are useful for the design and development of drugs for clinical conditions including Alzheimer's, epilepsy, hypertension, stroke, and cancer.

We are delighted that Margaret will be joining us as a keynote speaker at the 2008 AWIS conference.

2007 MacDiarmid Young Scientist of the Year

Congratulations to the MacDiarmid Yong scientist of the year **Jessie Jacobsen** (University of Auckland). Jessie was also first equal in the Advancing Human Health and Wellbeing category with her research on 'Generation of a transgenic ovine model for Huntington's disease'

Natalie Harfoot, (University of Otago, Dunedin) was the winner of the Science and our Society category with research into how the 'Unique distribution of ion transporters in the possum gastrointestinal tract – results in major differences to secretion'

Gabrielle David, (University of Otago, Dunedin), was runner up in the Science and our Society category with 'Stable isotope analysis of aromatic amines'

Sarah Cox, (University of Auckland), won the Masters Level Research Award with her research into 'Computational ergonomics: an anatomically based finite element model of the lower limbs in the seated posture'. Sarah's entry was in the Future Science and Technologies category.

CEO for Royal Society of NZ

Congratulations to **Professor Dianne McCarthy** the new Chief Executive of the Royal Society.

Dianne was previously Pro Vice-Chancellor (EO) and Associate Dean (Science) at The University of Auckland. She has degrees in Mathematics, Experimental Psychology and Music, and was a recipient of both a Young Scientist Award and a Hamilton Memorial Prize for Research from the Royal Society of New Zealand. Her current research interests are in Behavioural Neuroscience and she has served on a number of national and international funding bodies and editorial boards. She was a Director of AgResearch from 1996-2002, and served on the Council of the Royal Society of New Zealand from 2000-2004.

Announcements

AWIS AGM

This short and sweet event (with nibbles provided) will be held in Christchurch at the end of July. We need your support at this meeting.

New Zealand Federation of Graduate Women Susan Byrne Memorial Award

The New Zealand Federation of Graduate Women (NZFGW) has announced the opening of the annual Susan Byrne Memorial Award.

The purpose of the award is to enable a mature graduate woman to retrain for a change of career in mid-life by furthering her studies at a New Zealand tertiary institution. The value of the award will normally be at least \$10,000 and will be unrestricted as to the field of study.

An applicant for the award must be: a degree graduate of a university or other degree granting institution in New Zealand or overseas; in an existing career or have had a previous career; wishing to make a change in career; a citizen of New Zealand or permanent New Zealand resident for at least five years; at least 35 years of age.

Susan Byrne was a member of NZFGW who died in 2004 and generously bequeathed a sum of money with the suggestion that this award be established. The closing date is 31 July each year and application forms can be downloaded from:

<http://www.nzfgw.org.nz/byrneaward.html>

UNESCO-L'ORÉAL International Fellowships

The National Commission would like to nominate four young women for the "2008 UNESCO-L'Oreal Co-sponsored Fellowships for Young Women in Life Sciences", (for those in the fields of biology, biochemistry, biotechnology, agriculture, medicine, pharmacy and physiology).

Each year since 2000, as part of the L'ORÉAL-UNESCO For Women in Science partnership, 15 international UNESCO-L'ORÉAL International Fellowships are allocated to young women researchers in the Life Sciences, at the doctoral or post-doctoral level, whose promising projects have been accepted by a reputable institution outside their home country.

Starting with 2006 Fellows, the length of the Fellowships was doubled. Each is now worth a maximum of \$40,000 and may cover a period of up to two years.

The UNESCO-L'ORÉAL Fellowship Selection Committee makes the final choice of three Fellowship beneficiaries from each of these five UNESCO regions: Africa, Arab States, **Asia/Pacific**, Latin America/Caribbean, and North America/Europe.

For more information contact Kate Barker, National Commission for UNESCO.
Kate.Barker@minedu.gvot.nz

Application deadline: 14 September 2007

Manhire Prize for Creative Science Writing

2007 Topic Theme: **CLIMATE CHANGE**
Closing Date for Entries: **16 August 2007**

Topic: Climate Change

Many scientists and social scientists believe that climate change is a serious threat to human civilisation. Regardless of climate change, we need to find sustainable forms of agriculture, manufacturing and energy. How will we respond? How can we respond?

This theme applies to both the fiction and creative non-fiction categories. Entries will be judged on their literary merits, and the extent to which they are likely to engage the reader.

For Entry Conditions and Entry form visit
<http://www.rsnz.org/events/creativesciencewriting/index.php>

Branch News



Waikato

Liz Carpenter, Convenor
(liz.carpenter@agresearch.co.nz)

The AWIS Waikato Branch met with BioLadies, an informal group of women working and studying in the Biology Dept at the University of Waikato. We briefly introduced

ourselves and then with pizza, wine and dessert readily available, we (randomly & with great informality) discussed areas of mutual interest.

We touched on a wide range of discussion topics, including: Where do all the female Biology graduates go? What makes a good mentor & how do I find one? How do I respond to extremely inappropriate comments by senior academic staff members? Why is it seen as acceptable to send graduate students to the few female academics on staff for 'morale boosting' or support, rather than their actual supervisor? Does a 'boys club' / male network exist & is this significant for career advancement?

The discussion was appreciated by all, and although we didn't come to any great conclusions or make any astounding breakthroughs, we generally agreed that AWIS probably could provide some support for the BioLadies. However, there is great merit in the continuation of regular meetings for the women working and studying in the Biology department. I am now planning the rest of the Waikato branch programme to incorporate some ideas from our joint discussion.

A few days after our joint meeting I came across an article ("A Network of our Own") and it resounded loudly with my recollections of the discussion with the BioLadies group. The group meeting in the Biology Dept is fulfilling a similar role to that described in the article – Group. And it shares features described for the networks profiled in the article: (i) the network is a safe place for members and (ii) is noncompetitive.

AWIS is a network that can be described as sharing these features also. As Susan Forsburg (author of 'A Network of Our Own') states "all scientists, from junior students to senior professors, can benefit from a peer community. No one needs to do it alone." AWIS is a fantastic peer community & could readily expand to help fill this support role that appears to be needed by women working in science in NZ. I have experienced great support through AWIS, through the newsletters, email list, conferences and branch meetings. I've met so many positive, encouraging women; women with great stories to share. Let's spread the word so that more NZ women working in science find out that we are there for all to benefit.

Liz Carpenter

Upcoming meetings in the Waikato

June 27th. Resilience in today's world. How do we pick ourselves up and keep on? Presentation by Bev Burns (Teacher, registered psychologist and Learning & Development consultant)

July 24th AWIS Dinner.

August 29th: Leading Experts. Presentation by Bernadette Doube (Learning & Development consultant)

Café Scientifique

June 26th, August 7th, September 11th.

Branch contacts

Overseas

Jilly Evans, Convenor
(Jilly.Evans@amirapharm.com)

If you want to see some of the work that Jilly has been involved with, her FLAP crystal paper has just been published in Science Express (reserved for really hot topics!!). Check it out at <http://www.sciencemag.org/cgi/content/abstract/1144346>

Christchurch

Fiona Carswell, Convenor
(CarswellF@landcareresearch.co.nz)

Fiona and members of the Christchurch branch are busy organising the AWIS conference, but if anyone wants to organise a branch meeting please get in touch.

The AWIS AGM will be held in Christchurch at the end of July.

Other Branch contacts

Dunedin

Lyn Dowsett, Convenor
(lyn.dowsett@stonebow.otago.ac.nz)

Nelson

Jenipher Hubley, Convenor
(jenipherhubley@yahoo.com)

Palmerston North

Nicole Roy, Convenor
(nicole.roy@agresearch.co.nz)

Wellington

Liz Feary, Convenor
(elisabeth_feary@frst.govt.nz)

Auckland

Needs a new convenor, please contact the exec if you can help.



Subscription Form

Your subscription for the year beginning 1 April 2007 is now due. Subscriptions fund regular newsletters and local branch activities. Please renew your membership now.

Name: _____ **New Member: Yes/No**

New members names and branch details are published in the first newsletter issued after joining. Are you happy to have this published? Yes/No

Branch: Auckland / Hamilton-Waikato / Rotorua / Palmerston North / Wellington
Nelson / Christchurch / Dunedin

Mailing address: _____

Contact details -please complete those you are happy to have used for AWIS business:

Home: Phone (____) _____ **Fax** (____) _____

Business: Phone (____) _____ **Fax** (____) _____

Email _____

The following details are sought to give AWIS better information about its membership base:

Organisation: _____

Occupation: _____

Specialist areas: _____

- Full membership \$25
- Associate membership \$20 (libraries, organisations and men supportive of AWIS)
- Student/Unwaged membership \$15

[you may pay for more than one year if it suits (e.g. overseas members)]

Privacy declaration: I agree that the National AWIS committee and my local branch convenor may use my contact details for the purposes of communication within AWIS.

Signed: _____ **Date:** _____

Please send form and cheque (made out to AWIS) to:

AWIS Treasurer, PO Box 1078, CHRISTCHURCH

Tick box if you require a receipt.

Thank you

If Undelivered Please return to

*AWIS
PO Box 1078
CHRISTCHURCH*