

ANZMAG NEWS - AUGUST 2016

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Dear all,

Welcome to the ANZMAG e-newsletter for August 2016. I hope you enjoy the news this month. As per usual I'm happy to accept feedback and additions so please feel free to send suggestions, comments etc. It is a fairly quiet news month this August but we do have the following.

FELLOWSHIPS AND AWARDS

The month RMIT University has a call out for the **Vice Chancellor's Research Fellowships** in all disciplines; there are two levels senior and junior depending on how far out you are from your PhD and experience. You can find out more at <http://bit.ly/2aSVf54> if you are interested. You will note from the advert that and fellow must align with RMIT's 8 new Enabling Capability Platforms (ECPs) which "consist of clusters of multidisciplinary research and innovation capabilities that are deployed to deliver research outcomes with a strong focus on translation and significant economic, social and environmental impact" You also need to fit in with an academic research group at the University. If anybody reading this wants to apply and wants more information please don't hesitate to get in touch. I am happy to assist in any way I can.

CASS Foundation Travel Awards are offered to further the professional development of Australian post-doctoral early career researchers by enabling them to attend international conferences and make presentations about their current research at meetings and related activities overseas, where they may have opportunities to establish contacts for ongoing research collaborations. Applications for Round 2 Travel Awards are now open at <http://www.cassfoundation.org/travel-awards-status/>

The Analytical and Environmental Division of the RACI is inviting nominations for the following **division medals and awards**; the Peter W. Alexander Medal for Early Career Excellence in Analytical Chemistry the Doreen Clarke Medal for Excellence in Analytical Chemistry, the Environmental Chemistry Medal and the Student Original Publication Award. Details of all can be seen at <https://www.raci.org.au/events-awards/analytical-environmental-chemistry> if you are keen, or know any good student nominees.

CONFERENCE CORNER

We have two magnetic resonances to draw your attention to this month; one in Australia and one in India.

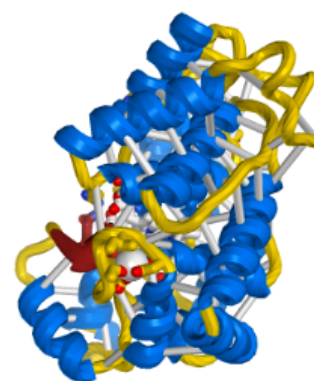
The **Asia-Pacific NMR Symposium & 23rd Annual meeting of NMRS-India** will be held from February 16-19, 2017 at the Indian Institute of Science in Bangalore. The website is now open at <http://nrc.iisc.ernet.in/apnmr2017> for more information. NB: I can tell you from experience that visa's to India are now much easier to get (you can do it online rather than go to the embassy). Thanks to Ray Norton for sending this one in.

The **1st University of Newcastle (UON) Magnetic Resonance Course** will be held on Saturday **29 October 2016** at the UON campus at 55 Elizabeth St, Sydney. You can find a flyer for the event at <http://bit.ly/2b84xgl> if you are interested. The cost is low and while it seems to mostly be aimed a radiographers it may be of interest to all magnetic resonance people. Thanks to Lindy Rae for this one.

3D PRINTING OF PROTEINS

Many of you reading this probably use NMR for protein work; solving structures and such like? If so you may have thought about 3D printing your structures to see how they look in "real life" or for teaching. Then you might have had a colleague tell you it was "pretty straight forward" as all you need to is "generate a pdb file then clean it up using various software tools and then import into a slicer program to generate the code for the printer". Believe it or not that set of instructions is not too tricky when you dig into it but it does take a while and so puts people off. Well good news, the new NIH 3D print exchange website takes all this effort out of sorting the models and you can print almost any protein you like.

You can either get a computational chemist to make the protein data bank file for you or you can download the data from something like swissprot or even use a pubchemID. There is a nice video on how to do it at <http://bit.ly/2btbGtx> and the website itself is at <http://3dprint.nih.gov/discover/3dpx-003545> The picture to the right shows a model of horseradish peroxidase that I made in just a few minutes. You can print in a range of materials but be aware that not all structures can be made from all materials, it depends on the detail in the shape, and if it will be strong enough. Most universities have 3D printers these days but I'd stay away from officeworks as they are very expensive. Sites like www.shapeways.com, www.sculpteo.com/en/, <http://3dprint-au.com>, www.thinglab.com.au/print/3d-printing-services, and <http://www.thinglab.com.au/> are much cheaper.



NATIONAL RESEARCH INFRASTRUCTURE WORKING GROUP TOUR

As some of you may know The Australian Government has commissioned the 2016 National Research Infrastructure Roadmap to support future investment decisions in research infrastructure. This is aimed to ensure Australian researchers can access world-class major national research infrastructure. In conjunction with the release of the Issues Paper (<https://docs.education.gov.au/node/41051>), a range of consultations will occur around Australia. If you would like to participate (and it would be good to get as many people going as possible) please register via registration form available online at <https://www.ivvy.com/event/3DQ8NT/> - I'll be going to the Melbourne one.

STORIES FROM THE WEB

- <http://bit.ly/1UwRM0J> - This study is an interesting one on the use of EPR to identify the radical species formed during formation of zeolites made in the laboratory using a sol-gel process.
- <http://bit.ly/28PJSvr> - In this study four different iron porphyrin complexes were studied using NMR, EPR and resonance Raman spectroscopy to investigate why synthetic analogs of cytochrome P450 are much more sensitive to degradation from O₂ than the enzyme form
- <http://bit.ly/2aUYizm> - This link goes to a story on a study that allows simultaneous positron emission tomography and magnetic resonance imaging on the same sample. See also <http://bit.ly/2bwCJ8v>