

Talking with 2022'S FAMELAB SA WINNER

*Diabetes is the second leading cause of death due to disease in SA, after tuberculosis. Finding ways to treat diabetes using indigenous knowledge about natural remedies has won **Dr Nehemiah Latolla** of the Nelson Mandela University a place on the world stage of science communicators as 2022's FameLab SA winner.*

Dr Nehemiah Latolla was chosen as the FameLab SA 2022 winner during the national leg of the International FameLab science communication competition, held on Monday evening, 17 October 2022. As the national winner, he also represented South Africa at the International FameLab 2022 competition in November 2022.

During the FameLab South Africa Final, ten young scientists showcased research from some of the top academic and research institutes across the country in a way that non-experts can follow along and enjoy. The ten finalists each presented a three-minute talk about their research using props and simple language. The talks shared a glimpse into the lives of young researchers in South Africa and the impact that they hope to have through their studies and work. FameLab is the biggest international competition that seeks and supports science communication talent. This year marked the celebration of the 10th season of FameLab in South Africa.

Dr Latolla, a post-graduate researcher at Nelson Mandela University, charmed the judges with captivating storytelling skills and his passion for tapping into the wealth of South Africa's indigenous knowledge about natural remedies to treat diabetes.

His research in phytochemistry focuses on evaluating the safety and efficacy of natural products to treat diabetes. "SA has about 30 000 recorded plant species of which approximately 3 000 have the potential for medicinal use. However, there is a lack in the reported chemistry, safety, and efficacy of these medicinal plants," according to Latolla.

First runner-up, Johanné Marais from the University of the Witwatersrand, seeks to address sleep deprivation due to HIV treatment with her sleep neurophysiology research. Second runner-up, Onesimo Mtintsilana, also from the University of the Witwatersrand, is a particle physicist and the student representative for the Women in Physics in SA Forum. Mtintsilana is also a tour guide at CERN (European Council for Nuclear Research) in Switzerland, where she introduces people to this multinational particle physics research institute's mission and achievements.

In reaction to his win, Latolla said: "We truly had a team of great science communicators with great ideas in the competition this year. I feel very honoured to be able to



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Dr Nehemiah Latolla of the Nelson Mandela University

move forward and represent this group. I will give my best to showcase the richness of thought and innovation South African scientists have to offer.

When asked about the importance of science communication, Latolla feels strongly that tax-funded researchers owe it to the tax-payer to communicate science in an unambiguous way.

"COVID-19 showed us how important it is for scientists (not politicians) to come forth and address the public on the sciences involved in any particular case. I see FameLab as paramount in helping develop myself to effectively communicate with the communities I work with."

The FameLab competition offered all contestants the opportunity to hone their communication and presentation skills to engage the public with their research starting with training and participating during heats held at various institutions earlier this year. All contestants were encouraged to continue their new roles as ambassadors of their research and to find opportunities to talk about their research outside their academic spaces.

FameLab, an initiative of Cheltenham Festivals in the UK, has been running in South Africa since 2013 through a partnership between the South African Agency for Science and Technology Advancement (NRF-SAASTA) and research communication specialists, Jive Media Africa.

Watch the full FameLab SA Finals presentation here: <https://www.youtube.com/watch?v=3mXjgLeZvoQ&t=4s>

Interview with Dr Nehemia Latolla

Tell us a bit about yourself

I was born in Leratong Hospital in Johannesburg before my parents started missionary work in the Eastern Cape province. Growing up in a home of missionaries, my parents always reminded us of the importance of caring for and helping others. This would become my goal in life, to use education to better the lives of others around me.

I was attracted to Organic Chemistry in high school as the biological route (as a medical practitioner) did not agree with my squeamishness around blood. It offered the world of medicine through chemistry which I would, later on, make a home. I am a firm believer in the African proverb, "Those that are in the room, are meant to be there" and this I connected to my journey - where you are meant to be, life will lead you.

In my first Organic Chemistry lecture I met my supervisor, who would later introduce me to the world of medicinal chemistry through the use of indigenous plants. This field of research resonated with me on both an academic and personal level, offering the opportunity to help others through familiar stories shared by my grandparents. But this change-making project does not stop at a purely scientific level, I also use the scientific method to create fashion and poetry to change the lives of others, using critical narratives to explore questions about the body, sexuality, and the curriculum. This I've been able to do as a former chair of the university poetry society (where I ran "Poetry as healing" workshops with community members), at various exhibitions, publications and events, and as a former assistant exhibition manager at the Archives and Exhibition Centre at the Nelson Mandela University. I think of all this work that describes who I am as the culmination of the different streams at my disposal to care for and help others. All this to, in the words of my institution's namesake, "Change the world".

How did you find out about FameLab and why did you get involved?

I became involved in FameLab for various reasons. Former FameLab alums from my institution (Dr Pulleng Moleko-Boyce and Sendibitiyosi Gandidzanwa) have shared the amazing opportunities FameLab offers and upon completing my thesis I saw the need to revisit how I communicate my science.

Tell us about your research and what value it has in the world? What made you choose this specific research area?

My research area is the study of the chemistry of plants. In my case, those plants used locally in the treatment of

diabetes. This chemistry is compounds or substances produced by living organisms found in nature and is termed Natural Products (NP). In the 1990s approximately 80% of drugs were NP or derived from NP. Thus, we are interested in the study of these medicinal plants towards new, safe, and cost-effective drugs. Similarly to other scientific research, the study of NP is not unique to South Africa but forms part of global endeavours toward drug discovery. What makes this undertaking so special here is our regional and indigenous knowledge systems advantages which are unique to South Africa. I am motivated to make a contribution to this research towards drug discovery to combat the significant healthcare crisis which is diabetes. This research responds to the United Nations Sustainable Development Goals (SDGs) for 'Good health and well-being' and can further contribute towards 'No poverty' through the potential of innovation, investment, and job creation.

Why do you think it is important to share your research on an international platform?

I work with indigenously used medicinal plants which only grow in southern Africa to find solutions for diabetes, which is a global challenge. This situates this research as uniquely South African and responsive to global challenges, highlighting the South African botanical gardens as sites of innovation, investment, job creation and ultimately poverty alleviation. Research worth pursuing is research worth sharing.

What advice can you offer to young researchers?

As you work towards your qualification or complete your research project, three things become important: passion, perseverance, and care. Make sure that you are passionate about whatever research topic you seek to investigate, as this will make it real and tangible. Develop the ability to persevere, so that regardless of the challenges or setbacks you are able to continue to push towards your goal. Finally, have care for the project, the people you work with, and yourself, which resonates with the age-old saying, "If you love it, it will grow". Remember research is not an activity, it becomes a life of its own and thus you need to make sure that the people around you (involved in the project or in your life) understand and support you on your journey. Failure is inevitable and necessary when you conduct research because it provides an opportunity to stop, reevaluate, learn and grow as a researcher. My father, who was a devoted Christian and Pastor (God rest his soul) taught me the most important lesson yet in my life, "The greater the challenge, the greater the reward". This is always my mantra in research - whenever all seems lost, great victory is ahead.

Article compiled from a media release and interview provided by FameLab SA and Jive Media Africa. To find out more about FameLab in South Africa, go to: <https://www.saasta.ac.za/competitions/famelab/>