

ANZMAG NEWS: JANUARY 2022

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Dear all,

Welcome to the first edition of ANZMAG News for 2022.

ARC SUCCESS

Congrats to ANZMAGers who were successful in the latest **ARC DP** round. From a quick glance I can see that Associate Professor Mehdi Mobli got a sole DP entitled "Autocyclases: A new class of self-cyclising proteins". Professor Joel Mackay and Professor Sandra Hake received funding for their project "How does an essential histone variant effect changes in gene expression?" Professor David Reutens, Dr Shekhar Chandra, Professor John Bertram, Dr Nyoman Kurniawan and Associate Professor Helen Healy had success with "Advancing the visualisation and quantification of nephrons with MRI". Full list of grants is at <https://bit.ly/3Kr2oeC>

GRANTS AND AWARDS

The Australian Academy of Health and Medical Sciences are currently seeking nominations for the **Academy's Medal for Outstanding Female Researcher**. Full details at <https://aahms.org/programs/medal-for-outstanding-female-researcher/>
NB: It looks like you need to be pretty senior to apply.

Nominations for the **Prime Minister's Prizes for Science** close in <20 days. Would be great to see a win for magnetic resonance. See <https://business.gov.au/grants-and-programs/prime-ministers-prizes-for-science> for details.

The **BioMelbourne Network Women in Leadership Awards** are still accepting nominations. See <https://biomelbourne.org/women-in-leadership-awards/2022-awards/> for details and please consider nominating worthy candidates.

The flagship **Snow Medical program** that aims to develop Australia's next generation of outstanding biomedical research leaders will open on 15th Feb. See <https://snowmedical.org.au/snow-fellowship/> for the details.

MEETINGS

Not a lot of meetings at present but there is a list at <https://waset.org/nuclear-magnetic-resonance-conferences> and <https://conferenceindex.org/conferences/nuclear-magnetic-resonance> that some might find useful

Jobs

A Postdoctoral Fellowship in Non-Linear Electromagnetic Sensing is available at the CSIRO Mineral Resources' Magnetic Resonance Development Team. Deadline is **Monday 24th Jan** though. See <https://bit.ly/3qllvrE>

Victoria University of Wellington (NZ) is looking for a Postdoctoral Fellow in Plant-Microbe Interactions. See <https://go.nature.com/3ryKQ7D>

Researchers in Chemical/Environmental Engineering at RMIT are looking for an RA for a short literature review project. It might suit a recent graduate. Full details at <https://lnkd.in/gjNQYxzT>

PAPER OF THE MONTH

This month's paper of the month is entitled "Small-Molecule Mn Antioxidants in *Caenorhabditis elegans* and *Deinococcus radiodurans* Supplant MnSOD Enzymes during Aging and Irradiation" by Gaidamakova et al. In this work the bacterium *Deinococcus radiodurans* and the nematode *Caenorhabditis elegans* were monitored for gamma radiation sensitivities over their life spans while Mn²⁺-antioxidant content was measured using electron paramagnetic resonance spectroscopy as a powerful new approach to determining the *in vivo* Mn-antioxidant content of cells as they age. EPR showed that small-molecule Mn-antioxidant content was shown to decline in unison with age-related decreases in cell proliferation and radioresistance. This leads the authors to propose an extended theory of the global responses to oxidative stress that includes small-molecule Mn-antioxidants as potent O₂⁻-scavengers. You can read the paper at <https://journals.asm.org/doi/10.1128/mbio.03394-21>

STORIES FROM THE WEB

- <https://phys.org/news/2022-01-explores-bacteria-drug-resistant.html>

This is an interesting article about how Electron paramagnetic resonance has been used to help explore how bacteria can become drug resistant.

- <https://www.sciencedaily.com/releases/2022/01/220118104107.htm>

This story is about how a new MRI technique could improve diagnosis and treatment of multiple sclerosis

- <https://www.nippon.com/en/news/yjj2022010400665/>

A Japanese team has developed a high-performance nuclear magnetic resonance device that can be transported by car, but still has high performance.

Thanks everyone. Have a great 2022!