UnSW School of Medicine is spearheading an exciting new model of online education in partnership with James Cook University, University of Queensland, University of Melbourne and leading industry bodies, to develop a suite of web based simulation tools to revolutionise online learning.

Students of Medicine, Nursing, Allied Health and Medical laboratory Science will be a part of the new online community using virtual labs, virtual microscopy, adaptive tutorials and virtual patients to improve and enrich their learning.

The $3.3 million project is funded by the National Broadband Network (NBN) and will roll out nationally to students and professionals in Universities, TAFEs and High Schools across Australia. The software development and servicing for the project is web hosted and runs on the Smart Sparrow Adaptive eLearning Platform.

“The BEST Network’s Adaptive e-Learning Platform is something to get excited about. Rather than pushing educational boundaries, The BEST Network is instead re-defining the frontiers of future education,” says Diane Vukelic, Project Manager for The BEST Network.

Each institution will be involved not only in defining and creating their own training modules but in adapting modules developed by other universities. Modules will be constantly developed and refined by those who design and use them – the academics.

Key examples of existing tutorials
at UNSW School of Medical Sciences include Virtual Patients in exercise physiology, that simulate real life medical procedures and tests: Virtual Microscopy Adaptive Tutorials (VMATs), which teach histology and histopathology to over 1,200 students each year; and Western Blotting, a Virtual Lab (V-Lab) designed to teach third year Pathology students the technical aspects and relevance of assaying for changes in protein expression due to disease.

Using a virtual environment provides students with access to classes and facilities that would otherwise be unavailable, and lets them explore a myriad of theoretical designs and outcomes, without being exposed to the real-world hazards of the laboratory.

While potentially providing access to a far broader range and depth of study opportunities, the NBN BEST Network also hopes to deliver a more targeted and enriched learning experience through the platform’s capacity to adapt to the needs of each student, and to provide them with timely feedback. The system can also monitor the performance of each student in real time, enabling the teacher to review their students’ performance as a group or as an individual, and to track trends across modules. Teachers can use these analytical functions to identify areas of difficulty for their students, and to adapt tutorials appropriately.

The BEST Network is providing the tools needed by a new breed of online educators and learners.

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**UNSW Library Richard D'Avigdor Conference Award**

The award (up to $3000) aims to enhance career development opportunities by attendance at major national or international conferences on aspects of the development of digital information provision and access. It is open to UNSW Library staff or junior academic staff, working in a field relevant to the delivery of innovative information services. Academic staff applicants must be working in a similar field and must be employed by UNSW in Level A or B academic positions. Grant applicants should be proposing to attend a conference in the twelve month period November to October immediately following the closing date for applications. Applications will be assessed on the basis of career development potential, reasons for proposed attendance at the nominated conference and the potential benefits to be returned to UNSW.

Applicants proposing to deliver papers or poster sessions at a conference will be well regarded. Consideration of the award as a joint grant will be given to applicants proposing to make a joint conference paper presentation. Applications close 31 October 2012. Please submit to Cheryl Meyerson c.meyerson@unsw.edu.au

SoMS Seminar Series Presents

Professor David Tremethick

I received my BSc (Hons) in 1984 (University of Sydney) and my PhD in 1989 (Macquarie University and CSIRO). My PhD studies involved studying the role of chromosomal proteins in regulating transcription. Was awarded a NIH Fogarty Fellowship and worked as a post-doctoral fellow at the University of Rochester in the US where I developed an in vitro chromatin assembly to study how chromatin contributes to and regulates the gene activation process. Returned to Australia and established my own laboratory at the John Curtin School of Medical Research at the ANU. The aim of my group is to understand and link chromatin structure with its role in controlling the differentiation process by studying histone variants. Currently the head of the Genome Biology Department.

New mechanistic insight into how chromatin is remodeled and inherited during cellular differentiation to control cell fate

Wednesday 24th October

4 - 5pm
Level 4 Lowy Seminar Space
Lowy
Light refreshment served after event
Australia’s most inspiring academic and professional staff have been recognised for enriching student learning with prestigious Citation Awards from the Gillard Government.

152 university academics and professional staff were recognised for developing innovative programs, including new teaching models, to improve student experiences and learning.

These Citation Awards re-affirm the crucial role teachers and staff play delivering quality education and improving the student learning experience in Australian universities.

The Citations recognise a diverse range of teaching contributions, including:

- developing innovative curricula and resources in Chinese language and culture;
- improving the numeracy skills of engineering students;
- developing practice ready veterinary graduates; and
- sustaining quality practices in teaching and learning with technology.

The good news is that Dr Patsie Polly and Ms Gwyn Jones (Learning Centre) have been chosen to received a Federal Government Citation. The award recognises their work in developing written research communication skills in undergraduates using a community of practice approach which is ‘in time’ not ‘just in time’.

Patsie has been working on this research in Pathology since 2005. "We have empowered our undergraduate science students in research communication skills by asking them to take the role of 'researcher' and by collaborating in teams,” said Patsie. "Our findings demonstrate that collaboration enhances student confidence and learning."

This was one of only two Office of Learning and Teaching Citations...
Did you know that UNSW students now have access to an awe-
some new UNSW mobile app?

‘Uni-Verse’ launched mid year. It is the official mobile guide to the univer-
sity and has all the features students need to connect with UNSW in the palm of their hand. The app was developed for students by the Office of the Pro-Vice-Chancellor (Students) and Student Life and Learning.

Features ensure that students don’t get lost around campus, can vote on the best places to eat, keep up-to-date on news and tag events to share with friends.

If you have a “smart phone” you can download the app yourself.
You won’t always find Fiona at the bench. This is one academic that chases dreams whether intellectual or personal. At any given time you might come across her readying for time in the great outdoors, engaging in artistic pursuits or unravelling the mysteries of cardiac muscle excitability.

Science sparked her imagination from a young age. Fiona knew that this was something that she would continue with. “My first exposure to research was as an undergraduate on a Wellcome Trust summer scholarship working alongside a PhD candidate. My first physiology experiments were contractile studies of sheep lymph nodes. Even the trips each morning to the local abattoir to obtain fresh sheep lymph nodes did not turn me off and by the end of that summer I knew I wanted to be a researcher,” she said.

Fiona’s early years in Ireland provided her with a wealth of experiences that spanned the cradle to the grave. Her parents both had two occupations; they owned the local pub in Donegal that has been in the family since the 1800’s and while her father was the local undertaker and her mother the secondary school teacher. She is the second youngest of 6 children and recalls, “Life was a little unusual in our household. We lived above the pub and all of us had to learn to pull pints of Guinness from a young age. However the household focus was very much on education and my mother encouraged us all to study and excel in our schooling.”

Adopting her mother’s philosophy of embracing education served Fiona well as she moved from Donegal to Northern Ireland to study at the University of Ulster. It was here that she completed her BSc and a PhD in Biomedical Science. As a post-doc she moved to the US using her skills in molecular biology to secure a position in the Horowitz lab at the University of Nevada, Reno. “The lab had a
strong focus on electrophysiological research and I slotted right in,” she said. “It was here that I got involved in a number of ion channel structure/function studies. I found my research passion, understanding the molecular mechanisms of cellular excitability.”

Fiona’s work uses a variety of molecular, biochemical and gene knockout approaches. Her aim is to define the physiological roles of individual genes that encode ion channels and are responsible for electrical currents important for cardiac and smooth muscle contraction.

Fiona had found not only a position when she moved to Reno but also a mentor in Dr Burton Horowitz. He is remembered as being outgoing, insightful and having a generous nature. “My early career path was made easier due to having such an excellent academic advisor,” Fiona said. “He had such a positive impact. When he passed away suddenly in 2003 I really learned the value of having a superb mentor and how difficult an academic career can be without one.”

“Although I feel too junior to be passing on pearls of wisdom to people starting out on an academic path, if pressed, I would say find a good mentor - it makes all the difference - and when you reach your research destination you should strive to become a good mentor in return.”

Along with funding she secured a faculty position within the School of Medicine at University of Nevada.

After a number of years in the States Fiona was seeking change in a number of aspects in her life. “It seems as if my wishes have come true,” she says of her move to Australia. “Relocating to UNSW with my husband, Will, is a new adventure. I’m looking forward to a challenging new position, exciting possibilities for research, a vibrant new city on a different continent. While I’m still learning the ropes, getting used to a new research environment, new curriculum, different semesters, I relish the opportunity to establish collaborations with academics at UNSW and having the opportunity to develop my research in the department of physiology,” Fiona says.

Along with the research side of things Fiona finds delight in teaching into the undergraduate programs and mentoring higher degree students. “One of my most treasured moments is attending the graduation of my first PhD student,” she said. “I really enjoy interacting with students. When you realise that “they get it”, it’s a great feeling.”

Perhaps one of the biggest challenges faced in academia is finding time for it all; a work life, a social life and a personal life. It is in this regard that Fiona has been blessed with a perfect role model to emulate, her mother. “My mum has always been an enthusiastic supporter of my career choices. I don’t know how she did it all, being a secondary school teacher, raising 6 children and running a business. She did all of this with energy and vitality. She still is and she’s almost 80!”

You can contact Fiona at 9385 0585 or by email at f.britton@unsw.edu.au
“Physiology Runs in our Veins”. That was the logo that Team UNSW Physiology proudly wore on our t-shirts as we represented UNSW at the recent 10th Inter-Medical School Physiology Quiz held in Kuala Lumpur on the 29th and 30th August, 2012. Hosted by Professor Cheng and the University of Malaya, the ISMPQ was in its 10th year and the biggest attendance to date, as teams of keen and bright Physiology students selected from the Medical Schools of 69 different Universities across the world converged on Kuala Lumpur for this 2 day Physiology quiz. 

Unfortunately Jackie couldn’t make it, so Dennis, Amy and Arty, accompanied by academic staff Fiona Wilson (Physiology Teaching Unit) and Andrew Moorhouse (Cellular and Systems Physiology) packed their bags and headed off to KL. The team had undergone regular study sessions, which continued throughout the flight and upon arrival in KL.

Day 1: Finally the competition began. Day 1 was a written test of 100 questions held in a new examinations hall with about 400 students. The top 40 teams progressed on to the verbal test in day 2. Academics spent the time mingling with other Physiology teachers and attending a seminar on some of the latest Physiology laboratory teaching software by AD Instruments. The successful teams were announced later that evening, building up the tension by releasing brief snippets of the results throughout an evening student talent quiz.

The talent quiz was interesting! Singing and dancing — sometimes quite professional, sometimes not so professional but always amusing. During the final announcement, “Team UNSW” was called and we all cheered to have made it through to the Day 2 oral quiz rounds. We also celebrated with new friends to have also made it through — especially the teams from Brunei (led by UNSW alumnus, Dr Fatima-Shad), from Thailand (Srinakharinwirot U., led by former UNSW visiting scientist Dr Thongsgaard), from Nepal (attending for the 1st time) and our Aussie colleagues from LaTrobe (3 adventurous ladies competing for their 1st time in KL).
Day 2: The competition began early. 40 teams had qualified and there were 8 x 1st round matches of 5 teams scheduled. Only the 8 winning teams, and 4 other 2nd place highest scoring teams would go through to the quarter finals. Arty, Dennis and Amy took the stage for UNSW, up against some hot favour- ites – NUS, National University of Singapore to name just one. We got off to a flying start, Amy buzzed in with a 2nd chance correct answer, Dennis and Amy answered their questions superbly, and UNSW was in the lead! Not for long though, NUS strongly came back to just scoop 1st place in the round. But with a good score of 8 points we were a chance still. It was nail-biting waiting for the matches to finish but when they did, we heard “Team UNSW” once again. We had made it into the quarter finals! High Fives all round!

After lunch we were on stage for the next time, again some strong competition – University of Malaya, Shanghai Medical Military University and others. Amy and Dennis gave great responses to their Qs but not exactly the right answer! Arty rescued the team with a very good answer to his question to earn us valuable points but the competition was too strong. The final was a 3- way match between University Malaya (Kuala Lumpur), Mahidol University (Bangkok) and Chulalongkorn University (Bangkok). UNSW staff acted as judge throughout the day and could clearly see and feel the pressure! “Chula” were deserved winners – an outstanding performance in both written and oral quiz – and a polite and joyous winning team. We were sure to invite them for postgrad study at UNSW!

Epilogue: Once again the IMSPQ in KL was a great event – with Physiology being the real winner (corny but true!). UNSW was well represented at this International forum – and 9th out of 69 of the region’s Universities, including some consistently strong competitors, was a great effort. But the quiz is more than just about scores and ranks. The staff strengthened bonds and had valuable discussions comparing how Physiology is learnt throughout our region. Students become part of an international physiology collegium, and the competition and intense study ignite a genuine appreciation of our Discipline. We see this happen – in this year’s team and in previous years. Team members have gone on to enrol in, and excel at, honours and postgraduate study in Physiology. Physiology continues to run in their veins! We welcome this year’s team members into our own SOMS Physiology collegium and hope they maintain their strong affiliation with our fascinating Discipline.

Behind the scenes: None of this would be possible without assistance from our sponsors and from some key staff members. Team UNSW and the Department of Physiology warmly thanks our sponsors: UNSW Medicine, UNSW International and The School of Medical Sciences. We also thank those who helped organise the venture, particularly Ms Chris Riordan and the Physiology Teaching Unit – Drs Lesley Ulman, Nicole Marden, Eric Han and Fiona Wilson. And finally to our colleagues in Physiology for their support and effective and dedicated teaching.

Additional references:
10 Things You May Not Know About Allison Arndt

Did you or do you have a nickname, how did this come about? Childhood one is “Smiley”. Year 3 teacher. 47 guesses how I got that one, and the first 46 don’t count. Adult one is “Wormy” because I never seem to stay in one spot for very long.

What’s your most treasured possession? It would be cool (or not) if I said my Custom Harley Davidson Sportster 1200 but it’s actually my iPhone.

What’s under your bed? A monster and some tumbleweeds made of dust.

My worst job was... making cloth covered buttons in a furniture factory using a machine built in the 1940s. The challenge was making the little circle of cloth line up with the backing without having my fingers crushed as the two parts where snapped together. I used the money earned in the school holidays to travel to Surfers Paradise with my friends. That was before it was called Schoolies.

The book that changed my life…. I haven’t read it yet.

Do you have any pets? 0-23 wild rainbow lorikeets, 0-2 wild magpies, 482 wild spiders, 56 wild skinks, 2 wild dogs, 2 wild horses, 2 wild children, 1 wild husband.

Where did you grow up? Still growing up.

What is your most embarrassing moment? My phone ringing while listening to Rufus Wainwright at The Basement. He was alone on stage with his piano playing Peach Trees. A very slow, passionate song. I was sitting at a front table. He stopped his performance and looked at me while I tried to shrink into a pea-sized version of myself and hide behind my empty wine glass. He saw my horror, smiled and kindly said not to worry, it happens at least once every gig…… and he went back to the beginning of the song. Ugh!

How do you spend your free time? In horse riding boots, carrying bales of hay, with a wheelbarrow and rake picking up horse manure, towing a horse float...and you get the idea. It's a pity I don't ride. I'm part of the Mum & Dad support team for my girls.....

What could you do as a child that you can't do now? The splits!

What is the most favourite concert that you have been to? Justin Bieber with my 2 JB crazy daughters... well actually Rufus Wainwright at The State Theatre. First Australian concert after his Mum (Kate McGarrigle) died. Very moving! He had a huge screen as a backdrop with a weird movie playing of only his eyes covered in heavy makeup and tears.


If you could live anywhere in the world for a year, where would it be? North West Island. 100km out to sea from Gladstone, on Great Barrier Reef. No buildings, no cars, no people but lots of trees, turtles, whales, fish, birds, harmless reef sharks....and a wonderful compost toilet that works

Complete the statement: “I recommend…” pilates in the Lowy level 4 reading room held every lunch time Monday and Thursday with the absolutely amazing instructor, Pearly. Try it! Your core muscles will thank you! Please see me if you want more info.

What do you most enjoy about your profession? Helping people.

Allison is a Research Support Officer in the School in Medical Sciences. You can contact Allison on 9385 9794 or email on a.amdt@unsw.edu.au
In this paper we show that oxidative stress in the form of protein carbonyl formation, lipid peroxidation and DNA damage increases with age in males and females. We further give evidence (for the first time) that chronic oxidative stress is associated with NAD+ depletion in males and females and a subsequent decrease in sirtuin deacetylase activity, particularly in men. These data support the potential therapeutic benefit of promoting NAD+ anabolism in humans which may enhance sirtuin and PARP activity and perhaps slow down some degenerative processes related to aging.

Y Kim, AC Wong, JM Power, SF Tadros, M Klugmann, AJ Moorhouse, PP Bertrand, GD Housley


This paper reports an alternative splicing of the canonical transient receptor potential type 3 (TRPC3) in the brain. This splice variant (TRPC3c) has a very high ion channel activation frequency when linked to G protein-coupled receptors such as the mGluR1, with considerable Ca2+ conductance. The TRPC3c ion channel is shown to be the principal effector for mGluR1 signalling in the cerebellum. The results from this publication have significant translational ramifications for ischemic brain injury and the work is central to on-going research across the group.


This was the first research paper from Janna Duong’s PhD work. This study investigated the use of metformin, a drug widely used in the treatment of type 2 diabetes, in patients with chronic kidney disease. Current guidelines recommend stopping metformin therapy in patients with kidney disease due to the potential risk of lactic acidosis. Although the sample size was small, this study showed that patients with kidney disease were not at a higher risk of developing lactic acidosis at low doses of metformin. Therefore, lowering metformin doses in patients with kidney disease and regular monitoring of metformin concentrations would enable patients with kidney disease to benefit from the use of this drug.
In Brief

The UNSW Vice Chancellor, Prof Fred Hilmer took time to thank staff recently on the success of the University Open Day held at the beginning September. "As you know, this is one of the biggest events on our calendar, and a tremendous amount of work goes into ensuring it is a success. We had more than 18,000 visitors over the course of the day, with all the displays, workshops and other activities well attended. The new Information for Parents lectures were particularly popular, with some 500 people dropping into the Parents Tent for more information," he said. "Please pass on my gratitude, on behalf of the University, to those of your students who gave their time to help out. As always, they were enthusiastic and very effective ambassadors for UNSW. I enjoyed the day very much and hope everyone who attended did as well."

New Resources

• Acland’s Video Atlas of Human Anatomy
  Uses high quality 3-D images of unembalmed human specimens to illustrate anatomical structures. There are 5 sections covering: The Upper Extremity, the Lower Extremity, the Trunk, The Head & Neck and The Internal Organs.

• BMJ Learning
  Features over 500 modules of accredited, peer-reviewed learning modules in text, video, and audio formats. (Staff and students will need to register and create a personal profile before being able to sign in, If you already have an existing BMJ login you can use this.)

Uploading journal articles:

• If you plan to upload a copy of a journal article to a web page or online research network you should check the publisher’s copyright policy first. The Sherpa/Romeo site http://www.sherpa.ac.uk/romeo/ is a website that lists publishers policies. (Please note that many publishers do not allow the publisher’s pdf to be uploaded.)

• If you upload a paper to the UNSW open access repository UNSWorks the Library will check the publishers policy on your behalf.

• If you would like your students to read an article, rather than uploading it, you can create a link to put in Blackboard / Moodle. (Instructions on how to do this, and information on publishers licensing conditions, are available on the Library License Database http://er.library.unsw.edu.au/)

Please contact Kate Dunn (kate.dunn@unsw.edu.au, 51012) for more information.

UNSW Medical Review

Professor Fred Hilmer, President and Vice-Chancellor of UNSW, has commissioned a review of the Faculty of Medicine. Professor Hilmer is seeking advice from an international review panel to assist in setting the strategic direction for the Faculty of Medicine over the next 5-10 years.

The Panel is expected to review the Faculty of Medicine and prepare a report for the President and Vice-Chancellor to:

• Assess the strength of the Faculty in terms of national/international standing and research performance, and advise on future research directions.

• Examine and comment on the alignment of the recommended research strategy with the current and planned level of resources and infrastructure (including space, equipment, electronic data storage and management, staffing and leadership).

• Examine and comment on the interface between Medicine and its cognate Faculties (mainly Science, Engineering and FASS).

• Examine and comment on the relationship with its affiliated Medical Research Institutes, affiliated hospitals and other healthcare providers to identify opportunities for growing research strength especially within the context of Academic Health Centres.

• Examine linkages with eminent centres of medical research internationally, and advise on whether and how these might be strengthened.
Equipped for the Future

The School has a host of shared equipment available for the use of researchers and higher degree students but too often we find staff are unaware of these resources. To address this we will ‘host’ a piece of equipment in each newsletter.

Precellys

The Precellys can grind and homogenize a wide range of biological samples. The Precellys can be cooled if your samples are thermo sensitive, by coupling with the Cryolys cooling unit.

The Precellys system enables the preparation of up to 24 biological samples from soft to hard tissue (animal & human tissue, plant tissue, microorganisms) for example; brain, muscle and heart samples to very hard matter such as bones, hair and rice.

A figure-of-8 multi-directional motion gives a high energy level to the beads that grind up to 24 samples together in just a few seconds, at speeds ranging from 4000 rpm to 6800 rpm. Typical homogenization time is thus around 30 seconds. Samples are then ready for analysis using DNA, RNA analysis, PCR, Electrophoresis, Liquid Chromatography, Western Blot…

SoMS has 2 Precellys instruments - the Percelly 24 Dual for 12 x 2mL or 6 x 7mL tubes or the Precellys 24 for 24 x 2mL and we also have the Cryolys attachment. This attachment is use to maximise the combined yield and integrity of thermo-sensitive molecules.

Location: Wallace Wurth Lab 215 (Angela Finch’s lab)

Custodians : Lu Liu and Allison Arndt

How to Book: Book online at http://somsbookings.med.unsw.edu.au/
If you haven’t noticed that Chris Tzar and his team at the UNSW Lifestyle Clinic have been courted by the media lately then what rock have you been living under? This September the UNSW Lifestyle Clinic headlined in Sydney Morning Hearld’s Extra – the section for life & style.

The dual page spread focuses on how the Lifestyle Clinic benefits members of the public who have chronic health issues. The new miracle cure – exercise!

To read the full article please click anywhere within the frame.

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On the Lighter Side

I’VE HAD A MENTAL BREAKTHROUGH ON THAT PROBLEM I’VE BEEN WORKING ON...

NOT A COMPLETE SOLUTION – MORE A FUNDAMENTAL SHIFT IN EMPHASIS...

I’VE REALIZED THAT SOMEONE, SOMEWHERE IS BOUND TO KNOW THE ANSWER TO MY PROBLEM!

MY NEW PROBLEM IS WHERE TO LOCATE THAT SOMEONE...?