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**Research Group:**Biomedical Research & Innovation Platform, South African Medical Research Council. **Qualifications: BSc (Biol. Sci), Natal University; BSc Hons (Morph. Sci., *cum laude*), MSc (Med. Sci., *cum laude*),** PhD (Med. Phys.), Stellenbosch University.

**Research Focus:** Current research niche involves the potential protection of pancreatic beta cells in the context of metabolic disease. A multi-disciplinary approach, including *in vitro*, *ex vivo* and *in vivo* models, is used to investigate pancreatic islet pathophysiology. Several techniques are also employed, including flow cytometry, fluorescent microscopy, immunohistochemical labelling, qRT-PCR and Western blot analysis. A novel approach to investigating pancreatic beta cells *in vitro* is my development of a 3D culture model to mimic more of an islet-like structure compared to conventional 2D culture. This 3D model can also be applied to other cell types, with extensive applications for toxicity testing in 3D hepatocyte spheroids.

Other areas of research interest and experience include cell metabolism assays *in vitro* in muscle, liver and fat, as well as RAW 264.7 macrophage anti-inflammatory studies.

**Current Postgraduate Students**

**MSc:** Ms Namani Ngema (University of Zululand); Ms Simoné Nel, Ms Daniella Lagoa Pereira, Ms Danélle Truter (Stellenbosch University).