**Master of Science ‘Table grape cell wall snapshots’ Project Bursary**

A fully funded Master of Science bursary is available within the South African Grape and Wine Research Institute (Department of Viticulture and Oenology) at Stellenbosch University. The bursary and project are available for **commencement of studies in 2024**. The value of the bursary is **R110 000 per annum** and is tenable for 24 months.

**Project Background**

The crunchy texture of table grapes is one of the key quality parameters during production. This varies from cultivar to cultivar, stage of harvest and vineyard performance. Cell wall properties are key drivers of berry quality (e.g., pericarp firmness and intactness) at harvest and beyond. A promising avenue is to link carbohydrate arrays with probes targeting cell wall polymers with more traditional biochemical methods with rapid infrared spectroscopy tools to ‘chemotype’ the cell walls of cultivars at specific stages of ripeness and postharvest. This MSc project will involve ‘**Screening table grape cultivars using rapid cell wall profiling tools for berry quality parameters’.** Integration of cell wall and spectral datasets using chemometric multivariate statistical methods and generation of predictive models for cell wall quality in different cultivars.

**Degrees required**

BSc (Honours) in Botany, Biotechnology, Biochemistry, Chemistry, Molecular Biology and/or related fields or a 4 year BSc(Agric) in Food Science, Agronomy, Horticulture and related fields will also be considered.

**Skills learned in project**

Selecting a range of different commercial table grape cultivars. Assessing berry texture and firmness. Utilising cell wall profiling methodology using plant cell wall probes and bioanalytical methods such as gas chromatography mass spectrometry. Perform various forms of infrared spectroscopy and perform chemometrics multivariate analysis.

**Conditions of MSc bursary**

The successful applicant will have to register and apply as an MSc student within the South African Grape and Wine Research Institute (Department of Viticulture and Oenology).

**Application requirements**

Applicants should submit (i) a cover letter, (ii) a comprehensive CV, (iii) copies of their academic transcripts and certificates, and (iv) referee contact details (including e-mail addresses)

*We reserve the right not to appoint anyone in the position and will continue to advertise until a suitable candidate has been identified.*

**Contact details for submission of applications:**

Please apply via email to Dr John Moore E-mail: [moorejp@sun.ac.za](mailto:moorejp@sun.ac.za) Telephone: 021 808 2733