

ANZMAG NEWS - JANUARY 2023

By Oliver A.H. Jones (RMIT University - oliver.jones@rmit.edu.au)

Dear all,

Welcome to the first ANZMAG news of the year. I hope you all had a great Christmas break a happy new year and are having a good start to 2023.

CONFERENCES

- **ISMAR** - As I am sure you are all aware, the 23rd International Society of Magnetic Resonance (ISMAR23) conference is being held in Brisbane from the 20-25th August. Please save the date and check out the website and keep an eye on the website at <https://www.ismar2023.org> for details.
- **Metabolomics** - the 19th Annual International Conference of the Metabolomics Society will be held on June 18-22, 2023, in downtown Niagara Falls, Canada. Please see <https://www.metabolomics2023.org>
- **International Society for Magnetic Resonance in Medicine & the Society for MR Radiographers & Technologists** – The ISMRM & SMRT meeting will be held from June 3-8, in Toronto, Canada. See <https://www.ismrm.org/23m/> for details.
- **EUROMAR** – The European Conference on Magnetic Resonance is being held on July 9-13, in Glasgow, Scotland. See <https://euromar2023.org/> for information.
- **Rocky Mountain Conference** – RMC will be held over July 23-27, in Denver, USA. Note this is an EPR-only meeting in 2023. See (<https://rockychem.com/> for details.

AWARDS

- The **2023 Anatole Abragam Prize** will be awarded the ISMAR detailed above. Candidates are eligible within seven years of completing their PhD (excluding career delays), and can be nominated by any Regular Member or Fellow of ISMAR. The recipient is selected on the basis of evidence of novel and significant contributions to magnetic resonance. Nominations must be received by March 1, 2023. Please see for details <https://ismar.org/2023/01/09/call-for-anatole-abragam-prize-nominations-2023/>
 - The **Metabolomics Society** has a call for nominations out for honorary fellows and early and mid career medals. The deadline is February 24. See <https://metabolomicssociety.org/awards/honorary-fellowships/> for details on the Fellowships and <https://metabolomicssociety.org/awards/metabolomics-society-career-medals/> for the career medals.
 - **Prime Minister's Prizes for Science**. These are Australia's most prestigious awards for outstanding achievements in scientific research, research-based innovation and excellence in science teaching. The deadline is the 9th Feb so there is still time to nominate a worthy candidate. See <https://www.industry.gov.au/science-technology-and-innovation/science-engagement/prime-ministers-prizes-science> for details.
 - **Royal Society** – Nominations are also open for the Royal Society's medals and awards. There are quite a few awards here that might suit ANZMAGers. There is a new process this year so if you are thinking of nomination please make sure to read all the documents at <https://royalsociety.org/grants-schemes-awards/awards/nominations/>
-

JOBS

- The University of New South Wales, is looking for a Scientific Officer to work in the NMR Facility within the Mark Wainwright Analytical Centre. NB **Applications close 11.55pm, Wednesday 1st February**. The advert is at <https://external-careers.jobs.unsw.edu.au/cw/en/job/513851/scientific-officer>
- Monash University is looking for a Lecturer in Drug Discovery Biology at their Parkville campus. See <https://www.nature.com/naturecareers/job/lecturer-drug-discovery-biology-monash-university-770168> for the details.

ONLINE LEARNING

- **ANZMAG YouTube Channel** – ANZMAG has its own YouTube channel with lectures by Malcolm Levitt, James Keeler, Daniella Goldfarb, Art Palmer, David Wishart, Ad Bax, Paul Callaghan and more. There are 3.57 thousand subscribers. See <https://www.youtube.com/channel/UCBJcwZxXuqv5PqzFgm-n2eA>
- **Conversations on Magnetic Resonance** - ISMAR sponsors a series of on-line meetings about current topics in magnetic resonance, called “Conversations on Magnetic Resonance. Rob Tycko has continued to organise these. Each meeting focuses on a specific topic of current interest, pertaining either to a specific aspect of magnetic resonance methodology or to a specific area of application for magnetic resonance techniques. Further details and recordings are available at the ISMAR website. See <https://tube.switch.ch/channels/fb103798>

PAPER OF THE MONTH

This Month's Paper of the Month is “**Structures of the sulphite detoxifying F420-dependent enzyme from Methanococcales**” by Jespersen et al (2023). The topic of the work are Methanogenic archaea, which are the main actors in the carbon cycle but also sensitive to reactive sulphite. Some methanogens use a sulphite detoxification system that combines an F420H₂-oxidase with a sulphite reductase, both of which are proposed precursors of modern enzymes. In this paper the authors present snapshots of this coupled system, named coenzyme F420-dependent sulphite reductase (Group I Fsr). The authors present the X-ray crystal structures of Fsr isolated from two Methanococcales as well as the electron paramagnetic resonance (EPR) spectroscopy characterization of its metallocofactors, providing snapshots and molecular insights, into this prototypical sulphite reductase. It is a nice example of EPR and structural biology. You can read more about it at <https://www.nature.com/articles/s41589-022-01232-y>

STORIES FROM THE WEB

- <https://phys.org/news/2022-11-strategy-modulate-reaction-pathway-zn-fe.html> - EPR spectroscopy characterization, helps with a new strategy to modulate reaction pathway of Zn-Fe double oxide Fenton catalyst.
- <https://healthimaging.com/topics/medical-imaging/magnetic-resonance-imaging-mri/man-shot-his-own-gun-mri-suite> - A bit of a change of pace but I thought a potentially useful learning example about why we don't take metal objects near an MRI.
- <https://scitechdaily.com/an-overlooked-phenomenon-researchers-discover-evidence-of-a-hidden-state-involving-one-of-the-most-common-ions/> How ³¹P NMR helped discover evidence of a “hidden” state of one of the most common ions in the lab.