



Professor J. M. Farrant Chair of Molecular Physiology Department of Molecular and Cell Biology

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PLANT STRESS GROUP – POSTDOCTORAL RESEARCH FELLOWSHIP

Purpose:

The Plant Stress Group, under the leadership of Prof Jill Farrant aims to gain a comprehensive understanding of the mechanisms of desiccation tolerance in resurrection plants to ultimately apply this knowledge towards the production of drought tolerant crops. A multidisciplinary approach is utilized in which disciplines of molecular biology (for understanding of genes, proteins and metabolites associated with water loss, and their regulation) biochemistry/cell biology (for functional analysis of how protection is afforded and where it is located) and physiology/ecophysiology (to inform and contextualize responses). The research is at a stage where key genes and regulatory processes associated with tolerance of more extreme water loss have been identified and their efficacy in inducing drought tolerance in desiccation sensitive crop species must be assessed.

The work of this Fellowship will thus aim at developing a platform for transformation and testing of genes associated with extreme drought in select crops. Successful candidate genes will be permanently expressed/suppressed and relevant functional testing done. A key aspect to this work is an understanding of gene regulation and biotechnological approaches to plant transformation.

Applications are invited for the fellowship from suitably qualified individuals.

The successful applicant will be working with Prof Jill Farrant, in collaboration with Prof Ed Rybicki, A/Prof Inga Hitzeroth, from the Biopharming Research Unit, and Dr Suhail Rafudeen, within the Department of Molecular and Cell Biology, and will be required to conduct research aspects of gene/protein expression and biotechnological transformation of gramineous and legume crops.

Conditions:

- Applicants must have completed their doctoral degrees within the last 5 years may not previously have held a permanent professional or academic post.
- No benefits or allowances are included in the Fellowship.
- As part of his/her professional development, the successful candidate may be required to participate in a limited capacity in departmental activities, such as teaching and student supervision.
- The successful applicant will be required to comply with the university's approved policies, procedures, and practises for the postdoctoral sector.

Value and tenure:

The value of the fellowship is R 200,000 tenable for 1 year, with options for extension for a further 1-3 years.

Academic criteria:

Applicants should have qualified with a doctoral degree covering aspects of plant molecular biology and biotechnology. They should demonstrate experience in techniques involving gene cloning, protein expression, plant transformation and be relatively familiar with bioinformatic and statistical tools. Understanding of plant physiology and experience in grant writing will be a strong recommendation.

The successful applicant will be required to register as a Postdoctoral fellow at the University of Cape Town as soon as possible in 2021.

Application requirements:

Applicants should submit a short description of their research interests, a CV including a publication list, copies of their academic transcripts, and email addresses of at least two references with whom the applicant has worked alongside, was taught by, or was supervised by. Please supply this in one PDF file.



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Selection process:

Only eligible and complete applications will be considered by the 3 PI's of this research. Qualifying interviews will be given to top candidates.

Closing date:

Applications must be submitted by no later than Monday 1 November, 2021.

Contact details for submission of applications and for enquiries please contact Keren Cooper at keren.cooper@uct.ac.za

The University of Cape Town reserves the right to disqualify ineligible, incomplete and/or inappropriate applications. The University of Cape Town also reserves the right to change the conditions of the award or to make no awards at all.