RESEARCH FELLOW - INBORN ERRORS OF METABOLISM (IEM)

DEPARTMENT/UNIT                School of Biological Sciences

FACULTY/DIVISION               Science

CLASSIFICATION                Level A

WORK LOCATION                 Clayton campus

ORGANISATIONAL CONTEXT

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You’ll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you’ll need to publish your work. We’re a university full of energetic and enthusiastic minds, driven to challenge what’s expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

The Faculty of Science contributes to the University’s goals via research, teaching and partnerships with industry, government and individual supporters. Our five Schools cover a large and diverse range of disciplines in undergraduate and postgraduate courses. Ten Schools from other university faculties contribute to science teaching at all levels, allowing students to choose their studies from physical, biological, biomedical, behavioural, environmental, mathematical and computer sciences. The research in the Faculty of Science is carried out by world-class researchers. Their work spans the theoretical to the applied, contributes to new knowledge and technologies, and challenges how we interact with the world. To learn more about the Faculty of Science, please visit our website: www.monash.edu/science/.

The School of Biological Sciences has an international reputation for the highest quality research and education programs. We aim to be a global leader in the life sciences. Areas of expertise include: molecular and cellular genetics; evolutionary genetics, disease causality, adaptation to environmental change and disease resistance; community ecology and ecosystem functioning; the impacts on biodiversity, and strategies to mitigate major environmental challenges. Simply put, we are interested in all forms of life, interactions between the environment and genetics / genomics and strategies to improve human and environmental health. To help us achieve our aims, we have a strong complement of academic, research and professional staff and a large and high achieving student population. We encourage applications from academics of diverse backgrounds and have a number of support processes to aid the transition to Australian research and education sectors. For more information about the School of Biological Sciences, please visit our website: https://www.monash.edu/science/schools/biological-sciences.
POSITION PURPOSE

Inborn errors of metabolism (IEM) are a large heterogeneous group of genetic diseases caused by mutations in key metabolic genes. Individually, IEM are considered rare, but as a group, they impact more than a million people. A significant proportion of sufferers have defects in amino acid metabolism (IEaaM). Tragically, the affected individuals are most often infants and young children, and the mortality rate amongst them is high. If identified early and there is a known diet intervention, there is a very positive effect on quality of life. However, there is no known intervention for a large portion of these diseases and because early intervention is key, there is no time in the clinic to develop ad hoc treatment plans. We are using Drosophila melanogaster (fruit fly) to model and understand the mechanisms of IEaaM. This is an exciting opportunity to join our unique team that combines extensive clinical expertise of IEaaM with detailed technical knowledge of metabolomics and Drosophila nutrition and genetics, aimed to rapidly develop dietary interventions to save human lives.

The role works across the Piper (Nutritional Genetics) and Johnson (Development and Disease) groups within the School of Biological Sciences and apply sophisticated Drosophila genetics, confocal microscopy, metabolomics and macronutrient screening approaches to model and develop treatments for human metabolic diseases. The role works with and reports to Dr Matthew Piper and Travis Johnson for their research area.

Reporting Line: The position reports to the Senior Research academic staff members

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level A research-only academic may include:

1. The conduct of research under limited supervision either as a member of a team or, where appropriate, independently and the production or contribution to the production of conference and seminar papers and publications from that research

2. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise

3. Limited administrative functions primarily connected with the area of research of the academic

4. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff

5. Occasional contributions to teaching in relation to their research project(s)

6. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures

7. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees

8. Advice within the field of the staff member’s research to postgraduate students
KEY SELECTION CRITERIA

Education/Qualifications
1. The appointee will have:
   - A doctoral qualifications in Genetics or a closely related field

Knowledge and Skills
2. Experience in using animal model systems, preferably Drosophila
3. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise
4. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines
5. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
6. A demonstrated awareness of the principles of confidentiality, privacy and information handling
7. A demonstrated capacity to work in a collegiate manner with other staff in the workplace
8. Demonstrated computer literacy and proficiency in the production of high level work using software such as Microsoft Office applications and specified University software programs, with the capability and willingness to learn new packages as appropriate

OTHER JOB RELATED INFORMATION
- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE
Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.