

## Postdoctoral Research Fellowship

**Project Title:** Processing of biological materials

**Project description:** The processing of biological raw materials will form the cornerstone of the growing bio-economy, and it offers substantial opportunities for innovation, commercialisation and interdisciplinary collaboration. At the Department of Process Engineering at Stellenbosch University, the development and optimisation of biomass modification, transformation, preservation and fractionation processes forms an integral part of the research activities of the Bioresource Engineering Group. A variety of biomass types are being worked on, including plant- and animal-based proteins, seaweeds and lignocellulosic biomass.

The project will revolve around developing processing strategies for the recovery of high-value compounds for the nutraceutical and food industries, with a strong focus on producing publishable results that also support the development of a techno-economic evaluation. This is an ideal opportunity to be part of exciting developments in the South African bio-economy, where the successful candidate's research will directly contribute toward development of technology to utilise and process sustainable biological raw materials.

**Responsibilities:** The successful candidate will have the opportunity to do independent and cutting edge research under guidance of the host, and to form part of a focused research group in the Department. The candidate will be required to generate significant new data and to publish the work, to generate publications from existing data, to partake in training and supervision of a limited number of postgraduate students which will work in the same research field, and to assist in fundraising through grant writing.

**Host:** The research will be conducted at the Department of Process Engineering, Stellenbosch University, as part of the Bioresource Engineering research group. The Department of Process Engineering is known for its high quality research and its excellent facilities, and it hosts a large contingent of international postgraduate students and post-doctoral fellows.

**Requirements for application:** PhD qualification in Chemical Engineering or similar discipline (must have graduated within the last five years). The candidate must have demonstrated his/her ability to publish in high quality, accredited and peer-reviewed journals. In addition, the candidate should be competent in the English language, be computer literate and have previous experience in one or more of the following areas:

- Processing of biological raw material and/or extraction of high-value compounds from biological raw materials
- Operation of pilot scale equipment
- Process simulation using specialist software packages e.g. Aspen
- Techno-economic analysis of processing operations

Please note that postdoctoral fellows are not appointed as employees and their fellowships are awarded tax free. They are therefore not eligible for employee benefits.

**Commencement of duties:** February 2020 or as soon as possible thereafter.

**Closing date:** 31 January 2020

**Enquiries:** All applications should be sent electronically by e-mail to Dr. Neill Goosen at [nigoosen@sun.ac.za](mailto:nigoosen@sun.ac.za).

Applications should contain **all of** the following documents:

- Cover letter, stating the date available to commence duties
- Complete Curriculum Vitae
- Title of PhD and year obtained
- Complete list of scientific outputs, including journal articles and conference outputs
- Contact details of PhD supervisor(s) and at least one other academic reference

Stellenbosch University reserves the right not to make an appointment for this position.