

April 2015

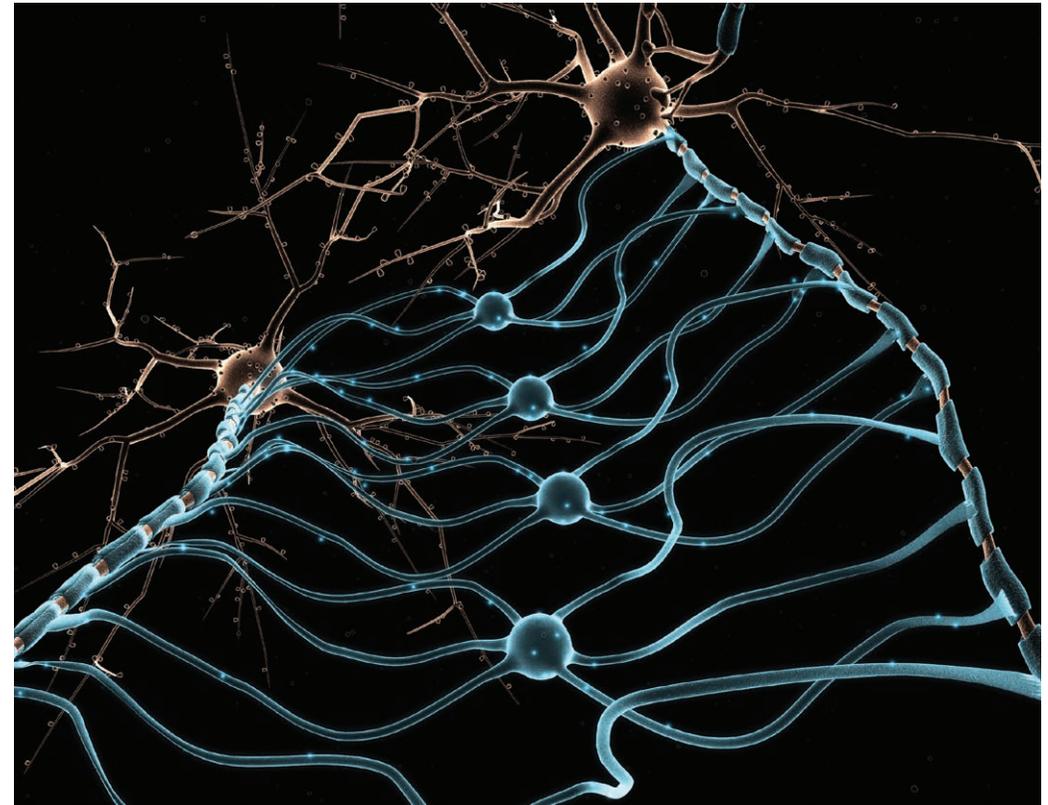


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[www.ans.org.au](http://www.ans.org.au)

## Australasian Neuroscience Society Newsletter



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## Message from the President

ANS members will be aware of the increasing competitiveness of funding from various granting agencies. In Australia, the unfolding consequences of the pause in funding increases to the National Health and Medical Research Council are being felt through diminishing success rates for applications across schemes. This is on the back of almost a decade of increasing NHMRC budget allocations, following the highly influential Wills Review of Health and Medical Research released in 1999.



**James Vickers**

*President, Australasian  
Neuroscience Society*

Australia saw substantial increases in medical research funding by Coalition governments, under Michael Wooldridge and Tony Abbott as Health Ministers. Major selling points for these rounds of increased funding were not just that Australia should be participating at the highest levels in health and medical research internationally, but that the outcomes of such research would lead to useful outcomes, not just in health but also in terms of national wealth, the latter through the stimulation of local biotechnology and pharmaceutical industries. In concert, we have also seen substantial Commonwealth and State government investment in capital infrastructure, with major neuroscience institutes being developed, and a number of new centres arising across Australia and New Zealand.

With regards to commercial outcomes and the neurosciences, while we have fantastic success stories in terms of 'neurotechnologies', such as the cochlea implant, it is not obviously clear how the last decade of increased government funding for medical research has led to the growth of substantial new industries. This 'gap' between the laboratory and translation into human and health outcomes has been well described. In terms of the neurosciences, the last 10-15 years have seen many exciting laboratory investigations internationally, but these have not converted into successful human clinical trials or new drug treatments. In many ways, this should not be that surprising given our partial understanding of many psychiatric and neurological diseases and conditions, as well as our still very rudimentary knowledge of the workings of most regions of the nervous system. These very key and 'undiscovered' elements of neuroscience research are what keeps many of us exercised academically and professionally. The insights that we collectively generate can also have a substantial impact on human health outside the development of new technologies and drugs. For example, in our region, research providing insights into the genetics of

conditions that cause epilepsy have led to new models of diagnosis, treatment and management across Australia and New Zealand. Research on brain imaging is providing new opportunities to detect CNS diseases at their earliest stages, providing smarter approaches to target drug interventions as early as possible. Australian and New Zealand research is also having an important effect on key public health messages for mental illness. These examples show that quality neuroscience research has a key role in informing public knowledge and attitudes about nervous system diseases and conditions, and also has a role in shaping appropriate medical management and health support initiatives.

Is neuroscience research in our region underfunded? In NHMRC relative terms, probably not, but there are also conditions of the nervous system of high health and societal impact that do not receive the research attention that they should. Our own investigation of 2014 NHMRC outcomes showed that around 9.1% of funding allocations (not including Senior, Principal and Senior Principal Fellowships) was attributed to the Neurosciences 'Field of Research' (FORs) code (eg \$52 million of \$580 million allocated). However, an analysis of outcomes across all FORs, demonstrated that neuroscience-related funding corresponded to approximately \$110 million, or 19.1% of the total funding (outside of Fellowships). The NHMRC have since released data related to areas of historic funding. Details of this are at <https://www.nhmrc.gov.au/grants-funding/research-funding-statistics-and-data/funding-statistics-grants-and-funding-data>. There is a spreadsheet available

*(Message from the  
President continued)*

there for neuroscience (from <https://www.nhmrc.gov.au/grants-funding/research-funding-statistics-and-data/burden-disease-and-health-issues>) with details of funding that drills down into specific areas of neurobiological research from 2000 to 2014. You will note that some areas of neuroscience research show relatively unchanging levels of funding despite overall NHMRC funding increases, whereas other fields such as neurogenetics and imaging have grown substantially in terms of relative allocations.

What is most chilling, however, is data showing that the numbers of grants in the neurosciences have not grown very much since 2009 (although dollar amounts allocated to grants have). This shows that, despite the substantial investment into projects, people and infrastructure over the last 10-15 years, we are in for a period of relative funding stagnation with increasing grant length and cost also contributing to a dwindling success rate. This is at a time when there has never been a greater recognition of the impact and burden of mental illness in the community, and where dementia and stroke are now the 2nd and 3rd major causes of death in Australia, respectively (with dementia soon to pass ischemic heart disease as the major cause of death in women). Mental illness alone costs the Australia economy more than \$20 billion annually.

The NHMRC has always held to the principle of funding the 'best' medical and health research, but has not always shown a particularly good record of funding research strategically to answer community needs or to address shifts in health burden. It is a worthwhile national conversation as to whether this approach, in the face of a budget allocation that will

not foreseeably increase, is the correct approach. Similarly, should the NHMRC maintain the current set of funding allocations across its schemes? Relatedly, there has been substantial investment in establishing a number of medical research institutes across the country, some of which are principally neuroscience-focused and many other which have major divisions undertaking nervous system research. With approximately \$100-120 million available annually from public funding agencies for neuroscience-related research across Australia, will this be sufficient to ensure that these institutes and research programs not only survive but thrive? All of this is not helped by current uncertainties about the potential deregulation of the Australian tertiary education sector. The ongoing higher education policy mess has led to a general paralysis of our university sector, including how they might address research support, as it is difficult for these institutions to predict their own future funding profiles. It is also hard to see how funds may be made available for the MRFF given Federal Government projections for future deficits.

Where to from here? Neuroscience research, along with other areas of health and medical research, sits at a proverbial cross-roads. It is clear that the previous reliance on increasing public funding for medical research will not assist a robust neuroscience sector in the short to medium term. It is timely for our Society to re-engage with the general community who increasingly place value on neuroscience research, and to engage with other non-governmental funding agencies and philanthropic organisations that support neuroscience research. I would encourage members

to take every opportunity to engage with the public and their communities of interest, to help make the case for the value of neuroscience research and how it can be applied not only to new drug development for a suite of currently incurable diseases, but also how such research informs how we understand and manage a range of conditions. As we are aware, the wider public is becoming more fascinated by neuroscience research, and the impact of mental illness, as well as the surge in ageing-related neurodegenerative conditions, is pushing neurobiological research to the forefront. It will be up to us a community of neuroscientists, including also our major institutes and centres, to work collectively to help map a way forward. The ANS Council recently decided to increase its efforts in advocacy on behalf of our members, and it is hoped that such public engagement initiatives may also assist in building a strong case for capitalizing on the marvelous contributions of neuroscience across Australia and New Zealand.

*... there has never been a greater recognition of the impact and burden of mental illness in the community, and where dementia and stroke are now the 2nd and 3rd major causes of death in Australia, respectively ...*

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## The Cairns Meeting Beckons with an Exciting Program

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The Program for the 2015 ISN/APSN/ANS Conference in Cairns (August 23-27, 2015) promises to be a very exciting and varied one. In the last three ANS Newsletters, I have highlighted the 9 satellite meetings that will precede and follow the main meeting and 5 plenary lectures during the meeting. This time I want to focus on the range of outstanding symposia and young investigator presentations and a major international outreach event that will take place during the meeting.

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The program includes 37 Symposia spanning a huge range of topics that can be broadly broken into three groups. Some focus on applications of new methods such as: optogenetics, neuroinformatics, imaging of dense core vesicles, and electrophysiological investigations of ion channels and receptors. Others focus on frontiers of understanding of basic cellular and molecular mechanisms in neuroscience such as: epigenetics in brain development, dynamic networking between glia and neurons, extracellular vesicles, synaptic plasticity, the roles of non-coding RNA, glycogen and lipids in brain function, and autophagy and mitophagy in cell death. The third major group examines the cellular and molecular basis of brain disorders to identify potential therapeutic targets in conditions such as: brain injury, degenerative diseases, epilepsy, schizophrenia and addiction. The full list of symposia and the outstanding range of international presenters is available on the preliminary timetable at: <http://www.neurochemistry.org/biennial-meeting/isn-2015-biennial-meeting/isn-2015-scientific-information/isn-2015-preliminary-timetable.html>

The 7 Workshops during the meeting will provide a more interactive forum for discussion and debate of controversial or developing areas in neuroscience. These include topics such as: the strengths and limitations of experimental models of human neurological disease, new diagnostic markers and therapeutic targets for such diseases, and strategies for career development for early career researchers including “How to publish a good paper”. Young investigators will also receive special focus in two types of presentation. Four special plenary lectures will feature outstanding young investigators. There will also be 4 Young Investigator Colloquia each featuring 5 young investigators. Details of the Workshops and Young Investigator Colloquia are also available on the preliminary program above.

During the midday break on Monday August 24, the Cairns meeting will host the Final of the International Brain Bee (IBB) Challenge. Since its foundation in 1999, the IBB has grown to become the largest worldwide neuroscience competition for secondary school students with around 30 countries expected to compete in 2015.

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*(The Cairns Meeting Beckons with an Exciting Program continued)*

Since 2007 ANS has sponsored the Brain Bee as a major outreach activity to motivate students to learn about the brain, capture their imaginations, and inspire them to pursue neuroscience careers in order to help treat and find cures for neurological and psychological disorders. The Australian Final has proven to be a very popular event at the annual ANS meetings. This will be doubly so in Cairns as we will host the International Final for the first time. The IBB Final has never been held in the Asia-Pacific region where interest in the IBB is growing strongly – Japan, Hong Kong, Taiwan, Philippines and Bangladesh are likely to compete in 2015 for the first time.

And if all this was not enough, there is also the wealth of reef and rainforest experiences that tropical Queensland has to offer. Early bird registration will close on May 12. I hope to see you all in Cairns.

**John Rostas**

*Chair of the Local  
Organising Committee*

# Call for nominations for ANS Council Positions

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The ANS Executive calls for nominations for the following ANS Council positions which need to be filled in time for the Cairns 2015 Conference AGM in August this year:

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**President-elect:** The current past-President, John Rostas, will step down at the Cairns 2015 AGM after completing his 4-year term. His replacement will serve as President-elect for one year, then President for two years and finally, past-President for one year.

**Secretary:** the current secretary, Joe Lynch, has served in this position for 3.5 years and will step down at the Cairns 2015 AGM.

**Editor:** The Editor holds office for one year but is eligible for re-election for any number of succeeding years. The current incumbent, Steven Petrou, has served for 3 years and will renominate for a further 12 month term.

**New South Wales State Representative:** the current representative, Kay Double, has served in this position for 4 years and is not eligible to be renominated.

**Queensland State Representative:** the current representative Michael Piper, has served in this position for 2 years. He has indicated that he will renominate for a second 2 year term.

**Tasmanian State Representative:** the current representative, Tracey Dickson, has served in this position for 2 years. She has indicated that she will renominate for a second 2 year term.

To nominate for a position, please send an email requesting nomination to ANS Secretary by 30 June 2015. You must be a current ANS member to nominate either yourself or someone else to a Council position. In the event of more than one nomination for a position, a postal ballot will be held prior to the August 2015 AGM. To find out more about what each position entails, please contact the current incumbent or the ANS Secretary.

# Science Meets Parliament Report

Science Meets Parliament is an annual event organised by Science & Technology Australia to provide approximately 200 scientists with training in communication of science to the media, policy makers and politicians. As a member organisation of Science & Technology Australia, the Australasian Neuroscience Society can propose delegates, and this year I was nominated to attend in this capacity.



In the current financial climate, all government expenditure is under intense scrutiny and competition for funds is fierce. It is vitally important that scientists engage with policy makers and politicians to make their voice heard and to catch the attention of the paymasters. An old Washington political adage states that if you are not at the table then you are on the menu, and never has this phrase been more apt. The Science Meets Parliament event is aimed at training scientists to successfully engage with the political process, to invite themselves to that table and effectively influence the conversation.



The first day of the event was spent listening to presentations from various groups. Members of the political media (James Massola, political correspondent at Fairfax Media and Alison Carabine, political editor of RN Breakfast) gave a valuable insight into the daily news cycle. They stressed that journalists and editors do not have time to chase stories and if we want to publicise our science we have to be proactive in getting a clear

and succinct message across. However, this event was not focussed on “media training” and attention quickly switched to concentrate on the political process and policy making. Experienced political lobbyists discussed how it is possible to influence the political agenda and imparted valuable tricks for effectual interactions with politicians. This was backed-up by senior academics, Professor Brian Schmidt AC (Astronomy, ANU) and Professor Hugh White AO (Strategic Studies, ANU), who gave insights into their experience of successfully swaying political opinion. It soon became clear that a significant gulf exists between scientists and politicians: as scientists we strive for truth, whereas politicians care about votes and public opinion. We create knowledge and they make decisions, so it is imperative that we understand how to use our knowledge to influence their decisions. This is most likely to be successful if the scientific message is simple, and emotional but not evocative. The benefit to the economic or social well being of the country should be readily apparent and the political cost of ignoring the research should be emphasised.

The second day of the event in the Parliament House was our chance to put the theory into practice and meet some politicians. MPs and senators were given chance to talk with scientists from a range of disciplines, and meetings were arranged depending on current interests and political agenda. MPs and senators from all sides of the political landscape including Tony Abbott, Ian Macfarlane, Malcolm Turnbull and Bill Shorten met with members of our group. I met Bert Van

## Caption

**Top:** The Hon Bill Shorten MP, leader of the opposition Labour Party, discussing science policy at the Science Meets Parliament gala dinner. Photo: Lorna Sim

**Bottom:** The Hon Ian Macfarlane MP, minister for industry and science, discussing science policy at the Science Meets Parliament gala dinner. Photo: Lorna Sim

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*(Science Meets Parliament Report continued)*

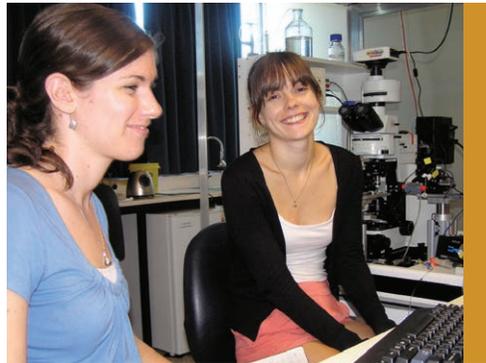
Manen MP, Liberal member for Forde. He had recently visited a Parkinson's support group and a stroke survivors group in his Queensland division and was keen to discuss current research into neurological conditions. I highlighted some of the advances in research in these areas and showed a video of deep brain stimulation to successfully alleviate symptoms of Parkinson's disease. The \$20 billion Medical Research Future Fund featured significantly in our discussions and I hopefully influenced his opinion more strongly in favour of maintaining this vital resource. Only time will tell what happens to this aspect of government policy in the coming months.

The first Chancellor of Germany, Otto von Bismarck, commented that "Politics is not an exact science. It is an art."; further adding that "Politics is the art of the possible." Over the two days of meetings with lobbyists, academics, policy makers and politicians, I learnt that if we are proficient in the political aspects of publicising our scientific agenda, increases in funding for our scientific research are likely to be possible.

Brian Billups

## ACAN Update

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As you read this, another 12 ACAN students will be sequestered on North Stradbroke Island learning the theory and practice of cellular neuroscience. The intensity of the course is legendary – but, interestingly, it's the students who set the pace. Why is this so? Perhaps it's the isolated but beautiful location and the opportunity to bond with like-minded young scientists; or perhaps it's the sense of being special, as a procession of world experts fly in to deliver one-on-one teaching. Whatever the reason, the atmosphere at ACAN has always been like this – exhilarating.

The first ACAN was held in 2005. Last year we celebrated our 10th ACAN with the help of Nobel Laureate Bert Sakmann as a member of the course faculty. This year we're celebrating our 10th anniversary and our special faculty member will be Chuck Stevens, another distinguished cellular neuroscientist whose achievements fill the textbooks.

What of ACAN's next 10 years? We have now trained 132 young neuroscientists and, for many of those, ACAN was a defining moment in their career. The demand for places on the course remains high: this year we had 29 high-quality applications for the 12 slots. However, delivery of a course like this does not come cheaply. The cost of running ACAN is about \$10,000 per student, of which only \$4,500 is defrayed by the course fees. The remainder must come from earnings on the original endowment from the Finkel Foundation and, critically, from sponsorships from the universities and institutes whose students benefit from the course.

### Caption

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**Left:** ACAN 2014:

Phill Bokiniec, John Bekkers,  
Max Camo.

**Right:** ACAN 2014:

Rebecca Playne, Tania Fowke.

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*(ACAN Update continued)*

It goes without saying that times are tough for universities and, unfortunately, it follows that our sponsorships are declining. Some institutions still recognise the value of courses like ACAN and are maintaining their support – the Universities of Queensland, Melbourne, Otago, Newcastle, Western Australia and Auckland, the ANU, Florey Institute and the Neurological Foundation of NZ are standouts. However, at some point these organisations will start to ask whether their money should be used to subsidise the training of students from institutions that decline to contribute.

All ANS members should consider whether the existence of a course like ACAN is beneficial to the future of neuroscience in our region. If the answer is 'yes', then a visit to your Dean to lobby for sponsorship might be in order. ACAN has proven its worth. Now we need to ensure that it evolves and prospers.

**John Bekkers**

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*Director, ACAN*

## (YREP): Inaugural Winners

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### The FENS-ANS Young Researcher Exchange Program (YREP): Inaugural Winners

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The Australasian Neuroscience Society (ANS) and the Federation of European Neuroscience Societies (FENS) have recently initiated a new joint young researcher exchange programme (YREP). This scheme will contribute to travel and/or accommodation costs associated with participation in training courses or exchange training stays of young researchers from Europe and Australasia.

YREP offers stipends up to a maximum of €2,000 to contribute towards travel and accommodation expenses during the training period. The training course or the exchange training stay must have a minimum length of at least two weeks. YREP stipends can be used to supplement other financial support obtained by the young researcher.

The deadline for the next round of YREP awards will be in September 2015. See <http://www.ans.org.au/awards/fens-ans-young-investigator-exchange-programme> for details.

### The winners of the first round of awards for 2015 are:

**Emma Burrows** (Florey Institutes) who will visit Prof Zoltán Molnár and Luiz Guidi, Oxford University, UK to evaluate the mechanisms through which gene variants, KIAA0319 and KIAA0319L, underlie susceptibility to dyslexia.

**Suvi Hokkanen** (Cambridge University) who will visit Dr. Hannah Keage at the University of South Australia to further her investigations into the prevalence and development of hippocampal sclerosis in various forms of dementia pathology.

*Congratulations to Emma and Suvi.*

# Report of the Australian Brain Bee Challenge

First and foremost, I would like to thank Prof Linda Richards, from the Queensland Brain Institute, for all her work in establishing and promoting the Australian Brain Bee Challenge (ABBC).

Vaughan  
Macefield



First and foremost, I would like to thank Prof Linda Richards, from the Queensland Brain Institute, for all her work in establishing and promoting the Australian Brain Bee Challenge (ABBC). Linda set up the competition in Queensland in 2006, and it then spread to other states and territories. The competition has been well championed by Prof Perry Bartlett, Director of QBI, since its inception, but now that Linda has stepped down as both National Coordinator and Queensland State Coordinator it is up to me to ensure that the momentum of the ABBC is maintained, not just as a fantastic competition that promotes an interest in neuroscience among high school students but, importantly, as the major public outreach program of the Australasian Neuroscience Society. Indeed, it is something for which ANS should be proud, hosting as it does the National Finals of the Australian and New Zealand Brain Bee Challenges. However, because of the special joint meeting of ANS and ISN this year we have had to hold the 2014 National Finals of the ABBC out of sequence.

I have just returned from Perth, where the 2014 National Finals were held in conjunction with the Symposium for Western Australian Neurosciences (SWAN). Thanks go to Jennifer Rodger (WA Coordinator) and her team, and the logistical support provided by Katherine Robbins from QBI, who helped make the 2014 Australian and New Zealand National Finals a great success. Special thanks go to Prof Charles Watson, who designed the patient diagnosis part of the competition, and helped write the questions for the National Finals. I am pleased to report that Jade Pham, from NSW, is the 2014 National Brain Bee Champion. Jade will go on to represent Australia at the International Brain Bee, to be held at the joint ANS-ISN meeting in Cairns this year. This is very exciting, as it is the first time that Australia will be hosting the International Brain Bee competition. We have Linda Richards to thank for securing this opportunity, and we know that she will ensure its smooth operation.

With the handover of the ABBC to the University of Western Sydney we now have a new website, though the domain name has not changed: <http://www.abbc.edu.au>

The generic email address for Brain Bee queries is now [abbc@uws.edu.au](mailto:abbc@uws.edu.au)

The website has been improved to provide easier access to State and Territory Coordinators, and also includes a link to the website of the New Zealand Brain Bee Challenge (NZBBC). We have partnered with online test provider, Education Perfect, who are based in New Zealand. Education Perfect conducted Round 1 of the competition flawlessly during Brain Awareness Week: over 5000 students throughout Australia and New Zealand sat the online test under exam conditions in their high schools. Now that the results are in, the Regional Coordinators will be inviting finalists to Round 2 of the competition.

I would like to thank Mathew Kirkcaldie, who is stepping down as Coordinator for Tasmania, and am pleased to advise that Jaylene Young will be taking over. I would also like to thank Damien Keating, who is stepping down as co-coordinator of South Australia; Hannah Keage has joined Femke Buisman-Pijlman to coordinate the South Australian competition. Taking over as the Queensland coordinator is Bruno van Swinderen, and we are fortunate that Katherine Wilkins is staying on to administer the Queensland competition - her corporate history is invaluable. Unfortunately, we do not have a Coordinator for the Northern Territory, so I would welcome receiving suggestions.

Finally, the 2015 National Finals will be held at the 6th UWS Sensory Neuroscience Symposium, to be held from December 6-7 this year.

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# ANS2016 in Hobart

## Save the date: December 4th – 7th



Satellites at the University of Tasmania  
Medical Science Precinct

Conference on the waterfront  
Dinner at MONA



# Call for ANS Award Nominations 2015

See the ANS website ([www.ans.org.au/awards/awards](http://www.ans.org.au/awards/awards)) for full details of all awards. Applications or nominations for all Awards are due by the 30th June, 2015, and should be submitted to the ANS Secretary, Joe Lynch ([j.lynch@uq.edu.au](mailto:j.lynch@uq.edu.au)). Applicants must be Members in good standing on the 30th June in the year of nomination. The 2014 Awards (i.e., last year's awards) and these 2015 Awards will both be presented at the ISN/APSN/ANS Conference in Cairns August, 2015.

**A.W. Campbell Award:** for the best contribution by a member of the Society in their first five postdoctoral years.

**Mark Rowe Award:** This is a new annual award for the best publication by an early career researcher member of the Society.

**Paxinos-Watson Award:** for the most significant neuroscience paper published by an ordinary (full) member of the Society.

**Honorary Memberships:** Distinguished neuroscientists who have rendered notable service to the Society shall be eligible for Honorary Membership of the Society. We strongly encourage nominations and these can be forwarded any time to the ANS Secretary ([Joe Lynch j.lynch@uq.edu.au](mailto:Joe.Lynch@uq.edu.au)).

**Distinguished Achievement Awards:** These are awarded occasionally to recognise an outstanding contribution by an individual to neuroscience in Australia, and to the Australian Neuroscience Society. Nominations are most welcome and can be forwarded any time to the ANS Secretary ([Joe Lynch j.lynch@uq.edu.au](mailto:Joe.Lynch@uq.edu.au)).

# ANS NSW/ACT News

“Kioloa at Newcastle” Neuroscience Colloquium, 31st January – 1st February, 2015

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The annual ‘Kioloa Neuroscience Colloquium’ took place on the 31st of January and 1st of February, 2015. This year, nearly 100 neuroscientists converged on the Point Wolstoncroft Sport and Recreation Camp eager to take part in a weekend of outstanding science and ample recreation time. The colloquium is named for its traditional location at the Kioloa Coastal campus of the Australian National University. It provides a forum for Early Career Neuroscientists to present their work to their peers and supervisors in a non-threatening and informal setting, without the intimidation typically associated with larger conferences.



The 2015 colloquium attracted attendance by students, ECRs and faculty from several NSW and ACT Universities and research institutes. Colloquium attendees had the option to present their research in either oral or poster formats. A total of 16 oral presentations of exceptional academic quality were featured, with the overwhelming majority of presentations delivered by RHD students. The Best Student Presentation Prize was awarded to Lauren Poppi, from the University of Newcastle, for her oral presentation entitled: Fast cholinergic modulation of mouse vestibular periphery. This year, plenary presentations were delivered by Prof. Tony Hannan from the Florey Institute, and Prof. Ruth Anne Eatock from the University of Chicago. The plenary speakers presented some of their inspirational work, and provided valuable insight into their successful academic careers. The poster session, featuring 25 poster presentations, was held in the boathouse overlooking beautiful Lake Macquarie.

The sunset session provided a relaxed atmosphere to network and catch up with colleagues over a glass (or two) of wine. The festivities continued after dinner with the thunderous enthusiasm of Socceroos fans watching the World Cup finals, projected on the big screen no less! A great day of neuroscience was capped off with an evening bonfire, including toasted marshmallows of course.

Special thanks go to Dr Melissa Tadros, Dr Michelle Rank and members of the Callister laboratory at the University of Newcastle for organising the colloquium, and the Sydney Chapter of the Society for Neuroscience, the University of Newcastle's Faculty of Health & Medicine and the Centre for Translational Neuroscience and Mental Health for their generous financial support. Of course thanks must also go to all the neuroscientists who attended, presented their work, and helped make the colloquium a great success. It was an outstanding showcase for research from Early Career Neuroscientists.

Melissa Tadros  
and  
Michelle Rank

*University of Newcastle*

## ANS Queensland News

### Michael Piper

#### University of Queensland awarded grant from The Michael J. Fox Foundation for Parkinson's Research

A UQ research team, led by Associate Professor Trent Woodruff from the School of Biomedical Sciences, has been awarded a \$A300,000 grant from The Michael J. Fox Foundation to target brain inflammation in people with Parkinson's disease. The Queensland university team was the only Australian research group supported in the latest round of grants, jointly provided by The Michael J. Fox Foundation and its major Australian funding partner Shake It Up Australia Foundation.

The grant of almost \$A300,000 will help Associate Professor Woodruff and his team identify, develop and test new drugs to reduce brain cell death in people with Parkinson's disease.

There is mounting evidence that people with Parkinson's develop brain inflammation, which accompanies the loss of dopamine-producing brain cells seen in the disease. The research team's main

task is to find a medication that will target the immune response that causes inflammation in the brain, to slow down and hopefully halt disease progression. While the research is yet to reach human trials, early results in several pre-clinical models have been very promising.

The research collaboration team is comprised of researchers from across UQ including Associate Professor Woodruff and Dr Richard Gordon from the School of Biomedical Sciences; and Professor Matt Cooper, Dr Kate Schroder and Dr Avril Robertson from the Institute for Molecular Bioscience. The group has been working with leading Australian and international researchers to identify novel compounds able to block immune responses in the brain.

Shake it Up Australia CEO Ben Young said his organisation was delighted to be supporting the world-class Parkinson's research being carried out in Australia, and was confident that Australian researchers would play a vital role in the quest for better treatments and, ultimately, a cure.

Our recent findings into the use of non-invasive ultrasound technology to treat Alzheimer's disease is extremely promising, despite its early nature.

When I joined the Queensland Brain Institute as the Clem Jones Centre for Ageing Dementia Research's founding director, it was my hope that we would be able to realise such work.

Our findings, published during March in *Science Translational Medicine*, discovered that in mouse models microbubbles are able to safely traverse the blood brain barrier, and can be successfully combined with a scanning ultrasound approach.

With the help of ultrasound waves, the microbubbles stimulate microglial cells that digest and remove the amyloid plaques that are so pervasive in Alzheimer's disease.

We did not expect that the reduction in amyloid plaques and amyloid-levels would be so pronounced, with some amyloid-species reduced by up to a factor of five. Memory function was also recovered.

The potential implications for the treatment of Alzheimer's disease are truly encouraging; however, we now need to expand our research. We not only need to refine it to further improve its efficacy, however, there are other technological hurdles ahead that need to be overcome.

In our next phase we are beginning to work on sheep, whose physiology with their thicker skulls is closer to humans than in mice. We will also conduct



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*(ANS Queensland News continued)*

longer-term safety studies to further examine the impacts of using ultrasound to treat Alzheimer's disease.

We are hopeful that this next phase can quickly be passed, ahead of human clinical trials. With the number of Alzheimer's disease cases swiftly rising, there has never been a greater time to find and implement a breakthrough, and our findings will hopefully bring us there.

The burden on the health system will only increase, and as a treatment option, perhaps the most promising aspect of this research is that it would foreseeably be cheaper to implement than other options currently being explored using drug therapeutics.

We have been humbled by the response to the research from the scientific community and general public, and will continue to work hard towards realising the potential of this research.

## ANS News from New Zealand

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Auckland Brain Day 2015 was hosted by The Centre for Brain Research at the University of Auckland, with support from the Neurological Foundation of New Zealand, on 28 March.

The event featured scientific, clinical, and community experts speaking around the theme 'Your life: Your brain – a journey through the lifespan', showcasing the brain's astonishing capacity, the way it changes through the lifespan, and the steps we can all take to maintain a healthy brain. The programme featured lectures and discussions taking in issues of importance to those of all ages, from the opening lecture of the day, looking at NZ-developed techniques for preventing brain injury in newborns, through to the final presentation, which outlined the exciting research developments around Alzheimer's disease taking place in New Zealand.

Along the way, attendees had the opportunity to learn about the ways in which music and dance can be a critical part of the toolkit for dealing with the challenges of life with dementia, to hear from two prominent experts about recent research developments in autism, and to attend a live performance by the Centre for Brain Research's CeleBRation Choir for those with communication difficulties.

Over 2000 members of the public attended the event, and when not attending presentations, they were able to peruse science laboratory experiments, tour the community support group expo, or, (for the budding junior scientists attending), take part in kids' hands-on activities.

The Brain Health Research Centre, (BHRC) based at the University of Otago, hosted an entire week of events as part of International Brain Week. The goal of this week, hosted in conjunction with the Otago Museum in Dunedin, was to raise the awareness of the research being undertaken locally and to give all ages the opportunity to get up close and personal with the amazing brain.

One popular event was "Musica in Cerebro." A collaboration between Mozart Fellow Jeremy Mayall and Professor David Bilkey, director of the BHRC. Together they created a composition music that incorporated EEG by altering the frequency of the brain waves so they were in the audible range. The composition was written specifically to show the public the immediate impact music has on the brain, through the use of EEG connected to a volunteer and projected on to a screen during the performance. With topics as diverse as Are birds really bird brained to Head injuries at the time of ANZAC the week really was about highlighting to the public the importance and diversity of neuroscience.

The BHRC's inflatable brain also made an appearance and continues to be popular with the public as a very visual way to understand the workings of the brain.



### Caption

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**Top:** Associate Professor Henry Waldvogel discussing the various cell types in the brain with an interested visitor.

**Bottom:** "Musica in Cerebro." Brain Health Research Centre PhD student Thomas Elston (left) and University of Otago Mozart fellow Jeremy Mayall prepare for a performance of Music for the Brain. Photo: Otago Daily Times Also featured on TV One <http://tvnz.co.nz/national-news/otago-university-maps-brain-waves-music-video-6255696>

## Victoria News

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Not much to report in Victoria with 'granting season' keeping most of us busy through the summer months. Students of Brain Research (SOBR) will again hold a professional development dinner on Tuesday 23rd June. The theme will be 'Bridging the Translational Research Gap' with confirmed speakers including Professor Pat Mc Gorry (DRYGEN) and Dr Krystal Evans (BioMelbourne Network). ANS will sponsor the event and I strongly encourage student members of ANS to attend what promises to be a very insightful evening. Make sure you register for this year's ISN/APSN/ANS Conference in Cairns (August 23-27, 2015) – looks like a fantastic lineup of plenaries and symposia.

Christopher  
Reid

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## Proposed Changes to ANS Constitution

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The current ANS Constitution contains several clauses that do not reflect long-standing ANS practice. For example, the membership categories are stipulated as 'Ordinary, Honorary and Sustaining' (section 3.1). There is no mention of the Student membership category, despite it being in existence for at least 25 years. The ANS Council has agreed on a series of updates to the Constitution so that it reflects the way that ANS has long operated. The Constitution, together with proposed changes highlighted in red, is appended below. The ANS Secretary will move that these changes be accepted at the next AGM (August 2015). Success of this motion will require the approval of 75% of members present at the AGM.

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### **ANS Constitution together with draft changes to be voted upon at the AGM, August 2015**

**Edits:** Additions in red text, deletions in crossed out red text

#### **1. Name**

- 1.1 The name of the Society shall be the Australasian Neuroscience Society Incorporated (hereinafter called the Society).

#### **2. Object**

- 2.1 The primary object of the Society shall be the advancement of the neurosciences by facilitating the dissemination of information pertaining to neuroscience, in teaching and research, by conducting meetings, seminars and lectures at local and national levels.
- 2.2 An additional object is the actual undertaking of research for the benefit of Australia and New Zealand, by clarifying the actions of the nervous system and how diseases of the nervous system can be treated. This may take the form of presenting novel data at workshops and / or the publishing of novel data generated by members of the Society.

*(Proposed Changes to ANS Constitution continued)*

### 3. Membership

- 3.1 There shall be ~~four~~ **three** classes of Members of the Society – Ordinary, Honorary, **Student** and Sustaining.
- 3.2 All persons interested in neuroscience shall be eligible for Ordinary Membership of the Society. A person shall be an Ordinary Member upon payment of an annual subscription of such amount as is from time to time determined by ~~Council an Annual General Meeting~~.
- 3.3 Distinguished neuroscientists who have rendered notable service to the Society shall be eligible for Honorary Membership of the Society. Candidates for election must be nominated by Council and be elected by a majority of Members voting at an Annual General Meeting of the Society. Honorary Membership shall be tenable for the lifetime of the Member.
- 3.4 Sustaining Membership of the Society shall be open to any interested organisation upon payment of an annual subscription as is from time to time determined by ~~Council an Annual General Meeting~~.
- 3.5 The privileges of Sustaining Members shall be 1. to be listed in publications distributed within the Society; 2. to designate one representative to act on its behalf as an individual Member of the Society for the purpose of voting and exercising other privileges; 3. to exhibit its products at meetings of the Society upon conditions to be determined by the Council.

3.6 The Society does not undertake to discipline its members.

### 4. Officers

- 4.1 The ~~Executive Officers~~ of the Society shall be the President, the Secretary, the Treasurer ~~and the Editor~~.
- 4.2 The office of President shall, upon the retirement of the previous President, be assumed by the person who occupies the office of President-elect. The President shall hold office for two years, ~~at the expiration of which he shall retire and will then~~ be Past-President for one year.
- 4.3 The position of President-elect shall be filled by election to take effect one year before the due date for the retirement of the President.
- 4.4 The Secretary and Treasurer shall hold those offices two years and shall be eligible for re-election, provided they shall not serve for a continuous period of more than six years. **A 'year' is defined as the period between two subsequent Annual General Meetings.**

### 5. Council

- 5.1 The Society shall have a Council consisting of: 1. The Officers; 2. The Past President or the President-elect, depending upon which of these positions is for the time being occupied; 3. The Editor ~~of Proceedings~~; 4. Eight additional members known as "**Regional State Representatives**", who will be the respective representatives of the States of Australia, the Australian Capital Territory and New Zealand.

5.2 Subject to this Constitution and to decisions of the Annual General Meeting, the Council shall be responsible for the conduct of the business of the Society and shall have power: 1. to make and amend rules for the conduct of the business of the Council; 2. to co-opt as members for the time being of the Council such Members of the Society, not exceeding three, as the Council deems fit.

5.3 ~~Regional State~~ Representatives shall hold office for two years and shall be eligible for re-election for two, but not more than two, succeeding years. The Editor ~~of Proceedings~~ shall hold office for one year but shall be eligible for re-election for any number of succeeding years. The Editor shall have the right to appoint an Associate Editor who will act in place of the Editor as necessary but who will not normally be a member of Council.

5.4 The Officers and other members of the Council shall all serve in an honorary capacity.

5.5 The quorum for a meeting of the Council shall be six members of the Council.

~~5.6 The Council will also form a Research Committee, comprised of Council members. At least five members of this committee must be appropriately qualified (PhD, MD) or have held previous professional appointments in the broad area of neuroscience research, or have received approval to be a member from the approving authority. Subsequent changes to the membership of the research committee require the written approval of the approving authority prior to the change taking effect.~~

### 6. Public Officer

- 6.1 The Council shall appoint a person who is resident in the Australian Capital Territory to be Public Officer of the Society for the purposes of the Associations Incorporation Ordinance.
- 6.2 The Public Officer shall be deemed to have vacated his office if he: (a) ceases to be resident in the Australian Capital Territory, or (b) he is removed from office by resolution of Council.
- 6.3 If for any reason the office of Public Officer shall become vacant the Council shall, within fourteen (14) days after it becomes vacant, appoint another qualified as aforesaid to fill that vacancy.
- 6.4 The Public Officer shall, within fourteen (14) days after his appointment, give notice in writing to the Registrar of Companies in the Australian Capital Territory of his appointment and of his full name and residential address. If at any time the Public Officer changes his address within the said Territory he shall, within fourteen (14) days after the change, give notice in writing to the said Registrar.
- 6.5 The Public Officer shall maintain a register of the members of the Society.
- 6.6 The Public Officer shall, at least fourteen (14) days before the date fixed for holding a General Meeting of the Society, cause to be inserted in a newspaper published daily in the Australian Capital Territory an advertisement specifying the place, day and time for the holding of the meeting.

*(Proposed Changes to ANS Constitution continued)*

6.7 The Public Officer shall, within one (1) month after the preparation of the Income and Expenditure Statement and the Balance Sheet, file with the Registrar of Companies of the Australian Capital Territory copies thereof certified to be correct by the Auditor.

## 7. Elections

- 7.1 Subject to this clause 7, the Officers and other members of the Council shall be elected by a ~~postal~~ ballot of all Members of the Society which shall be held in the month preceding the Annual General Meeting of the Society, so as to enable new Officers and other members to assume office immediately following the meeting.
- 7.2 In the case of a **Regional State** Representative the ballot shall be of the members of the Society for the time being resident in the **Region State or Territory** which the member of the Council will represent.
- 7.3 An Officer or other member of the Council (other than the Editor Proceedings) who ceases to hold an office or position shall not, except as expressly provided in this Constitution, be eligible for re-election to that office until the expiration of five years after ceasing to hold the office or position.
- 7.4 In the event of a casual vacancy (other than a vacancy in the office of President-elect), the Council shall appoint a Member of the Society as an Officer or other member of the Council to fill the vacancy. The appointee shall serve

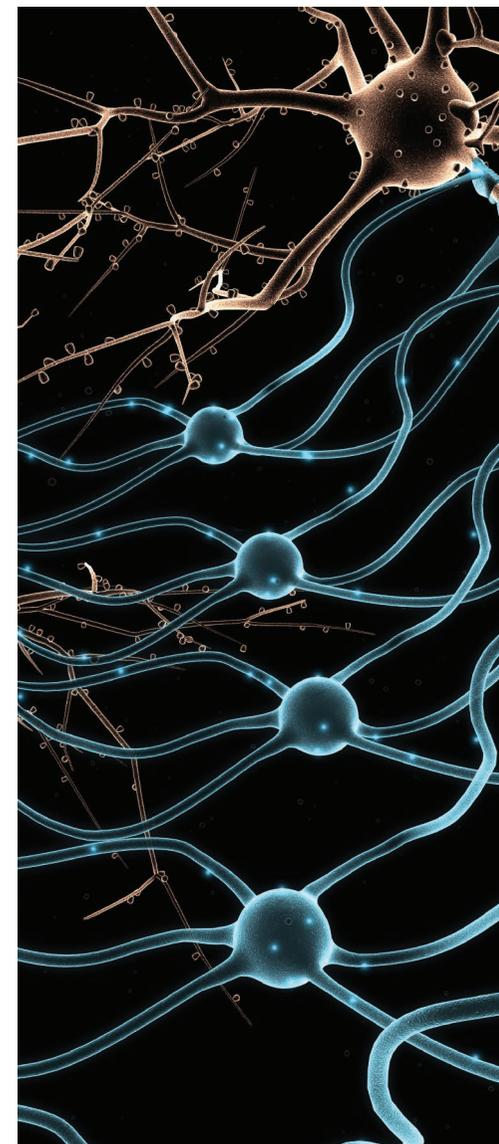
for the remainder of the term of the office or position and during that time shall assume the full privileges and responsibilities of the office or position. If the vacancy is in the office of President, the Council shall appoint the Past-President or the President-elect, as the case may be, and the appointee shall hold office until the next annual election whereupon the office shall be filled by election or by the assumption of office by the President-elect, as the case may require; in either event, the Past-President last holding office shall continue in that office for a further year after the filling of the office of President.

## 8. Local Committees

- 8.1 The Members of the Society resident in a State, the Australian Capital Territory or the North and South Islands of New Zealand may form a Local Committee for the purpose of organising local and national meetings of the Society in that State, Territory or region, respectively.
- 8.2 The relevant State Representative shall, ex officio, be ~~treasurer chairman~~ of the Local Committee ~~subject to approval by the treasurer of the Society~~. The Local Committee shall comprise a ~~Chairman appointed by Council, the treasurer,~~ and such other ~~members as are elected annually by and from the~~ Members of the Society in that State, Territory or region as agreed by Council. **Local Committee membership is to be balanced in terms of career stage, gender, scientific interest and institutional membership.**

- 8.3 A Local Committee shall be entitled to receive from the funds of the Society such amounts as the Council from time to time allocates. The Committee shall maintain proper records of the receipt and expenditure of the monies so allocated and shall account for the monies according to the directions of the Council.

*(No changes are proposed to Sections 9-16).*



# Upcoming Meetings and Courses

## **ASEAN Neuroscience Congress 2015, Singapore 30-31 July, 2015.**

On behalf of the organising committee, I would like to seek your support in making ASEAN Neuroscience Congress 2015, the joint meeting of 11th Biennial Convention of the ASEAN Neurological Association and the 16th ASEAN Congress of Neurological Surgery, a success. The congress, hosted by the Clinical Neuroscience Society, Singapore (CNS), will be held in Singapore, from 30 to 31 July 2015. The congress aims to bring together multidisciplinary fields in Neuroscience to address pertinent up-to date issues in our clinical practice. The field of Neuroscience is rapidly advancing and we are no longer able to treat patients in isolation within our own field of specialty. The face of medicine demands that we work as a multidisciplinary team to provide the best for our patients; it is hence vital for us to be in touch the current issues in Neuroscience and assimilate knowledge into our current practice.

[www.aseanneuroscience2015.sg](http://www.aseanneuroscience2015.sg)

## **Annual Meeting of Biological Psychiatry Australia (BPA), 21-22 September 2015, Coogee Bay Hotel, Sydney.**

BPA is a society for professionals interested in the advancement of biological research in psychiatry, with the annual meeting promoting academic exchange and collaboration between researchers and clinicians working in related fields. The website, <http://www.biopsychoaustralia.com.au> provides more information about the Society. You can also email [biopsychoaust@gmail.com](mailto:biopsychoaust@gmail.com) to join their mailing list and get more information about abstract submission, awards and the conference program.

<http://www.biopsychoaustralia.com.au>



## **FENS Forum 2016, July 2-6, 2016, Copenhagen, Denmark.**

The FENS Forum is Europe's preeminent neuroscience meeting: where European Neuroscience Meets the World. By uniting thousands of participants, the FENS Forum 2016 will facilitate and promote the exchange of knowledge and neuroscience research. Molecules and photons, neurodegenerative diseases and stem cells are only a few of the key topics to be covered by a top-level scientific programme, alongside lively networking and social events. The FENS Forum is a meeting point for the world's top experts, mid-career scientists, post-docs and students. See you in Copenhagen, Denmark, on July 2-6, 2016.

<http://forum2016.fens.org/>



## **9th World Congress of the International Brain Research Organization (IBRO). July 7-11, 2015. Rio de Janeiro.**

Registration and abstract submission are now open.

[ibro2015.org](http://ibro2015.org)

## **The Gordon Research Seminar on Calcium Signalling, June 6-7, 2015.**

*Sunday River Resort, Newry, ME, USA.*

This is a unique forum for graduate students, post-docs, and other scientists with comparable levels of experience and education to present and exchange new data and cutting edge ideas. The focus of the 2015 meeting is to highlight the latest developments in Calcium Signalling and to stimulate participants to identify the most relevant questions that need to be answered in the near future. Topics of discussion in scientific sessions include structure and function of calcium signaling molecules and components, and advances in understanding calcium signaling and the associated changes in physiology and disease. The meeting will feature a keynote presentation by Professor Diane Lipscombe, PhD (Department of Neuroscience, Brown University), as well as a manuscript writing/ career development session, presented by Dr. Elizabeth Adler (Executive Editor, Journal of General Physiology) and Lorna MacEachern (Director of Postdoctoral Career Services, Yale University).

<http://www.grc.org/programs.aspx?id=14633>



**International MJD (Machado Joseph Disease) Conference 2015 - Australia**

<http://conference.mjd.org.au/>



**Dementia, Ageing and Neurodegeneration DISeases (DANDIS) - A satellite meeting of the 25th ISN-APSN Joint Biennial Meeting.**

*Saturday 22 August 2015,*

*James Cook University, Cairns, Australia*

The Dementia, Ageing and Neurodegeneration DISeases group (DANDIS) is hosting a satellite meeting to 25th ISN - APSN Joint Biennial Meeting in conjunction with the Australasian Society for Neuroscience (ANS) in Cairns. The meeting will be held on Saturday 22 August, 2015 just before the main ISN meeting at James Cook University, Cairns campus. 14-88 McGregor Rd, Smithfield QLD 4878, Australia. This year the meeting's theme is Intracellular Protein aggregates in Aging - why haven't we cracked the problem? Neurodegeneration is almost universally accompanied by protein aggregation, and in most cases the protein aggregates (beta amyloid, tau and alpha synuclein being the best known) are thought to play some significant role in the pathogenesis of neurodegeneration. However in

most cases, the reason for the initiation of protein aggregation is unclear. Furthermore, attempts to modify neurodegeneration by attacking the protein aggregates have not been successful. The multiple high profile failures of anti-amyloid therapy in Alzheimer's are a case in point. The role of identified protein aggregates needs to be rethought. This satellite will explore the links between protein aggregation beyond the usual suspects, the failure of proteolytic degradation of abnormal proteins, oxidative stress and new strategies to go beyond our current therapeutic impasse. As well as the main theme, participants are invited to submit abstracts on any aspect of aging and neurodegeneration. This intimate and highly regarded meeting is an ideal venue for students and early career researchers to showcase their work to international experts in the field. This year we will feature a "one minute poster" session, where each poster presenter has one powerpoint slide and one minute to convince people to come and see their posters. This fast and furious (and often humorous) format (like the two minute thesis) gives every poster presenter an opportunity to showcase their work in a friendly atmosphere.

<http://www.users.on.net/~reynella/DANDIS2015/DANDIS2015.htm>

Follow us on Facebook: <https://www.facebook.com/groups/DANDIS/>



We are always interested in receiving articles or information from ANS members for the newsletter. Such material could include topics for discussion, meeting announcements, meeting reports, news about prizes and awards received by ANS members, obituaries, and any other items of potential interest to members of our Society. The copy deadline for the next newsletter is 6 July 2015.

**ANS Policy on Requests for Publicity via Email Circulation**

The policy of ANS is to minimise email traffic to members. Advertisements for meetings and other significant announcements such as job vacancies can be added to the website and included in the newsletter if appropriate. Such requests should be directed to the ANS Secretary.

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