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## **UCT's MSc candidate wins prestigious Esther Mahlangu Master's Fellowship at Women in Science Awards**

Pearly Joubert, a trailblazing student at the University of Cape Town (UCT), has just been awarded the prestigious Esther Mahlangu Master's Fellowship by the Department of Science and Innovation (DSI) as part of the 2024 Women in Science Awards.

The theme for this year's awards was "Transition towards an innovation economy: The role of women leaders in science, technology, engineering and mathematics". This resonates with Joubert on multiple levels due to her passion for solving pressing challenges informed by scientific research.

Commenting on the award, Joubert said: "This award truly means so much to me. I never imagined winning one like this so early on in my research journey."

Joubert founded a startup called *uMama* (mother) to reduce maternal and fetal mortality rates in rural Africa. The dynamic student leader also heads UCT's Student Women Economic Empowerment Programme (SWEEP), proving she is a woman of many talents.

SWEEP is a society that uses entrepreneurship to empower women students. Joubert also serves as president of the Women in Synthetic Biology Africa, which unites African scientists who are dedicated to developing a healthier, safer and sustainable world through synthetic biology. Synthetic Biology Africa is an initiative of the SynBio Africa organisation.

After completing her honours in neuroscience and physiology in 2022, Joubert immediately enrolled for her MSc, which explores how the brain's structural-functional connectivity, which helps shape neurophysiological activity and influence movement, responds to adjunctive acupuncture – the insertion of thin needles into the skin at strategic points to facilitate healing.

Joubert's research focuses particularly on a group of Chinese ischemic stroke patients with hemiplegia – paralysis affecting just one side of the body and impacting patients' ability to

perform everyday activities. She said treating ischemic stroke patients requires a multidisciplinary team to improve their mobility and facilitate their path to recovery.

However, she said multidisciplinary teams are not well-established in China. And while physiotherapy is recognised and recommended as a form of treatment, the neuro-mechanisms of acupuncture, which physiotherapists use to provide a range of benefits like pain relief and to reduce muscle spasm and joint stiffness, are poorly understood.

Therefore, to measure its effects, her trial had to be divided into two treatment groups: true acupuncture and physiotherapy, and physiotherapy and sham acupuncture. She will document how they respond to treatment in her dissertation under key findings.

Joubert said: "The research findings could provide crucial insights into determining the most effective rehabilitation pathway for ischemic stroke patients, whether through true acupuncture and physiotherapy or sham (placebo) acupuncture and physiotherapy. This research aims to enhance our understanding of how different rehabilitation strategies aid neuroplasticity and motor improvement."

On establishing the *uMama* startup, Joubert said research had showed that anaemia, as a result of poor access to a nutritious diet, is a major concern for pregnant women in the southern region of Malawi. As 70% of farmers in Malawi are women, facing several challenges the startup saw an opportunity to address these challenges.

As the president of SWEEP, she has learned the importance of financial independence, especially for women. She said *uMama* now trains women farmers to grow nutritious, climate-resilient crops guaranteed to benefit everyone in the community and empower women farmers to grow their businesses and boost their financial independence.

"Women entrepreneurs require a lot more support, not only because they can drive significant development but because they are often more motivated to create social impact through their ventures," she said. Helping women farmers means helping a community and our vision is for our women farmers to become leaders who uplift their communities."

She plans to use her prize money to attend the Organization for Human Brain Mapping meeting or the International Society for Magnetic Resonance in Medicine next year. "There are a few people who have been in it with me, and I would not be here without them. They know who they are. They give new meaning to the phrase: I am because we are," she said.



Pearly Joubert

Photo: Robin Thuynsma

***ENDS***

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