18 May 2023

**POSTGRADUATE OPPORTUNITY AVAILABLE AT THE SOUTH AFRICAN GRAPE AND WINE RESEACH INSTITUTE (SAGWRI) FOR 2024**

The following project is available for a MSc/PhD-level study from 2024, for a suitable student with a microbiology/biochemistry (or any other relevant) background.

**Project Title:** Assessing vitamin uptake and metabolism in wine yeasts

**Project description:** Grape juice is converted to wine through yeast-driven alcoholic fermentation. During this biochemical process, nutrients are converted to alcohol, yeast biomass and a myriad of aroma compounds. The high sugar concentrations and the lack of oxygen create challenging living conditions for the yeasts, especially because other nutrients are in limited supply. Amongst those, B vitamins are essential growth factors for yeasts which can take them up from their habitat and/or synthesise them, depending on the yeasts’ genetic background and the environmental conditions (viz. presence/absence of oxygen). Nevertheless, the conditions inducing uptake vs synthesis and the timing of uptake during fermentation are not clear for all vitamins and the further metabolism of the vitamins remains to be fully elucidated for the greater part. Moreover, fierce competition for these vitamins has been reported and its impact on individual yeast population dynamics within consortia requires further research. This project aims to investigate vitamins holistically, their uptake and synthesis in various wine yeasts and the possible exchange of vitamins within yeast ecosystems during fermentation. The project can accommodate two PhD students, but MSc applications will also be considered. It will be performed in collaboration with the University of Montpellier, France. PhD students will be given the opportunity to register at both universities (Stellenbosch and Montpellier) for a joint PhD degree.

**Contact person for the project: Prof Benoit Divol**

**Please send a CV as well as a motivation letter to Prof Divol (divol@sun.ac.za) to indicate your interest in this opportunity.**

**General contacts for SAGWRI:**

Prof MA Vivier: Interim Director of SAGWRI

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