Welcome to the March edition of the school’s newsletter. We are pleased to announce that our website has recently been updated and revamped in the new university template.

The website now includes information for a wider audience, including tutors, students (current and future), together with current and archived quarterly newsletters.

We invite you to view our new site at http://sydney.edu.au/medicine/westmead/

Awards...

Congratulations to A/Prof Pablo Fernández-Peñas who was recently awarded the Order of Civil Merit (Officer) by the Spanish Government and received his medal from the Spanish Ambassador at the Spanish Embassy in Canberra on 17 March 2016.

In addition to his role as Head of Dermatology at Westmead, Pablo works tirelessly helping Spanish students and dermatology trainees to visit Australia, is heavily involved in research, both locally and in collaboration with Spanish colleagues, represents Spain & Australia in the WHO and other international committees and agencies, as well as his work with the Spanish community in Australia.

Dates for your diary... .
Vivid Sydney - 27 May to 18 June 2016
See www.vividsydney.com

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Next Issue: June 2016
Please contact Amanda Burke on +61 2 9845 7661 or Amanda.Burke@sydney.edu.au if you would like to include an article in the next edition.

WEB LINKS.......

SMS Westmead

Sydney Medical School

University Events Calendar
http://whatson.sydney.edu.au/events

Westmead Redevelopment
Welcome …..

Welcome to:
- Natalyia Belova who has recently joined the Finance team at Westmead.
- Our new Year 1 medical students who attended an orientation session on 3 February 2016, in preparation for commencement of their MD studies at Westmead.
- The Westmead Association formally welcomed our Stage 3 Year 3 students to full-time placements at Westmead with a welcome lunch held in the Green from on 18 February 2016.

3rd World & Rural Australian Elective Scholarships...

Congratulations to our Stage 3, Year 4 students who were successful in obtaining the 3rd World & Rural Australian Scholarship from the Charitable Trustees at Westmead, with three presenting their experiences at MGR on 23 March 2016:-
- Shannon Lees - Thailand;
- Fiona Schleyer - Cuba;
- Romeo Torres - Vietnam;
- Deren Pillay - Cuba;
- Sarah Minto - Tanzania;
- Joanna Blair - Thailand; and
- Seung Yeon Lee – Thailand

With an audience including the Acting Dean, Professor Arthur Conigrave and Professor David Harris, Joanna Blair, Deren Pillay and Romeo Torres gave insightful and personal presentations of their experiences during their recent elective terms, with interesting comparisons of medical systems in developing countries and expected standards in hospitals such as Westmead.

Publications...

Congratulations to Prof Clara Chow and colleagues whose paper “Effect of Lifestyle-Focused Text Messaging on Risk Factor Modification in Patients With Coronary Heart Disease: A Randomized Clinical Trial” [JAMA. 2015 Sep 22-29;314(12):1255-63] has been selected by the Lifestyle and Cardiometabolic Health Council of the American Heart Association. This paper was nominated and ranked as one of the most impactful publications in Lifestyle and Cardiometabolic Health in 2015.

The TEXT ME study was run wholly at Westmead and will be highlighted throughout the EPI/Lifestyle 2016 Scientific Sessions in Phoenix, AZ March 1-4, 2016.

Appointments & Promotions...

Congratulations also to the following colleagues on their recent promotions or appointments:-
- Emeritus Professor Brian Trudinger;
- Professor David Booth (WIMR);
- Associate Professor Mark Douglas (ID);
- Clinical Senior Lecturer Terry McGee (PWH);
- Clinical Lecturer Matthew Watts (ID); and
- Clinical Lecturer Way Han Slow (Gastro)

Teacher of the Quarter...

Westmead Clinical School students, from Years 1-4, were asked to nominate their favourite teacher in recognition of their contribution to student teaching during the past quarter.

We are pleased to announce that, from a competitive field of nominations, Dr Kelly O’Shea (Renal) has been nominated as the Teacher of the Quarter for March 2016.

Emergency Medicine Interest Group (EMIG)....

A Journey on EMIG Airways
By Alexander Carroll & Mandy Wang

The Emergency Medicine Interest Group (EMIG) donned their pilot hats, economy seating and in-flight menus in a workshop that aimed to educate students on the medical emergencies faced on airlines. Over the course of two workshops on the 14th & 15th of March, approximately 60 Westmead students from all stages were faced with hands-on experience in the most prevalent medical emergencies in-flight; though snakebites were noticeably absent.

Dr Andrew Coggin welcomes students to EMIG Airways and provides the in-flight refreshments.

The JS Museum and Clinical Skills Laboratory were transformed into ‘EMIG Airways’ equipped with all the standard medical supplies an airline would carry. Inspired by a recent publication in The New England Journal of Medicine (NEJM)(i), Dr. Andrew Coggin and his staff of ED specialists guided the students through a host of scenarios, with the help of some very enthusiastic actors.

The stations covered a broad range of symptoms: acute chest pain, dyspnoea, and altered mental status. Each scenario was interactive and allowed the students to collaborate and formulate differential diagnoses and management plans. Instruments available included: oxygen masks, ECG, defibrillator, sphygmomanometer and stethoscopes in addition to medications including: nitroglycerin, aspirin, antihistamines, injectable dextrose, adrenaline and more.
According to the NEJM study, an in-flight emergency occurs on average 1/600 flights with the most common complaints being: lightheadedness (37%), respiratory issues (12%) and nausea (10%). At the workshop, students learnt about the limitations in medical assistance in-flight, the physiology of flight and the stress it can place on individuals such as cabin pressure, oxygen availability and altitude. For more information, visit our website, Emergencypedia: http://emergencypedia.com/2016/03/13/mile-high-medicine/

Seizure patient (Maggie) receiving assistance in the aisle, mid-flight.

The workshops were a huge success with the take home message being that in an in-flight emergency we should feel compelled to (and are protected by law to) assist in emergencies in whatever capacity we can to extend the best possible care to patients. Next time you choose to fly, fly EMIG Airways.

Stay tuned for upcoming EMIG events on our Facebook page and email us if you have any questions: https://www.facebook.com/EMIG-Emergency-Medicine-Interest-Group-Westmead-189444534438311/contactemig@gmail.com


Westmead Student Surgical Association......

The Westmead Student Surgical Association (WSSA) began the year with an interactive introductory seminar into surgery. With the help of various surgical staff specialists at Westmead including Prof. Pleass, Prof. Lam, Dr. Elder, Dr. Swinnen and Dr. Tully, we had a phenomenally successful event, with high attendance and positive feedback. Dr. Swinnen began the seminar talking about his view on the past, present and future of surgery, followed by a panel discussion lead by Prof. Pleass. A range of topics were covered, not only relating to the surgical pathway itself, but also work-life balance which is pivotal to every future medical professional. We hope that this event has inspired further interest in surgery and will be reflected in the enthusiasm in our future skill workshops.
Sydney Medical School Events....

Please see the Sydney Medical School website for http://whatson.sydneymedicine.edu.au/events which may be of interest to you.

Teaching Opportunities...

As you may know, we are continually seeking tutors for all stages of the course.

If you are interested in teaching, please contact Dr Amanda Harrison on 98456403 or email amanda.harrison@sydney.edu.au at the clinical school to discuss possibilities further.

We are happy to provide letters recognising your teaching contribution which can be included with your CV.

This quarter, we particularly require tutors for:-
- Communication skills and history taking (Med 1 & 2) for the upcoming Musculoskeletal, Endocrine/Nutrition & Sexual Health blocks;
- Clinical Reasoning Sessions (CRS); and
- procedural skills.

Thank you to all our current tutors for their support in teaching our physicians of the future. We greatly appreciate your ongoing support.

60 Second Makeover...

Mr Bones, our skeleton, who usually resides in the Clinical Skills Lab closet, was recently treated to a mini-makeover and cameo role in a short film with Dr Kavita Varshney from ED. All the attention seems to have gone to his skull and he is now asking for his own trailer and personal assistant.....

Parking at the Westmead Campus...

As part of the redevelopment at Westmead, major car parking changes have now commenced and staff should keep up to date with parking changes at http://wsldintranet.wshs.nsw.gov.au/Westmead-Redevelopment/Car-Parking/staff-fact-sheets

Postgraduate Student Unit...

Research Seminars

Congratulations to our PG Research Seminar Winners!! They will move forward to compete for the ‘Young Investigator Awards’ to be held in November.

- February – Nicolas Sokołowski (CVR)
• March - Suzanne Mahady – Storr Liver Unit

Congratulations to our presentation and lucky door winners and thank you to those students who have supported the seminars thus far.

Awards

Congratulations to Nimeshan Geevasinga (Neurology) for being awarded his PhD after his examiners came back stating no emendations!! Great job Nim!!

Presentations – International & Local

Amit Lalwani (Endocrinology) was selected for a poster oral presentation at the Keystone Symposia: X5: Islet Biology: From Cell Birth to Death, on 15th March 2016 at the conference in Keystone, Colorado, USA.

Deletion of HIF-1α (Hypoxia Inducible Factor-1α) from β-cells influences the development of Coxsackievirus B4 (CVB4)-induced Type 1 Diabetes (T1D)

Amit Lalwani1,2*, Joanna Warren2, Cecile King2, Jenny E. Gunton1,2  
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Introduction: CVB4 is pancreaticotropic and is implicated in T1D development. We previously reported that HIF-1α is important for β-cell function and islet survival post transplantation. Its role in viral-induced T1D is unknown.

Objective: To determine whether β-cell-specific deletion of HIF-1α (BHIF-1α) influences the development of T1D after CVB4 infection.

Methods: 8 week old BHIF-1α and floxed-control (FC) male NODs (n=6-8) were inoculated with 105 pfu of the Edwards strain 2 of CVB4. Blood and pancreas were harvested at 7 (peak of infection) and 21 (clearance) days post infection (dpi). At each time point weight, random-fed blood glucose level (BGL), viral-load by plaque assay, serum amylase activity, pancreatic weight, glucose tolerance, serum insulin and insulitis were assessed. Long-term effects of infection were investigated in a separate cohort.

Results: At 7 dpi, BHIF-1α mice had 2.8-fold higher viral-load in the pancreas (0.96±0.11 vs 0.34±0.06 pfu/µL, p=0.0001) and 75% more insulitis (2014±136 vs 1145±196 inflammatory cells, p=0.02). At 21 dpi, CVB4 was cleared in all mice however; BHIF-1α mice had more extensive exocrine pancreas destruction, more marked insulitis (3205±215 vs 1347±897 inflammatory cells, p=0.04), reduced β-cell mass (0.77±0.07 vs 0.41±0.04 mg, p=≤0.0001) and impaired glucose tolerance (p=≤0.0001). BHIF-1α mice also had higher random-fed BGLs (6.5±0.4 vs 4.6±0.3 mmol/L, p=0.006) and inappropriately low serum insulin. In the long-term study from 32dpi onwards florid T1D developed in 13/22 (59%) of the β-HIF-1α mice, but in 0/11 (0%) of the FC mice.

Conclusion: Deletion of β-cell HIF-1α and CVB4 infection interact to establish an aberrant response that increases risk of development of T1D. This has important implications for the role of β-cell HIF-1α in T1D onset.

Sultana Banu (Parasitology) presented her research paper titled ‘Multilocus sequence typing of seven genetic loci to discriminate strains of L. donovani isolated from Bangladesh’ (Oral presentation) in the 17th International Congress on Infectious Diseases” held in Hyderabad, India, March 2-5, 2016.
Abstract

Background: Leishmania (L.) donovani, a species of the L. donovani complex, causes fatal visceral leishmaniasis (VL) infection in the Indian Subcontinent, parts of Asia and a large part of Africa. Genetic variations in Leishmania cause heterogeneity, spread of virulent strains, resistance to chemotherapeutics and exploitation of different hosts and vectors. Previously, L. donovani strains in the Indian subcontinent were detected genetically homogeneous by MLMT. Later study using genome-wide SNP markers showed that genetic variation existed in L. donovani strains from Nepal and India. We aimed to reveal intra-species genetic variation between strains of L. donovani derived from different endemic locations of Bangladesh.

Methods: Twenty two newly isolated L. donovani strains from VL cases were investigated in a cross sectional study by DNA based MLST of seven functionally independent housekeeping genes located in different chromosomes. Target loci were rhomboid like serine protease, fatty acid/sphingolipid Δ- 4 desaturase, serine/threonine-protein kinase, 5’ A2r related gene, ubiquitin-activating enzyme e1, mannoseyltransferase and splicing factor 3B subunit1 gene. Sequences of respective genes retrieved from the whole genome of the L. donovani (GenBank ID BPK282A1) and from a Sudanese L. donovani strain were used for comparison.

Results: Unambiguous sites of single nucleotide polymorphisms (SNP) were detected in analysed sequences across all loci. The 5’ a2rel-related locus was the most diverge region with 26 SNPs, followed by mannoseyltransferase with 10, splicing factor 3B subunit1 with 6, ubiquitin-activating enzyme e1 with 5, rhomboid like serine protease with 4, fatty acid/sphingolipid Δ- 4 desaturase and serine/threonine-protein kinase possessed 1 SNP each. Two large closely related clusters (one contained 10 and the other 7 isolates) and five separate individual groups among 22 Bangladeshi isolates were revealed by phylogenetic analysis showing the presence of 7 genotypes among L. donovani strains in this small geographical region.

Conclusion: The study illustrates that intra-species genetic diversity between strains of L. donovani does exist in Bangladesh. A combination of sequencing of 5’ a2rel-related and mannoseyltransferase genes are sufficient to differentiate strains of the L. donovani. MLST can be a future tool to determine intra- and inter-species genetic variation of Leishmania.

Publications

Congratulations to Denise Chu (Psychological Medicine) on her publication “Failure to differentiate between threat-related and positive emotion cues in healthy adults with childhood interpersonal or adult trauma” in the Journal of Psychiatric Research.
http://dx.doi.org/10.1016/j.jpsychires.2016.03.006

Other News

Young people’s healthcare journeys
The Department of General Practice, Westmead’s ACCESS 3 research study http://sydney.edu.au/medicine/general-practice/research/access.php will describe the experiences of young people accessing and navigating the health system in NSW, focusing on the barriers and facilitators to accessing
health care for marginalised young people in NSW. The study will focus on young people aged 12-24 living in NSW who are:

- Aboriginal and/or Torres Strait Islander
- living in rural/remote areas
- homeless or at risk of homelessness
- refugee or vulnerable migrants
- identifying as gender or sexuality diverse

This multi-faceted project includes a cross-sectional survey of young people in NSW, complemented by an in-depth, qualitative, longitudinal study of a subsample of marginalised young people and their journeys through the health system over twelve months. The impact of digital media on access and navigation will be explored. The perspectives of service providers on access, health system navigation and system inefficiencies will also be sought. Research findings will be presented to key stakeholders from policy and practice to help translate the findings into policy-relevant recommendations. The study was funded by the Office of Kids and Families, NSW Health to inform the new NSW Youth Health Policy.

Young people aged 12 to 24 years living in NSW are currently being invited to complete the NSW Youth Health Access Survey at http://sydney.edu.au/medicine/general-practice/access/

For more information please contact Fiona Robards, Senior Research Officer and PhD candidate at fiona.robands@sydney.edu.au or Chief Investigator, Dr Melissa Kang at melissa.kang@sydney.edu.au