

## ANZMAG NEWS – APRIL & MAY 2021

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Dear all,

Welcome to the April and May 2021 edition of ANZMAG News. This edition is longer than usual to cover both months. The June issue should be out on time (touchwood).

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### VALE RICHARD R ERNST

We start this month with the sad news of the passing of an NMR legend Richard R. Ernst. It would probably take a year's worth of ANZMAG NEWS to scratch the surface of Professor Ernst's contributions to magnetic resonance. There are many but this obituary at <https://cen.acs.org/people/obituaries/Nobel-laureate-Richard-R-Ernst/99/i22> is a good overview.

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### ANZMAG WEBSITE UPDATE

ANZMAG is hoping to revamp our website in coming months to incorporate new functionalities and features. If you or someone you know are/is into website design, please read on.

We are seeking preliminary quotes including price and timeframe for the three levels of desirability by 30/6/2021.

The brief of the project can be found on:

<https://docs.google.com/document/d/1wtAaDs8EaZoWBeq3XdEOdq7mjKf26Z9m3x2T2uN4fNs/edit?usp=sharing>

Please feel free to forward this to anyone whom you think may be interested.

***[For more information, please contact Michael Green on m.green@neura.edu.au](mailto:m.green@neura.edu.au)***

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### ACHIEVEMENTS

Congratulations to Prof. David Craik who (along with Professor Marilyn Renfree) was recently elected a Fellow of the Royal Society.

Well done to Joel Mackay who not only recently completed a 50-km trail race (the UTA50 in the Blue Mountains) but did it [while juggling](#).

Well done to all the new Fellows of the Australian Academy of Science. See <https://www.science.org.au/news-and-events/news-and-media-releases/twenty-two-australians-recognised-among-nations-distinguished-scientists>

## PAPER OF THE MONTH

This month's paper of the month is on Benchtop NMR and how this could be used to make contributions to forensic science. The title is "*Detection, discrimination and quantification of amphetamine, cathinone and nor-ephedrine regioisomers using benchtop  $^1\text{H}$  and  $^{19}\text{F}$  nuclear magnetic resonance spectroscopy*" by Hulme et al. The authors show that benchtop NMR affords rapid, and discriminatory, analysis of the drug present in a seized sample. Check it at

<https://analyticalsciencejournals.onlinelibrary.wiley.com/doi/abs/10.1002/mrc.5156>

Similar results were reported by McKeown et al. (one of my PhD students see <https://www.sciencedirect.com/science/article/abs/pii/S2468170920300734> for more) Just goes to show that Benchtop FT NMR has a lot of applications beyond teaching.

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## JOBS

- The University of Melbourne is looking for a Head of School for the School of Biosciences. See <https://jobs.theconversation.com/jobs/65151509-head-of-school-school-of-biosciences-at-university-of-melbourne>
- The Centre for Advanced Imaging at UQ is looking for a Facility Scientist – Image Processing and Analysis. See <https://search.careers.uq.edu.au/caw/en/job/514563/facility-scientist-image-processing-and-analysis> for more.
- Tenure Track Professor of Computational Structural Biology at Medical University of Graz, Austria, <https://www.medunigraz.at/en/job-openings/tenure-track-professorships?job=LS-MBBC-2021-001142>
- Various jobs in MRI and imaging are advertised on Seek at present. See <https://www.seek.com.au/mri-jobs>

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## NEW SOFTWARE

Spectrum JS is a new browser-based, 1D and 2D NMR data processing and interpretation application. It allows easy access using any operating system and from any location. See <https://www.acdlabs.com/products/spectrum/spectrum-js/> for more.

raymolecule is an R package to parse and render molecules in 3D. Rendering is powered by the rayrender package, a pathtracer for the R programming language. See <https://github.com/tylormorganwall/raymolecule> (works well with rayvertex - <https://github.com/tylormorganwall/rayvertex>)

gr-MRI is a software package that enables the development of custom MRI spectrometers using off-the-shelf software-defined radios. See <https://www.opensourceimaging.org/project/gr-mri-a-software-package-for-magnetic-resonance-imaging-using-software-defined-radios/> for more.

## AWARDS & GRANTS

The Nature Research Awards for Inspiring Women in Science are now open for applications. The aim of the awards is to celebrate and support the achievements of women in science, and of all those (male or female) who work to encourage girls and young women to engage with STEM subjects. See <https://www.nature.com/collections/jcpghfmqlz/about> for more.

The deadline for the RACI National Awards was extended to Fri 25 June 2021 (see [https://raci.org.au/RACI/Awards/National-Awards/Web/Awards/National\\_Awards.aspx](https://raci.org.au/RACI/Awards/National-Awards/Web/Awards/National_Awards.aspx) If you work in the Chemistry area please consider nominating or being nominated for an award.

The CSL Florey Medal 2021 is open for Nominations. The Florey Medal is one of Australia's most esteemed awards in the health sciences. It is awarded biennially to an Australian researcher for significant lifetime achievements in biomedical science and / or human health advancement. See <https://aips.net.au/florey-award/> for more information.

Nominations are open for the 2021 GSK Award for Research Excellence. This award celebrates and supports outstanding Australian researchers focused on improving human health. Read more at <https://au.gsk.com/en-au/research/supporting-research/gsk-award-for-research-excellence/2021-gsk-award-for-research-excellence-nominations-now-open/>

The Jack Brockhoff Early Career Medical Research Grants Program supports early-career researchers to demonstrate their scientific originality and their capacity to complete, relatively independently, a discrete study for publication in scientific literature. See <https://www.jackbrockhoff.org.au/apply-for-a-grant/medical> for more info.

The VESKI Inspiring Women Career Recovery Grants are designed for female mid-career leaders or emerging leaders in STEM in Victoria to provide vital and timely support via short term flexible funding to boost research & help restore pre-pandemic competitiveness. See <https://www.veski.org.au/career-recovery-grants/> for more info if in Victoria.

The Royal Society of Victoria are advertising the Phillip Law Postdoctoral Award 2021, the award is open to suitably qualified post-doctoral candidates in Category II: Biomedical and Health Sciences. Full details are at <https://rsv.org.au/awards-and-prizes/phillip-law-award/> Please apply you are eligible (or tap someone on the shoulder who is).

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## MEETINGS

The Ampere NMR School 2021 will take place in hybrid form (in-person/virtually) on June 21-23, 2021. See <http://school.home.amu.edu.pl/>

Metabolomics 2021 Online will take place June 22 - 24, 2021. See <https://www.metabolomics2021.org/> for all the details.

The Oxford Venoms & Toxins Meeting is going ahead in virtual format from August 25 to 27, 2021. Details and registration at <http://bit.ly/3fz92B4>

ICONS3-2021 Intercontinental Magnetic Resonance Conference on Methods and Applications, in honour and memory of Konstantin Ivanov, September 1-3, 2021 See <https://sites.google.com/view/nmr-seminar-series/home>

ICEPR 2021: the International Conference on Electron Paramagnetic Resonance December 09-10, 2021 in London, UK <https://waset.org/electron-paramagnetic-resonance-conference-in-december-2021-in-london>

The 12<sup>th</sup> “NMR: a tool for Biology” conference jointly organized by Institut Pasteur and Bruker Biospin, will be held from January 31 to February 2, 2022, at Institut Pasteur in Paris. See <https://research.pasteur.fr/en/event/143562/>

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## STA SURVEY

Science & Technology Australia and Professionals Australia invite you to participate in the annual Professional Scientist Employment and Remuneration Survey. Your responses will provide an important glimpse into Australia’s science sector which, in turn, will help us advocate with and for this sector. The more scientists who participate, the more comprehensive and meaningful these results will be. The survey takes 10-15 minutes to complete. It is entirely anonymous.

See <https://www.surveymonkey.com/r/SciRem21STA>

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## STORIES FROM THE WEB

- <https://www.azom.com/article.aspx?ArticleID=20201>  
Here is one for the Geologists out there. This story covers how crude oil quality can be determined by Electron Spin Resonance Spectroscopy
- [https://www.eurekalert.org/pub\\_releases/2020-05/tmu-dmh051420.php](https://www.eurekalert.org/pub_releases/2020-05/tmu-dmh051420.php)  
This article asks is MRI has an environmental impact, specifically what happens to Gadolinium contrast agents after they have been through the body.
- <https://www.azom.com/article.aspx?ArticleID=20378>  
Continuing the geology theme this article and video is about using NMR to characterise Lithium deposits.