



POSITION DESCRIPTION

Bio21 Institute
Faculty of Science

Magnetic Resonance Specialist

POSITION NO	0056023
CLASSIFICATION	Level A - \$77,171- \$104,717 per annum (pro-rata for part-time); or Level B - \$110,236 - \$130,900 per annum (pro-rata for part-time); or Level C - \$135,032 - \$155,698 per annum (pro-rata for part-time) Level of appointment is subject to the appointee's academic teaching and/or research record, qualifications, and experience.
WORK FOCUS	Academic Specialist
CATEGORY	
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full-Time (1.0 FTE)
BASIS OF EMPLOYMENT	Three year fixed term
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
HOW TO APPLY	Online applications are preferred. Go to http://about.unimelb.edu.au/careers , select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Professor Paul Donnelly Tel +61 3 8344 2399 Email: pauld@unimelb.edu.au <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:
about.unimelb.edu.au/careers

Position Summary

The Bio21 Institute's Magnetic Resonance Facility (MMR) is one of six Platform technologies that answer to the Director of the Institute. It houses a wide range of Nuclear Magnetic Resonance (NMR) spectrometers for the analysis of small molecules, peptides and proteins by solution and solid-state NMR. The Magnetic Resonance Specialist reports to the manager of MMR and is responsible for providing scientific advice relevant to the Facility, liaising with users to determine their requirements, coordinate user training where appropriate and to liaise with other platform capabilities within Bio21. They will be responsible for ensuring the efficient use of resources and identifying future capability requirements. The appointee will be proactive in increasing the client base for the Facility. The incumbent will also be encouraged to engage in research development activities in relevant area(s) of solid-state and solution NMR in collaboration with academic and/or industry scientists. The incumbent will have the opportunity to pursue funding from external sources to support NMR research and development activities in collaboration with industry.

This is an Academic Specialist position that will lead the solid-state and Dynamic Nuclear Polarisation (DNP) activities of the Magnetic Resonance Facility with a time commitment of approximately 0.5 FTE or more and the remainder of time devoted to solution state NMR.

1. Key Responsibilities

The responsibilities of the position will relate to Bio21's academic research and industry engagement programs. The incumbent will:

- ▶ Assist Facility clients with the design, preparation, and execution of solid-state/DNP techniques.
- ▶ Train users in the use of equipment for solid-state and DNP NMR studies for the analysis of membranes, proteins, biomolecules, bioactive compounds and, on occasion, materials.
- ▶ Teach complex magnetic resonance concepts to facility users including NMR operation.
- ▶ Assist in training users in the use of NMR equipment for solution-based studies.
- ▶ Assist the submission of competitive grants for new equipment in the Bio21 Institute MMR according to the strategic goals of the Facility.
- ▶ Deliver high quality presentations within and outside the University to promote the technology capabilities of the Facility.
- ▶ Establish and participate in programs of training for internal and external users of both solution and solid-state NMR capabilities.
- ▶ Develop and implement programs that ensure the longevity and optimum performance of the Bio21 Institute NMR equipment.
- ▶ Provide high-level expertise, advice and assistance to the Bio21 Institute NMR users to undertake research projects using these instruments.
- ▶ In addition to having the skills to run state-of-the-art NMR platforms, the incumbent will also be expected to assist users with experimental design and data/scientific interpretation.
- ▶ Acquire and/or analyse complex data at a high-level for University research projects, and external clients, using these instruments on fee-for-service or collaboration basis.
- ▶ Collaborate with other academic researchers and industry on specific research projects as required.
- ▶ Collaborate with researchers (and research groups) in both solution and solid-state NMR spectroscopy, where the science will benefit from the contribution of an academic specialist in NMR to help with more sophisticated NMR experiments. The expectation

would be that significant contributions are acknowledged by co-authorship of relevant scientific publications.

- ▶ Maintain appropriate safety and training records.

1.1 RESEARCH AND RESEARCH TRAINING

You are expected to significantly contribute towards the research effort of the MMR team and make independent and original contributions which expand knowledge or practice in your discipline and have a significant impact on your field of expertise.

- ▶ Undertake internationally competitive team-based and/or collaborative research, resulting in publications in high impact journals
- ▶ Contribute to and publish academic papers and other scholarly outputs to a high academic standard in accordance with the research expectations of the University of Melbourne
- ▶ Actively participate in research seminars and conferences to disseminate research findings in their area of expertise as opportunities arise
- ▶ Take a leading role during the development, preparation and submission of research proposal submissions to internal or external funding bodies as it relates to NMR capability development
- ▶ Undertake administrative functions and obligations primarily connected with the staff member's area of research
- ▶ Provide effective co-supervision and training of honours or postgraduate research projects and co-supervise Research Higher Degree, Masters or Honours Students
- ▶ Engage with relevant professional and industry bodies and stakeholders to foster collaborative partnerships
- ▶ Will engage in network building within and across University platforms

1.2 TEACHING AND LEARNING

- ▶ Actively contribute to teaching, training, scientific mentoring and supervision of research students in the area of magnetic resonance

1.3 LEADERSHIP AND SERVICE

- ▶ Actively participate at meetings and contribute to planning activities or committee work to support capacity building at the University of Melbourne
- ▶ Contribute to effective supervision of junior research staff in the appointee's area of expertise with the goal of production of publications
- ▶ Contribute to, or present research to the public to elevate public awareness of educational and scientific developments, and promote critical enquiry and public debate within the community where appropriate
- ▶ Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity

1.4 OTHER DUTIES

- ▶ Actively participate at Institute meetings and play a major role in planning activities or committee work to support capacity building in the Institute/discipline.

- ▶ Contribute to and present quality research to the public to elevate public awareness of educational and scientific developments, and promote critical enquiry and public debate within the community where appropriate.
- ▶ Positive engagement in learning and career development of self and others.

1.5 OTHER DUTIES

- ▶ Perform other tasks as requested by the manager of MMR or the Bio21 Director.
- ▶ Actively participate in the University Professional Development Framework.
- ▶ Occupational Health and Safety (OH&S) responsibilities as outlined in Section 4.

2. Selection Criteria

2.1 ESSENTIAL

- ▶ Completion of a PhD in molecular sciences or a related discipline or equivalent professional experience.
- ▶ Advanced expertise in NMR spectroscopy including in both solid-state and solution-based measurements.
- ▶ Advanced experience in solid-state and DNP NMR technologies and facility management.
- ▶ Demonstrated leadership skills needed to provide high-level advice to key stakeholders.
- ▶ Ability to positively engage with research students from the University and its partners.
- ▶ High quality research publications in international peer-reviewed journals.
- ▶ High-level interpersonal communications skills and the ability to liaise with staff and research students, professional/ technical staff and clients from industry.
- ▶ Demonstrated ability to listen to others, actively contribute to the team and demonstrate flexibility in adapting to team priorities.

2.2 DESIRABLE

- ▶ The ability to attract external funding through grant applications and/or support in funded joint projects with others internal or external to the university.
- ▶ Experience in the development of new techniques that extend the capabilities of the MMR platform through the development of new methodologies.
- ▶ Experience in solution-based experiments such as NOE difference spectroscopy, selective decoupling experiments, multinuclear NMR of non-standard nuclei, 1D and 2D INADEQUATE experiments, Parallel Acquisition NMR Spectroscopy (PANSY).

3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion, and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the Advancing Melbourne strategy that addresses diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Advancing Melbourne.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<https://safety.unimelb.edu.au/people/community/responsibilities-of-personnel>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 BIO21 INSTITUTE

<http://www.bio21.org>

The University of Melbourne's Bio21 Molecular Science and Biotechnology Institute (Bio21 Institute) is a multidisciplinary research centre specialising in molecular life sciences and biotechnology.

Opened in 2005, the Bio21 Institute improves human health and the environment through innovation in molecular life sciences and biotechnology, driven by collaborative research and dynamic interactions with industry. The Institute embraces commercialisation as a facilitator of innovation, skills development and economic outcomes. A key driver of innovation is the Institute's commitment to intellectual property protection, technology transfer and business incubation.

Accommodating more than 800 research scientists, students, industry participants and administrative staff, the Bio21 Institute is one of the largest biotechnology research centres in Australia.

5.2 FACULTY OF SCIENCE

<https://science.unimelb.edu.au>

Science at the University of Melbourne is the most highly ranked Faculty of Science in Australia. Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 50,000 alumni and is one of the largest faculties in the University comprising six schools: BioSciences, Chemistry, Ecosystem and Forest Sciences, Mathematics and Statistics, Physics and the School of Geography, Earth and Atmospheric Sciences.

The Faculty is host to the Bio21 Molecular Science and Biotechnology Institute, the Indigenous Knowledge Institute, the Melbourne Energy Institute, the Office for Environmental Programs and home to numerous centres.

Science manages more than \$301 million of income per annum, with a staff base in the order of 250 FTE professional staff, and more than 662 FTE academic staff.

We offer a range of undergraduate, honours, graduate and research degrees, enrolling over 10,800 undergraduate and 2,500 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is highly research focused, performing strongly in the Australian Research Council competitive grants schemes. The Faculty of Science is currently growing its competitiveness and standing in the National Health and Medical Research Council and health space.

The Faculty of Science provides community services and industry partnerships based on a solid foundation of research in the pure and applied sciences. The Faculty has an endowment of approximately \$100 million. The annual income from the endowment supports more than 140 prizes, scholarships and research awards, and numerous academic positions.

5.3 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at <http://about.unimelb.edu.au/careers>.

5.4 ADVANCING MELBOURNE

The University's strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University's commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.

We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne's academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes: place, community, education, discovery and global.

5.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <http://www.unimelb.edu.au/governance>