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South African Grape and Wine Research Institute
Suid-Afrikaanse Wingerd-en-Wyn
Navorsingsinstituut

POSTGRADUATE OPPORTUNITY AVAILABLE AT THE SOUTH AFRICAN GRAPE AND WINE RESEARCH INSTITUTE (SAGWRI) FOR 2023

The following project is available for a MSc/PhD-level study from 2022, for a suitable student with microbiology/biochemistry 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, vitamins are essential growth factors for yeasts which can take them up from their habitat or synthesise them, depending on the yeasts' genetic background and the environmental conditions. Nevertheless, the conditions inducing uptake vs synthesis are unclear and the further metabolism of the vitamins remains unclear for the greater part. Moreover, competition for these vitamins occurs between yeast species. This project aims to investigate vitamins holistically, their uptake and synthesis in various wine yeasts and the possible exchange of vitamins within yeast ecosystems.

Contact person for the project: Prof Benoit Divol, divol@sun.ac.za

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