

Editorial

*Angela Brew, Macquarie University,
Chair ACUR*

It's been an exciting, busy but rewarding year for undergraduate research in Australasia. The establishment of the Australasian Council for Undergraduate Research (ACUR), has been made possible through the support and commitment of many people across the country who are working to develop undergraduate research opportunities in their institutions. 34 of Australia's 39 universities are now represented on the ACUR Steering Group. A very successful conference was held at the ANU in September. Paula Newitt and her team including undergraduate students worked tirelessly to ensure a high quality program which was enjoyed by the many students from all over the country and other visitors. In fact, a number of visitors commented not just on the quality of the presentations but also on the quality of the questions that students in the audience asked. High levels of engagement were evident throughout.

Numerous politicians and leaders of other institutions are now aware of the research undergraduate students are doing thanks to the Posters in Parliament celebration and exhibition of undergraduate research. The many visitors to the exhibition in Parliament House were impressed with the work and dedication of the students

who presented posters, and a number of others including Vice Chancellors and senior politicians wrote to wish the event success even if they were not able to come.

ACUR has been set up with the intention that Australasian undergraduate research conferences should be held into perpetuity and we have already secured the location of the fourth conference at UWA in 2015. A dedicated website was established this year (www.acur.org.au) and together with Twitter and Facebook provides on-going forums for news and discussion as events unfold.

It seems amazing that this is the ninth issue of URNA, which was set up initially with no idea that it would become such a significant magazine. We have continued to receive comments which suggest that colleagues find URNA interesting, and for this reason it has continued to thrive. We aim to share news of initiatives in undergraduate research which are likely to be of interest to people in Australasia, so please keep them coming. We welcome your ideas and comments too and if anyone is interested in assisting with the editing and production of URNA, please contact myself or Lilia.

In 2015 ACUR will need to work on establishing more links with New Zealand institutions; to finalize the conference hosting handbook; to

find the 2016 conference hosts; to support the ACUR2015 conference hosts and publish URNA 10 (hopefully in the Southern Autumn). There will also be a need to discuss how to establish on-going funding for ACUR.

Finally, I would personally like to thank: the OLT for supporting the SEED project "Ensuring the sustainability of an annual Australasian conference of undergraduate research"; Macquarie University and the ANU for supporting staff to carry out ACUR work; our sponsors for their generous support; supervising and supporting academics; the politicians, higher education leaders and other visitors who generously gave of their time to attend events; all the well-wishers who sent email letters of support which gave us courage to know that what we are doing is worthwhile; Parliament House staff who made our attendance there such a pleasure; members of the ACUR Steering Group and their colleagues for all that they did to nominate students for Posters in Parliament and provide support; Lilia Mantai for her loyal dedication, efficient organisation and friendship; and of course all the students who came to the conference and Posters in Parliament to present their work and listen to others.

I hope you enjoy this bumper issue of URNA and look forward to receiving your comments.



Some members of the ACUR Steering Group at Posters in Parliament on 22nd September 2014

ACUR Conference 2014

Adeline Clarke and Josh Baum, ANU

The third Australasian Conference of Undergraduate Research, ACUR 2014, was held at the Australian National University on September 18th-19th 2014. Students submitted abstracts and these were reviewed by a team of 25 ANU students and academics. Workshops were held at ANU to develop abstract writing and reviewing skills in students prior to their participation in the conference review process.

Advertising for conference submissions focused on encouraging students from all universities across Australia and New Zealand to attend. In particular, academic leaders were contacted in disciplines traditionally underrepresented in conferences showcasing undergraduate research. The aim was to encourage a breadth of participation in practice-based research as well as the more traditional areas of STEM and arts/social sciences.

This was the first ACUR conference held away from Macquarie University. This was also the first conference to impose a registration fee (\$125) as part of the development of a sustainable basis for the annual conference. Building upon past successes the conference continued to grow, attracting a record 110 student presenters from 20 universities across Australia. 140 individuals attended the conference. Vice Chancellors from all Australian universities were contacted with a request for each university to fund two students to the conference. Some students who were accepted to present at the conference ultimately declined due to the lack of financial support. This is an area of development into the future.

The research topics covered were across a diz-



ACUR2014 Student organisers

zying array of disciplines, from astrophysics to neuroscience, ancient history to music, business studies to law, and much in between. All sessions were exceedingly well attended and question times were distinguished by the quality of the questions. A workshop: *Publishing your Research* was held as part of the conference program. The highlight of the social program was the conference dinner, attended by 120 conference participants.



ACUR Morning Tea

2014 Prizes and Sponsors

Award for Best Presentation and Paper – \$1000 (donated by Emeritus Prof. Adrian Lee, UNSW) to Hannah Louise Phelps, University of New South Wales (Canberra), for “A Mathematical Model for Heat Transfer in Fire Fighting Suits Containing Phase Change Materials”.

2014 Jury Prize for Presentation and Paper– \$500 (donated by the conference host institution, ANU) to Chi Yhun Lo, Macquarie University, for “Evaluation of headphone effects on performance in the LiSN & Learn auditory training software”.

Runner-up Best Presentation and Paper – HERDSA Student Membership (donated by HERDSA) to April Strong, University of the Sunshine Coast, for “The role of neurohormones in aquatic parasitic host-finding behaviours”.

Award for Best Poster Presentation – \$500 (donated by HERDSA) to See Weng Leong, University of Adelaide, for “Is section 105.4 of the Criminal Code Act 1995 (Cth) constitutionally valid?”

Runners-up for Best Poster Presentation – Book



Poster browsing at ACUR 2014

prizes (donated by HERDSA) to Fabien Lean, University of Queensland, for “A retrospective study of 111 canine prostatic samples: clinic-pathological aspects and classification” and Amy-Lee Sesel, Macquarie University, for “Remembering Together”.

All participants of ACUR 2014 were invited to participate in a follow up online survey. The feedback peaked around positive comments that ACUR was seen as an opportunity to practise presenting research. Student comments included many remarks such as:

“Coming to ACUR has encouraged me to continue down the path of research, and hopefully present at many more conferences!”

“The best part of the conference was meeting people and the confidence of knowing that I can present at a conference!”

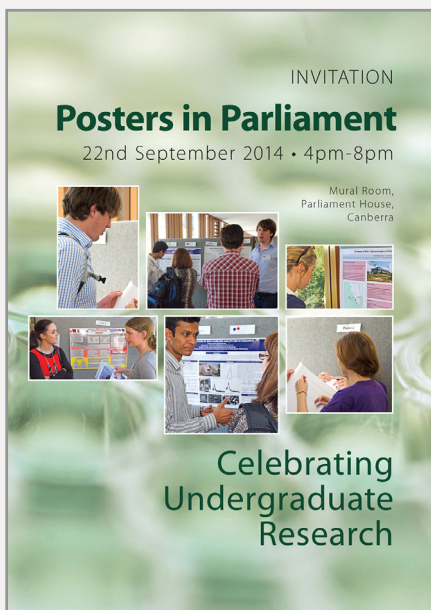
“ANU was an awesome place to have experienced. I love Canberra and the grounds at ANU. The workshop on publishing was interesting for me. I’d like to publish something one day or be involved with a journal.”

Feedback from attending academics was just as positive as that of their students:

“As a staff member it was fantastic to see the breadth of research being undertaken, and the quality of the research. Very exciting.”

Posters in Parliament: Celebrating undergraduate research

Angela Brew and Lilia Mantai, Macquarie University



Invitation leaflet cover

- ◆ "A wonderful feast for the inquiring mind"
- ◆ "Great to see politicians talking to the next generation of researchers!"
- ◆ "Inspiring – it is a great showcase of young talent!!"
- ◆ "I am inspired by such talent and think this is a terrific event!"

These were just some of the comments made by visitors to this celebration of undergraduate research on Monday 22nd September 2014 in the Mural Hall at Parliament House, Canberra.

The idea of hosting an exhibition of undergraduate student research in Parliament came initially from the USA where "Posters on the Hill" has been a feature of parliamentary life for many years. The aim was to demonstrate to key individuals including Members of Parliament and Senators the quality and range of undergraduate research that is being carried out by showcasing some of the best research through an exhibition of scientific posters displayed in a venue where parliamentarians and others can readily access them.



Students who presented posters

38 students from 16 different Australian universities across Australia presented their research. Student posters displayed research from a broad range of disciplines: from cell biology to language development, higher education teaching and learning to climate change; anthropology to biochemistry; philosophy to neuroscience. Visitors included many Senators and Members of the House of Representatives as well as key high education leaders, representatives of funding bodies and members of the ACUR Steering Group.

Our external consultant, Professor Stuart Hampton Reeves, who had recently introduced Posters in Parliament in the UK, provided useful advice both in the early and the



Angela Brew and Lilia Mantai, Organisers

later stages of planning. It became clear in discussions that the Posters in Parliament exhibition would require considerable liaison with universities through Steering Group members and that there might be restrictions in gaining space in Parliament House.

In the event, we were lucky to secure space in the Mural Hall, a large space in a secure area of Parliament House near to members' and senators' dining areas, so very convenient for them to pass by and view. Monday 22nd September was chosen as the date because it was a sitting day for both Houses of Parliament.

An invitation leaflet was prepared and was sent by post with an accompanying invitation letter to all members of the House of Representatives and Senators. It was also sent by email to all Vice Chancellors of Australian universities, all members of the ACUR Steering Group, all supervisors of the nominated students, and leading individuals from key organisations. In all an approximate total of 500 people was invited.

Australian universities represented in Posters in Parliament

University of the Sunshine Coast
University of Western Australia
University of New England
University of Newcastle
University of Tasmania
Griffith University
The University of Queensland
Flinders University
La Trobe University
University of New South Wales
RMIT University
University of Sydney
Macquarie University
Monash University
University of Adelaide
Australian National University

continued over...

Posters in Parliament *continued...*

Steering Group members and students were asked to personally write to their local MP and a number took up this opportunity. This was perhaps the most successful invitation strategy as a number of MPs came looking for the particular student who had invited them.

In order to ensure a high quality of student posters and presentations, ACUR Steering Group members were invited to nominate students. Where there was more than one Steering Group member in an institution, groups were invited to set up a process for nominating students.



James Brown, University of Newcastle presents his poster to Ms Sharon Claydon, MP, Member for Newcastle

Steering Group members were informed of the names of any students who had been accepted to present at the 2014 conference at the ANU which was being held on the Thursday and Friday prior

to Posters in Parliament. In a few universities where there were no Steering Group members, requests to send students was made through letters to Vice Chancellors.

Mechanisms for choosing students varied. In some cases mini exhibitions of students presenting at the conference were held. In others ACUR Steering Group representatives at the same institution collaborated to nominate their university's student representatives. Steering Group members were advised that not only should the posters be informative and well presented, the students needed to be articulate because they would have to explain their research to important people.

Judging by the comments of visitors, they certainly rose to the occasion. Some personal reflections on the conference and Posters in Parliament take up the story.



Ignatius Cha, ANU talks about his research on the Canberra fires of 2003



Professor Sally Kift with Chief Justice French at Posters in Parliament 2014

You can participate in this historic event by viewing the posters and photos that are on display at: http://www.mq.edu.au/lte/altc/ug_research/2014/index.htm

And by leaving comments on Twitter hashtag: #postersinparliament; or on Facebook at: The Australasian Conference of Undergraduate Research (ACUR)

Reflections on ACUR events 2014

Listening and Learning at ACUR 2014

Chi Yhun Lo, Macquarie University

I can trace my nascent trajectory into the world of research back to my experiences at the Australasian Conference of Undergraduate Research (ACUR) 2013. In my final year as an undergraduate in speech and hearing sciences, the good majority of my cohort was keen to continue onto clinical specialisations. But having witnessed the recent move of Cochlear Ltd. and the creation of the Australian Hearing Hub at Macquarie University,

stirred a different interest. This was a place where I could be at the forefront of auditory research! But at this stage, having no research project to present (let alone fully comprehend what research actually entailed), the next best thing was to promptly sign up to be a volunteer for ACUR2013. The experience was inspiring. I was so impressed by the quality of presentations and posters, and was determined that I could do the same (and then some!) in the future.



Chi Yhun Lo and Caroline Valim Macquarie University with Mr John Alexander, MP (member for Bennelong)

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Back to present day, and I have just finished giving my own presentation at the Australian National University, hosts of ACUR 2014, presenting a collaborative study between Macquarie University and the National Acoustic Laboratories (NAL) entitled: Evaluation of headphone effects on performance in LiSN & Learn auditory training software. LiSN & Learn is software designed by NAL to remediate spatial processing disorder (SPD) in children. SPD is the inability to focus on an individual speaker, particularly in the presence of noise, that typically leads to poor educational performance (because the child has difficulty listening to their teacher), leading to poorer social, emotional, and psychological outcomes. Although the title sounds technical, the research goal had some important, practical applications that would provide benefits to the users, and further expand access to LiSN & Learn.

ACUR is a multidisciplinary event, and I made a great deal of friends from across a wide range of topics, disciplines and universities. There were many standout presentations that I will not forget. I was instantly drawn to a group of Univer-

sity of Sydney students who were using the brain as an experimental controller for a digital music player entitled 'Crystallise your thoughts'. On to less familiar waters, and Kehani Manson explained the escape responses of marine gastropods; I must admit that watching sea snails move (albeit at 500% of their original speed) was both fascinating and hilarious. Finally, the presentation by Rebecca Davies on determining the age of star clusters was a reminder that the universe is an eternally wondrous place, and much like research in general – has so much left for us to discover.

I was also selected to be a poster presenter at the inaugural Posters in Parliament session and was fortunate enough to present my work to the Hon. John Alexander and the Hon. Ken Wyatt – the first Aboriginal person to be elected to the Australian House of Representatives. Both showed great interest in my project, as both had a personal connection with hearing impairment, and were aware of how greatly it affects the wider community. In particular, Ken Wyatt impressed me greatly, as his knowledge of hearing was superb, even using the scientific term of 'otitis

media' to describe ear infections! In general, hearing impairments affect aboriginal communities disproportionately, and Ken Wyatt was very receptive to the potential improvements with accessibility to LiSN & Learn as a result of my research study. He was incredibly encouraging, and adamant that I send him a copy of my published paper as soon as I can. In all, I hope the event will continue in the future, as it will help draw further connections, interactions, and initiatives between students, universities, politicians, and the government.

In summary, both ACUR 2014 and Posters in Parliament were a resounding success. These first few steps into the world of research have given me a boost in confidence, and has furthered my drive to continue down what I hope will be a long and fruitful career as an auditory research scientist. I have seen first-hand the benefit of undergraduate research programs, and I hope that both ACUR and Posters in Parliament continue well into the future, growing larger, and ever more ambitious!

Posters In Parliament, Canberra – A Victorian Archaeological Perspective

Chris Silvester, La Trobe University

'Your name has been put forward for consideration to represent La Trobe University to present a poster at the Posters in Parliament event as part of The Australasian Conference of Undergraduate Research 2014. . . ' Or so the email went. Me? I guess so.. Why not? Good chance to illustrate what our team is doing at Neds Corner Station, west of Mildura. 'You should contact the local member – they like that. . . ' Hmm – never done that... Guess I can do.

So I answered the email and found out that I was lucky enough to be chosen to represent archaeology at La Trobe University in Canberra. So we set about re-designing our poster specific to the conference requirements. What do I say. . . ? Talk about what the team you are part of are doing on the project.

So off to Canberra we went, and what an experience! Found the other presenting students outside – just look for the POSTER TUBES. A few students took 'selfies' with their posters outside to prove they had been there. I had never been inside the new Parliament House – quite a majestic building, and everything on a grand scale. We were taken through security, past some recognisable MP faces in the cafe to the Mural Hall to set up our posters, and then we started.

We quickly realised that we were from diverse backgrounds – music, linguistics, business, political science, international relations, biological sciences, chemistry, media and communications, surveying, geology. . . We all had an opportunity to explain our undergraduate research in plain language to others outside our field. Being able



Chris Silvester

to translate your research to someone who has no background in your sphere is an important skill. In addition, you pick up some great ideas through presenting, lateral thinking and networking.

Amongst others, I did get to meet the local member in the electorate where we undertake our surveys, Mr Andrew Broad, MP, Federal Member for Mallee (see below). It was refreshing to explain how we were assisting in an ARC and

continued on page 7 . . .

Reflecting on Posters in Parliament

Christian Inglis, University of the Sunshine Coast

Reflecting upon the Posters in Parliament, a certain phrase summarises my experience: A celebration of undergraduate research. And what a celebration it was! From the moment Posters in Parliament began I was absolutely amazed at the high standard of research being conducted by so many undergraduate researchers around the country. All who were nominated by their university to present at Posters in Parliament have so much to be proud of!

There is something terrifying about presenting the research that you have painstakingly worked over for an entire year to someone else besides your supervisor. For myself, the event was a first, and grand step in making my research public; and by so doing, inviting the worlds critique (cringe).

Suddenly I was exposing my 'baby' to a whole audience of professionals who knew nothing about my project (and if you read on you will understand how the word 'baby' really is a play on words). Professors, doctors, politicians, you name it, they appraised my work. How exciting and terrifying all at the same time!

After timidly placing my poster up on my assigned board in the Mural Hall in Parliament House, an onslaught of questions quickly ensued: why this research? Cut to the chase, what were your findings? How will this benefit the everyday person? What good can come from this project? Can you explain to me exactly why it is you decided to study the mental health of fathers after experiencing a traumatic childbirth??

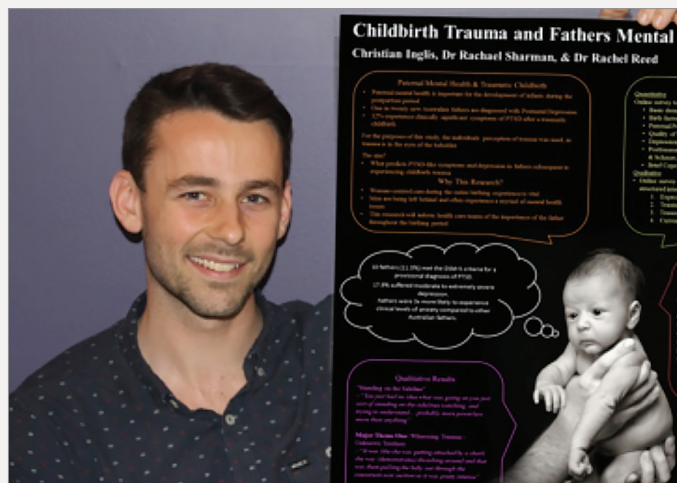
Another element of Posters in Parliament worth noting was speaking with my local member of parliament, Mal Brough on the Sunshine Coast. It is comforting to know our local leaders support undergraduate research with full fervour of heart, undergraduate research. His partnership with The University of the Sunshine Coast is what

helps fuel these types of events. I look forward to having a continued partnership with my local leaders in the future, and this event has taught me how.

The University of the Sunshine Coast was ecstatic that I won the prize for best poster as chosen by ACUR at the Posters in Parliament event. I have recently had a media interview that should be released shortly, and they spoke of the possibility of having television, radio, and newspaper interviews about my research, and about promoting undergraduate research. A great result here for the Sunshine Coast!

Why this research? Much is known in the literature about how a traumatic childbirth can have debilitating effects on a mother. The flow-on effects seen in mothers such as decreased attachment with her infant, increased postnatal depression, marital relationship difficulties, and post-traumatic stress are also starting to emerge in fathers. I wanted to explore why fathers perceive childbirth to be traumatic; I wanted to know what we can do to flag fathers who could potentially go downward spiralling into mental health issues after childbirth.

Findings? 11.5% of participants met the DSM-5 criteria for a provisional diagnosis of PTSD, and 17.9% suffered moderate to extremely severe depression. There was a sense of marginalisation of fathers before, during, and after the childbirth. Fathers said "You just had no idea what was going on you just sort of standing on the sidelines watching, and trying to understand". Another father mentioned, "... It's like you have your legs and arms tied up behind your back and



Christian Inglis with his poster

you have been thrown overboard and slowly sinking to the bottom of the ocean but all you can do is wiggle around".

Some fathers felt so traumatised they reported, "I have been thinking about vasectomy every day after the birth as I do not want to have the chance of going through it again".

Fathers need better communication before the childbirth about possible complications. During childbirth, even if things don't go pear-shaped, a midwife should guide the father through it, explaining what is happening. Fathers often don't know where to get help if it's needed in the postpartum; brief, routine psychological first-aid for fathers should be administered at the coalface by GPs and midwives to help prevent the slippery slope into mental health issues.

I feel honoured, and tremendously grateful for receiving the award for the best poster as chosen by the steering group of the Australasian Council of Undergraduate Research. It truly was an inspiring event.

Listening to other students just like myself speak with such zeal about their own research topics, instils in me a desire to be better. To work harder. To produce the best research I can, to do my part in giving back to the community.

RFA-funded project under Dr Jillian Garvey to more fully understand human occupation of the Murray River region, which we think is longer than the currently documented 15,000 years.

I explained how our piece of undergraduate research arose from a simple observation of whether a piece of burnt ground represented an Aboriginal cooking hearth or burnt ground from a lightning strike. We discussed the making of clay heat retainers (or heat beads) to cook food

in a fire pit, and how by replicating this, we were able to more accurately identify archaeological sites, and from this, the broader ramifications of a much older human occupation of the area.

So I came home inspired from meeting other students with bright and refreshing ideas and what's more, keen for others to have the opportunity to gain similar experiences at The Australasian Conference of Undergraduate Research 2015.



Chris Silvester, La Trobe University

Posters in Parliament Reflection

Mitchell Blincoe, RMIT University



Mitchell Blincoe sharing his research with Chris Silvester

Wow! What an experience. At the beginning of my studies I never thought I would have been given the opportunity to present my own original research in Parliament House.

As a public relations student at RMIT University in Melbourne, it's not the norm to be given such opportunities. I was proud to represent media and communications at Posters in Parliament and be among some impressive university students from all around Australia.

I found researching the affects of communication campaigns on the Gay Lesbian Bisexual Transgender and Intersex (GLBTI) community to be both interesting and rewarding. This is an issue I am passionate about and feel needs to be addressed more as a whole within our country.

This research was part of a subject I completed in the first semester of this year called 'PR in

Society', a research based course unique to public relations studies at RMIT.

Because GLBTI issues can be quite contentious, I was humbled to be given the chance to talk about my project in such a forum as Parliament House. I truly felt this to be a wonderfully unique and special opportunity to have a voice, and present something I had put a lot of work into and felt truly excited about. I had never been to Canberra before – so the all expenses paid trip didn't hurt either.

Presenting my work was such a rewarding experience, whether it be to MPs, members of ACUR, education leaders or my fellow students, I felt truly inspired to be in such an environment.

As my research was a little left of field in comparison with some of the other topics, I genuinely enjoyed seeing people's reactions and was pleased to see people expressing interest in something I believe to be so important. By the same token, it was so interesting to see what other students had been working on – one I saw was looking to one day develop medicines to fight inflammation, while another examined the affect of facial recognition on how we interpret Beethoven's music. Completely opposite ends of the spectrum, but both caught my attention equally.

Before I attended Posters in Parliament, I had a clear plan on what I wanted to do after I completed my undergraduate qualification at the end of this year. I planned to enter full-time work at a consumer PR agency and learn on the job – which is what most from my course will do. However, after participating in Posters in Parliament I honestly feel my outlook has changed. Why not pursue something that interested me so greatly further? Why not delve further into the research of GLBTI issues?

This is a relatively under-explored topic and I now have the confidence and the desire to perhaps one day pave the way in this area. I now plan to continue studying and feel inspired to complete an Honours year as an extension of this project. And from there who knows? Anything is possible.

I just wanted to say a few thank-yous; thank you to Angela and Lilia for your organization of the event – it was fabulous! (And a further thank you for fielding the barrage of emails that came your way in the week leading up). Thank you to my course co-ordinator Jenny Robinson for organizing the whole trip for me at such short notice. And finally thanks to the caterers; the canapés were amazing! I wholeheartedly enjoyed my ACUR Posters in Parliament experience, and hope our paths cross again in the future.

Reflections on Posters in Parliament

Associate Professor Liz Milward, The University of Newcastle

Recently I was privileged to attend the inaugural Posters in Parliament session, which was a wonderful success and a fantastic achievement on the parts of Angela Brew, other participating ACUR members and all the students concerned. Lilia Mantai did a fantastic job helping organise the event and making it such a success on the day while remaining calm and serene throughout, with a smile for everyone – very impressive!

For many of the students, this was their first opportunity to present in a public forum. They represented their institutions and research groups with enthusiasm and professionalism. My student had a wonderful time and has been telling everyone who's asked her about it – academics as well as other students – what a great experience it was and how much FUN.

Anything that helps students equate research with fun is admirable but there have also been deeper and potentially more enduring benefits. The high level of interest shown by other attendees and by the politicians who came by and spoke with her about her research has really helped her see that the work she's doing is considered important and worthwhile by her peers, academics from around the country and community leaders. This has had a very powerful impact and has strengthened her interest in going on to a PhD.

I also got a lot out of Posters in Parliament myself. Without exception the students explained their research with a level of enjoyment that was infectious and engaging. The variety of presentation styles has already led me to start re-thinking the approaches and technologies we use to communicate our research as well as giving me some new teaching ideas.

One student embedded an iPad in her poster, showing off the data dynamically in ways that made it come alive. The popular favourites were

five 1st year University of Sydney undergrads with high-tech headgear and software for detecting brain electrical activity and crystallising it into music. When the students hooked me up all the meters remained firmly flatlined – no activity of any kind, although the students, desperately seeking signal, tried the trodes in innumerable positions. Luckily, before they pronounced me brain dead, I was saved by the arrival of a well-coiffured woman who made a beeline for the electrodes, crying “Make way for the Senator”. To my extreme annoyance, the meters went off the scale when they hooked her up – clearly this particular politician's brain is still very much a going concern.

Everyone I spoke to on the day, whether students, academics or politicians, agreed that the event was a resounding success. Building better bridges between Australia's researchers and our politicians, encouraging and supporting our students and having fun at the same time – it's a brilliant concept and something I hope will continue.

The Emerging Researcher: Insight into La Trobe's new Hallmark Program

Hannah Schurholz, Mark Reedman, Rachael Pitt, La Trobe University

What is research? What does a researcher do? What is meant by methodology and how should it be applied? These are some of the questions put to La Trobe University's 'Hallmark Scholars' as part of its new 'Hallmark Program'.

La Trobe's first foray into a structured undergraduate research program commenced this year as an elite program for high achieving students straight out of Year 12. Hallmark Scholars come together as a cohort for one 'Hallmark' subject each semester throughout years one to three of their degree.

This has allowed the Program to be offered to students from over 20 degree courses with the inaugural cohort of 24 first year students forming a class representing multiple degree programs from across La Trobe's undergraduate offerings.

The Hallmark Program is a strategic initiative which is part of the La Trobe Framework and closely connected with La Trobe's interdisciplinary Research Focus Areas (RFAs): Building Healthy Communities; Understanding Disease; Transforming Human Societies; Sport, Exercise and Rehabilitation; and, Securing Food, Water and the Environment.

This linkage provides opportunities for the Hallmark Scholars to engage with leading researchers from across the University, both within and outside of their chosen discipline, and participate in authentic research addressing 'big issues'.

The Program introduces students to research from their first semester at university and is designed to allow them to progressively develop their research skills and knowledge. This initial year has exposed students to a variety of academic staff and postgraduate students across a range of RFA topics, exposing students to possibilities they had not considered.



The inaugural cohort of Hallmark Scholars

As one student told us

"...[it] is really interesting because you are able to learn so much on a particular topic, and discover that there are areas in specific fields that interest you which you may not have ever considered".

Another student noted

"The Hallmark Program is an eye-opener into the world of academia and the many opportunities with doing research at La Trobe".

One of the most rewarding aspects of this year for us has been watching the Scholars' understanding of research grow. Already they are beginning to recognise the benefits of this undergraduate research program with one student telling us

"The Hallmark Program is an enjoyable way to develop your skills as a researcher and extend your knowledge past the subjects you would normally be studying in your degree",

while another student reported that

"The best part of the Hallmark Program is getting the opportunity to talk with active researchers in fields I hope to explore one day".

Inviting such a diverse, talented, and energetic group of first year students to provide regular feedback and input into the development of the Program as it progresses has been both beneficial and insightful for us. Encouraging students to ask questions and to voice opinions has yielded

interesting insight into the undergraduate experience, the Scholar's understanding of research (and ours!), and how we might further develop the curriculum to better engage with our Scholars.

In addition to the theoretical components, Hallmark Scholars are provided with a variety of co-curricular opportunities including: a welcome residential program; research internships; mentoring; an international study tour; leadership training; and a scholarship (\$10,500 over four years) to support their participation in all curricular and co-curricular elements of the Program. The Program culminates with students undertaking an Honours year in their discipline on an RFA-related topic.

The Scholars are excited about their future research topics and the international study tour, and have told us that they have enjoyed working in groups with other high achieving students. Some of the more interesting quotes include:

"I have had the chance to meet like-minded students, who have provided me with friendly and welcomed competition, as well as companionship, throughout my first year of University".

"The Hallmark Program is [a] fantastic opportunity to challenge yourself and gain experience in areas you wouldn't otherwise be able to access".

Having only been in existence for eight months, La Trobe's Hallmark Program seems to be achieving



La Trobe University's Vice-Chancellor, Professor John Dewar, with Hallmark Scholars at the Melbourne Campus Open Day

its goals for both the students and the University. Our Scholars have embraced the idea of research; taken up opportunities to connect with some of La Trobe's best researchers; engaged in a learning community; and attended co-curricular activities including two Scholars representing La Trobe at the National Student Leadership Forum in Canberra.

Next year the Hallmark Scholars will embark on research internships working with La Trobe researchers on active research projects, where they will have the opportunity to apply some of the knowledge and enthusiasm that they have developed in their first year at La Trobe.

The class of 2014 will also welcome new students entering at a second year entry point, and have the opportunity to welcome and mentor the next cohort of first year students. A truly exciting journey lies ahead for both us and our Scholars!

Further information:

<http://www.latrobe.edu.au/hallmark>

Pathology comes alive in new Veterinary Sciences necropsy facility at JCU

Linda Johnson, Jenni Scott, Yissu Martinez, Dilini Thilakaratne and Janet Buchan, James Cook University

Since the opening of a new, state-of-the-art diagnostic teaching facility on campus in 2013, the bachelor of veterinary science program at James Cook University, Townsville has integrated the teaching of investigative diagnostics, including veterinary pathology aspects of collaborative research, to the 3rd year and 5th year veterinary

students. The new necropsy suite, built to PC2 specifications, receives a variety of farm and pet animals, wildlife and marine species for post mortem analysis.

The team of veterinary pathologists teaches diagnostic skills to veterinary students, which covers

initial history and signalment, methods of tissue collection, and advantages and limitations of different options, as well as learning in-laboratory diagnostic techniques, such as cytology.

The team was successful in securing a small JCU Learning and Teaching Development Grant



Pathology rounds presentation discussion between a clinician and veterinary students.

to help support the innovative use of technology and the effective use of the new necropsy suite during 2014. The team is working with an academic developer to guide the pedagogical research aspects of the project. The grant is supporting the purchase of audiovisual enhancements and increased histology services to augment teaching and understanding for the student diagnosticians.

Every Friday during the first semester the necropsy suite has been the venue for a presentation of Pathology Rounds by the 5th year students. These rounds highlight several of the cases received at the teaching hospital or from area clinics over the past week. A primary learning objective is for the students, generally in pairs, to learn to summarize a case history, including medical and surgical treatments. Students also learn to systematically review the gross pathology observed, and present any findings obtained from further diagnostic testing. There is a time limitation to these rounds, which requires learning a further skill, which is to be fully conversant about a case, but not to present too much information to an audience. Students learn that summarizing pertinent information and only providing further details upon request is a necessary communication skill.

The necropsy suite provides an authentic learning environment for the students to develop a range of skills essential to their profession. The students are able to draw on a range of learning experiences: from what they learn in class and during laboratory practical sessions to their experience in the teaching hospital located on-campus.

Students report that the rounds are an enjoyable challenge. They especially appreciate staff and peer engagement. Rounds offer an informal exchange between mentors and students, providing

initial insight to many students of their important status as colleagues on the 'front line' in only a few short months. Rounds also emphasize the importance of considering the question. Researchers and diagnosticians confront the necessity of addressing the primary question being asked. These weekly case review sessions impress upon the students the importance of the question raised in a case, considering whether this ques-

tion was answered, and whether, with hindsight, it was an important question to ask, and did they have the resources to resolve the question? As future clinicians often the questions asked by clients are, "why was the animal sick, or why did it die?" which can be challenging to succinctly address. This approach to teaching, culminating in a rounds presentation of the case to colleagues, aids students to formulate a professional response to questions often asked extemporaneously.

Pathology rounds contribute to the specific skills which underpin JCU veterinary graduate attributes. In particular rounds emphasize the pathogenesis, clinical signs, diagnosis, treatment, aetiology and epidemiology of diseases in common domestic, aquatic and native species. Issues of public health, zoonoses, disease control and prevention are discussed. Students demonstrate critical evaluation of evidence and identification of knowledge gaps suggest areas of veterinary research and problem solving.

"As an academic developer my core role involves understanding how learning spaces and learning technology can be used effectively and it is excit-

ing to see the staff and student engagement in the learning process in the necropsy space. The deep learning that is taking place as a result of these presentations shows that this is far more than just an assessment task. Through active audience discussion during their presentations the fifth years are being challenged as colleagues and professionals by staff and fellow students who drop in to hear about interesting cases."
Dr Janet Buchan (Academic Developer - Teaching and Learning Development)

Another effective initiative is the fortnightly vertical integration of learning achieved by having the 5th year veterinary students teach the 3rd year students in laboratory practical sessions. These sessions focus upon learning to identify and describe pathological lesions obtained from abattoir acquired ruminant tissues, and learning to conduct a post mortem examination. Instructors observe that both sets of students achieve greater awareness of the learning objectives by having taught peers, as well as receiving correction from peers. For the 5th year students, who are encouraged to diagnose lesions, this is an opportunity to practice description, rather than rapid diagnosis, and to articulate to peers the value of describing and not labeling. This is a valuable skill for front-line disease surveillance and reminds diagnosticians of the value of considering basic principals and not making assumptions.

Evaluation of the student and staff experiences in this initiative will be undertaken as part of the Learning and Teaching Grant research project and will inform ongoing improvements to the assessment design and teaching approaches in the course.



Third year veterinary students receiving instruction from fifth year veterinary students in pathology skills.

Upcoming Events

Undergraduate Research Programs: Building, Enhancing, Sustaining

University of Oklahoma-Norman, USA,
June 23-25, 2015

Do you have something to share: a great program, unique process, assessment initiatives, or an interesting and exciting aspect of your undergraduate research program? Are you ready to network and learn from your colleagues? This conference is for you and is designed for programs at any stage, including the development phase!

Be a part of it! Session topics include:

- Undergraduate Research Administration Nuts and Bolts
- Assessment
- Ensuring Access for All
- High-impact Learning: Expanding, Collaborating, Scaling Up and Scaffolding

Session formats vary from panels, 75-min interactive sessions, 10-min short presentations, and a poster session.

For more information: http://www.cur.org/conferences_and_events/urpd_conference_2015/

DEADLINES:

Interactive and short session presentation abstracts: **Friday, November 14, 2014**

Poster session abstracts: **Friday, February 27, 2015**

Early bird registration: **Friday, April 24, 2015**

Final registration: **Friday, June 5, 2015**

This meeting is hosted by the Council on Undergraduate Research's Division of Undergraduate Research Program Directors at the University of Oklahoma-Norman.

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CONFERENCE OF
UNDERGRADUATE
RESEARCH

**CALL FOR PAPERS
WINCHESTER
APRIL 20-21 2015**

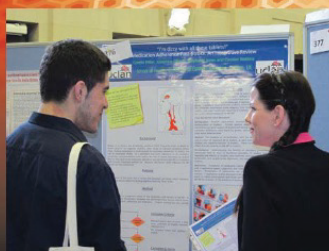
The British Conference of Undergraduate Research brings together undergraduate students throughout the UK (and beyond) to share their original research.

Undergraduate students and recently graduated students from all subject areas are encouraged to present the outputs of dissertations, internships and projects.

You can present through: posters, spoken papers, or creative outputs e.g. exhibitions, performances and film.

We are also calling for papers from academic staff or students, concerning research or case studies about the introduction of undergraduate research into modules or courses. Collaborative staff-student presentations are particularly welcome.

You can submit an abstract using the online form available from: <http://bcur.org/bcur-15/abstract-submission/>



The deadline for submission of abstracts is 15th December 2014.
If you have any enquires please email bcur2015@Winchester.ac.uk

**Fourth Australasian Conference of Undergraduate Research (ACUR2015),
University of Western Australia, Perth**

29-30 September 2015.

In 2015, the ACUR Conference will be held at the University of Western Australia, Perth. In an exciting new development for ACUR, it will be held jointly with an international event (ICUR); a global, 24-hour event linked by video conferencing technology where undergraduate students across disciplines at universities in different parts of the world are invited to showcase their research through oral presentations or posters. Joining these two events will extend the opportunities for interaction face to face and electronically not only across Australasia but also across the world. Both events will be held at UWA in the one venue with a joint program advertising the parallel sessions.

There will be a fee charged for registration. The exact amount is yet to be determined but will probably be about \$50.

Please mark the dates in your diary. Further details and a call for papers available soon.

ACUR

Australasian Council
for Undergraduate
Research

Upcoming Events

The 12th annual conference of the International Society for the Scholarship of Teaching and Learning 27-30 October 2015 in Melbourne, Australia.

The conference will be co-hosted by Monash University and RMIT University and held at RMIT University, located in the central business district of Melbourne. At this major international conference, you will have the opportunity to hear from, and interact with, scholars of teaching and learning from around the world. The conference theme, *Leading Learning and the Scholarship of Change*, will explore how teaching staff and students in universities can lead quality learning and teaching practice as we move inevitably towards more changes in higher education.

URNA

Contact us:

If you didn't receive this directly from us, it means that you are not on our list.
Please let us know if you would like to join our extended network of interested people.
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The Australasian Conference
of Undergraduate Research (ACUR)



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URNA is an occasional publication produced in the Learning and Teaching Centre, Macquarie University (design is by Kathie Mason /Tony Dwyer). We welcome contributions for the next issue to be published in the Southern Autumn.