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Technical/Research Assistant

Department of Microbiology, University of Stellenbosch, Stellenbosch
7600, South Africa

Position: Stellenbosch University supports a stimulating research environment where new knowledge and skills can be developed, shared and applied to the benefit of the South African community. **Two** Technical Research Assistants positions are currently available for one year (with the option to renew for an additional year).

Research: The main focus of the Stellenbosch University biofuels research programme is to develop strains of *Saccharomyces cerevisiae* with the ability to simultaneously degrade lignocellulose and ferment the resulting sugars to ethanol. Although several groups are developing yeast strains that produce lignocellulosic enzymes, none of the existing groups has developed yeast that produces sufficient quantities of lignocellulose-degrading enzymes to sustain growth and fermentation on this substrate for a commercially viable process. Thus the main objective of this research is bioprospecting for new cellulolytic and hemicellulolytic enzymes for heterologous expression in yeast.

We aim to achieve the objectives of this program using a range of cutting-edge molecular and metatranscriptomics technologies in collaboration with IMBM, one of South Africa's leading laboratories in the field of metagenomics and gene discovery, as well as the CSIR. The screening of metatranscriptome libraries enriched for eukaryotic mRNA's will be developed and employed in this project. Furthermore, classic screening regimes for culturable microbes will also be conducted. The project is made possible as part of funding for the South African Biofuels Platform: I. Lignocellulosic Enzymes for Agricultural Feedstocks [LEAF] by PlantBio.

Requirements: A minimum requirement at Masters level, but preference for a PhD, in Microbiology obtained within the past five years, with a strong background in cDNA library construction, molecular biology and yeast biotechnology.

Applications: A cover letter with full *curriculum vitae* including all research outputs must be submitted to Dr. H Volschenk, Department of Microbiology, Private Bag XI, Matieland, 7602, by Fax to 021-808 5846 or by e-mail to volschenkh@sun.ac.za

Closing date for applications: 15 March 2009

