

SA GRAPE AND WINE RESEARCH INSTITUTE

Programme/Project Info for Prospective MSc and PhD Students

PROGRAMME: WINE MICROBIAL ECOSYSTEMS AND BIOTECHNOLOGY

1)Biology of wine microorganisms	This multidisciplinary, integrated program uses diverse complementary tools to assess the diversity of microorganisms in vineyards and wine fermentation processes and further explores the impact of mono- and mixed-cultures on wine properties. The molecular mechanisms underpinning interspecies interactions in diverse settings are investigated using a combination of microbiology, molecular biology and systems biology approaches. The current research topics include:
2)Microbial ecology and evolution	
3)Microbial resources	
	<ul style="list-style-type: none">a) Influence of viticultural practices on vineyard and fermentation microbiomeb) Yeast-yeast and yeast-bacteria interaction during fermentationc) Yeast-microalgae for wine wastewater bioremediationd) Using omics technologies to study microbial physiology and metabolisme) Microbial strain improvement using biotechnology, breeding and directed evolution approachesf) Biochemical and oenological characterization of strains

OPPORTUNITIES FOR 2020

1. Biology of wine microorganisms	<ul style="list-style-type: none">• Benoit Divol; Evodia Setati; Maret du Toit; Florian Bauer; Debra Rossouw• Two BScHons ,one MSc/MScAgric and one PhD• To discuss projects: divol@sun.ac.za; setati@; mdt@; fb2@, debra@
2. Microbial diversity, ecology and evolution	<ul style="list-style-type: none">• Evodia Setati, Florian Bauer, Debra Rossouw• Three BScHons, One MSc, one PhD
3. Microbial resources and improvement	<ul style="list-style-type: none">• Florian Bauer, Benoit Divol, Debra Rossouw• One BscHons, Two MSc, one PhD

CONTACT INFORMATION

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	http://www.sun.ac.za/english/faculty/agri/viticulture-oenology