

ANZMAG NEWS - APRIL 2017

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Dear all,

Welcome to the (slightly delayed) April 2017 ANZMAG e-newsletter. I hope that everybody had a good Easter break? This month we have the usual mix of magnetic resonance and science related items for you.

GRANTS

With the Discovery and LIEF applications over with you might think grant writing season was over but there are still a few other opportunities out there.

Ramaciotti Health Investment grants of up to \$150,000 are awarded to individuals in universities, public hospitals or institutes for health or medical research with the potential path to clinical application within five years (<https://www.perpetual.com.au/Ramaciotti/Applications>).

The **Australia Awards–Endeavour Scholarships and Fellowships** are the Australian Government's scheme providing opportunities for Australians to undertake study and research overseas and for overseas citizens to do the same in Australia (<https://internationaleducation.gov.au/Endeavour%20program/Scholarships-and-Fellowships/Pages/default.aspx>).

The **Bridging Grants program** (<https://globalconnectionsfund.org.au/bridge-grants/>) is administered by the Academy of Technology and Engineering (ATSE) and is funded by the Australian Government Department of Industry, Innovation and Science. Bridging Grants provide between AUD25,000 to AUD50,000 per grant and based on a matching funds/in-kind basis of additional resources from the applicant partners.

NMR AND MRI BOOK

Last month we had a look at a few textbooks. This month I'd like to draw your attention to one more. "**Biophysics and Biochemistry of Cartilage by NMR and MRI**", edited by Yang Xia, and Konstantin Momot. The aim of this book is to describe the latest information in the fundamental understanding of the biophysics and biochemistry of articular cartilage, whose degradation contributes to osteoarthritis and related joint diseases. Connecting the fundamental science with the clinical imaging applications, the book may be of interest to practising physical scientists and radiologists with an interest in the fundamental science as well as instrument manufacturers and clinical researchers working with articular cartilage. Please see <http://pubs.rsc.org/en/content/ebook/978-1-78262-133-1#!divbookcontent> for more information.

UPCOMING CONFERENCES

The **11th Australia and New Zealand society for Magnetic Resonance** conference (<http://www.anzmag2017.org/>) will be held from Saturday 2nd - Wednesday 6th, December 2017 at Mantra on Salt Beach, Kingscliff, New South Wales. Book it in your diary now.

EUROMAR 2017, the largest European congress on magnetic resonance, will (for the first time) be held in Warsaw, Poland from July 2nd to July 6th, 2017 (<https://www.euromar2017.org/>).

The **20th ISMAR meeting** will be held in Québec City on July 23-28, 2017, jointly with the Rocky Mountain Conference on EPR (<http://www.ismar2017.org/>). Early bird deadline is 5th May.

TALKS

Dr Scott Robson of Harvard Medical School will give a talk entitled "Mixed pyruvate labelling enables backbone resonance assignment of large proteins using a single experiment" at 1-2 pm on Thurs 4 May in the Bio21 Auditorium, University of Melbourne.

MAGRITEK BENCHTOP NMR UPGRADE

This month I note that the Magritek benchtop NMR just got a major upgrade and according to the advert you can now use it for, for example, resolving metabolites in urine at milli-molar concentrations. You can find out more about the system at <http://go.magritek.com/spinsolve-ultra-benchtop-nmr-brochure?>

CHENOMX WEBSITE UPDATE

NMR Suite software for metabolomics (<http://www.chenomx.com/software/>) works really well for profiling all sorts of samples and features a huge library of spectra automatically adjusted for pH and field strength. Even if you do know about the software you might want to have a look at their new website anyway. It is a little different style than their previous one and is more mobile and user friendly. I quite liked the list of app notes at <http://www.chenomx.com/resources/application-notes/> but there is plenty more to see.

NMR POSTDOC AT THE ANU

There is Postdoctoral Fellow post available in the Casarotto Laboratory, at the ANU in Canberra. They are looking for somebody with skills in structural biology preferably with experience in protein structure determination using solution state NMR. More details on this job can be found at <http://jobs.anu.edu.au/cw/en/job/516161/postdoctoral-fellow> - closing date is 7th May.

INAUGURAL SUPERSTARS OF STEM PROGRAM

Science & Technology Australia is now accepting applications for the inaugural Superstars of STEM program. The program strives to: support 30 women employed in science, technology, engineering and mathematics to become highly visible public role models through training in public speaking, media and communicating with influence and through creating opportunities to practice their newly acquired skills. See <https://scienceandtechnologyaustralia.org.au/what-we-do/superstars-of-stem/> for more details.

STORIES FROM THE WEB

- <https://phys.org/news/2017-04-mechanism-electric-photosynthesis.html>

This story is on recent work using time-resolved electron paramagnetic resonance (TREPR) to study the mechanism behind the electric charges generated by photosynthesis.

- <http://www.scienceworldreport.com/articles/58895/20170427/nanodiamond-magnetic-resonance-imaging-track-drug-delivery.htm>

This story is on the use of nanodiamonds for obtaining high-contrast MRI images. Apparently nanodiamond-mediated MRI may be able to track drug delivery for indefinite periods.

- <http://www.azom.com/article.aspx?ArticleID=13770>

An interesting story on the use of Dynamic nuclear polarization (DNP), a technique used to boost signal intensities in nuclear magnetic resonance (NMR) experiments.