

School of Molecular and Cell Biology

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HILLEN-FRIEDLAND POSTDOCTORAL FELLOWSHIP

**Transcriptional Regulation, RNA Therapeutics and Human Disease
University of the Witwatersrand, Johannesburg, South Africa**

Applications are invited to apply for a prestigious two-year Hillel-Friedland Postdoctoral Fellowship in the Protein Structure-Function Research Laboratory within the School of Molecular and Cell Biology at the University of the Witwatersrand. The successful candidate will join an internationally active research programme investigating how microRNAs regulate transcription factor function in health and disease. The project aims to uncover fundamental mechanisms that govern gene regulation and to identify novel therapeutic strategies for diseases driven by transcriptional dysregulation.

Research Project

The fellow will contribute to a cutting-edge research project entitled:

"Mechanistic and Therapeutic Targeting of miRNA-Regulated Transcription Factor Networks in Neurodevelopmental and Immune Disease"

This interdisciplinary project sits at the interface of molecular biology, biochemistry, structural biology and biomedical research. The overarching goal is to determine how microRNA-mediated regulation alters transcription factor structure, DNA binding and interaction networks, and whether these mechanisms can be exploited therapeutically. The work focuses on disease-relevant transcription factors and their regulatory networks, with applications to neurodevelopmental disorders, cancer biology and autoimmune and immune-mediated disease. The project forms part of a broader effort to develop novel RNA-based therapeutic strategies for diseases in which conventional drug discovery approaches have had limited success.

Research Environment and Opportunities

The successful fellow will join a vibrant and collaborative research environment with expertise in transcription factor biology, protein structure-function relationships and molecular mechanisms of disease. The project combines molecular biology, biophysics, structural biology and computational approaches to address fundamental questions in gene regulation while maintaining a clear translational focus on therapeutic development.

This highly interdisciplinary environment provides a unique opportunity to work across multiple levels of biological organisation, from molecular mechanisms and biomolecular interactions to cellular function and disease relevance. The Fellow will be exposed to advanced experimental and computational methodologies and will be encouraged to integrate these approaches to develop innovative solutions to complex biomedical problems.

Beyond technical training, the Fellowship is designed to support the development of an independent researcher. The successful candidate will have the opportunity to publish in leading international journals, present research at national and international conferences, contribute to the supervision of postgraduate students, establish collaborative networks and develop independent research directions within the broader theme of transcriptional regulation and RNA

therapeutics. The position therefore offers the opportunity to participate in a cutting-edge research programme while also building the scientific, leadership and research skills necessary for a successful long-term career in academia or the biotechnology sector.

Candidate Requirements

We are seeking an outstanding and highly motivated early-career researcher with a demonstrated commitment to excellence in biomedical research. Candidates must hold a PhD awarded within the past five years and should have an emerging track record of high-quality research outputs relative to career stage. Applicants should possess strong intellectual curiosity, excellent communication skills, and a desire to tackle challenging scientific questions at the interface of molecular biology, gene regulation and human disease.

Experience in biochemistry, biophysics and/or structural biology is preferred. Additional experience in molecular biology, RNA biology, gene regulation, cancer biology or computational biology would be advantageous; however, we particularly welcome candidates who can demonstrate scientific excellence, creativity and the potential to become future leaders in their field.

The successful candidate will be expected to contribute intellectually to the development of the project, drive research activities with a high degree of independence, and actively participate in the broader academic life of the research group through publication, collaboration, mentorship and scientific engagement.

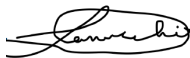
Application Procedure

Applicants should submit:

1. A detailed curriculum vitae
2. A cover letter outlining research interests and suitability for the position
3. A full publication list
4. A letter of recommendation from previous host or supervisor
5. Contact details of an additional two academic referees
6. A brief statement of future research interests (maximum one page)

To apply click here: <https://forms.gle/a8jjLnfC18gpBd7s7>

Queries can be directed to



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Shortlisted candidates will be invited for an interview.