

Postdoctoral position in biological MAS ssNMR at University of Pittsburgh

The Van der Wel lab is looking for a postdoc candidate with a background in NMR, preferably solid-state NMR, to join our research effort focused on protein aggregation and protein-lipid interactions. More information on our research and recent publications can be found below and on our website at <http://www.vanderwellab.org>

Research topics:

The researcher is expected to join the Van der Wel lab to contribute to our NIH-funded research. One focus in the lab is the use of MAS NMR to study amyloid structure and protein aggregation with a particular focus on polyglutamine-expanded proteins implicated in Huntington's Disease. Another key focus is on the study by ssNMR of membrane structure and dynamics, as well as protein-lipid interactions, in particular in context of mitochondrial apoptosis, which has important implications for neurodegenerative disease and cancer research.

Selected recent publications:

- Mandal et al. (2015) Structural changes and pro-apoptotic peroxidase activity of cardiolipin-bound mitochondrial cytochrome c. *Biophys. J.* 109(9): 1873.
- Hoop et al. (2016) Huntingtin exon 1 fibrils feature an interdigitated β -hairpin-based polyglutamine core. *PNAS* 113(6); 1546.
- Mandal et al. (2016) MAS 1H NMR Probes Freezing Point Depression of Water and Liquid-Gel Phase Transitions in Liposomes. *Biophys. J.* 111, 1965-1973
- Mandal et al. (2017) On the use of ultracentrifugal devices for routine sample preparation in biomolecular magic-angle-spinning NMR. *J. Biomol. NMR* in press

Resources & Location:

The Van der Wel lab uses departmental wide-bore 600MHz and 750MHz Bruker ssNMR spectrometers outfitted with 3.2, 1.9, and 1.3 mm CP/MAS as well as static ssNMR probes. Departmental facilities offer state-of-the-art EM, X-ray and solution NMR instrumentation, with the latter including 700, 800, and 900 MHz spectrometers. Excellent resources are available for protein production, biophysical and computational studies. The lab is housed in the interdisciplinary Dept of Structural Biology, one of the basic science departments of the University of Pittsburgh School of Medicine.

More Information?

For more detailed information on these projects, links to related publications, and other useful information please visit the lab website at <http://www.vanderwellab.org>. To apply, or to obtain more information, please contact Patrick van der Wel by email at vanderwel@pitt.edu. Applications are expected to include a cover letter (or "cover email") explaining specific research interests, a CV, and the names and contact information for three reference writers.