



Djeneba Nantoume

2020 One Planet Laureate Candidate

Position

Associate Professor

Institution

Laboratory of Microbiology and Microbial Biotechnology Research (LAbOREM-Biotch), Faculty of Sciences and Techniques (FST), University of Sciences, Techniques and Technologies of Bamako (USTTB)

Country

Mali

Education

PhD, Microbial Biotechnology, University of Sciences, Techniques, and Technologies of Bamako, Mali

Mentor

Prof. Kalifa Traoré, Research Director; Head of the Production Systems and Natural Resource Management Programme, Economic and Rural Institute

Research Area

Applying technology to microorganisms to help small- and large-scale producers in Mali address several issues, such as climate change.

Djeneba Nantoume was born in 1991 in Kayes, a city in Mali, on the banks of the Senegal River. Her father is a breeder and research director at the Economic and Rural Institute, and her mother is an agricultural engineer (specializing in market gardening).

In 2002, the family moved to Bamako. Djeneba obtained her high school diploma specializing in biological sciences in 2008. She enrolled in the Chemistry-Biology-Geology program at the Faculty of Science and Technology, aiming to excel in the same field as her parents. She later obtained a Bachelor's degree in Biochemistry and Microbiology.

Initially, Djeneba wanted to take a Bachelor's degree in microbiology. However, she then discovered the new subject area of biotechnology in agriculture to curb chemical fertilizers and pesticides, a potential source of greenhouse gas emissions.

She based her research on organic farming without using chemicals that are harmful to the environment and consumers.

In 2015, she obtained funding for a Master's degree in microbial biotechnology from the West African Agricultural Productivity Programme, which she received in 2017.

The research conducted for her Master's degree enabled her to isolate, select and

exploit rhizobacteria which have been proven to increase greenhouse tomato production by more than 30%.

Djeneba has been working on her thesis in the same field since 2018. Her thesis project was developed by the Director of the Laboratory of Microbiology and Microbial Biotechnology Research and focused on rice's bio-fertilization.

However, when Djeneba started university, she had no idea that she would continue her studies to the Ph.D. level. As she progressed with her studies, she increasingly enjoyed learning about this relatively unknown field.

Developing innovations was her main objective because Mali is not advanced in terms of biotechnology. She found it exhilarating both to introduce people to this new field and to explore it herself. She was also strongly encouraged by her thesis supervisor.

A Ph.D. student in Microbial Biotechnology at the University of Science, Technology and Technology in Bamako, Mali, Djeneba's research is focused on agriculture. Her work is based on rice endophytes and using these endophytes to increase production.

She uses microorganisms and technology to help both large and small producers, especially against climate change.

Djeneba is working on rice endophytes to increase the production of rice in Mali. She uses microorganisms and technology to help both large and small producers, especially against climate change.

She also aims to increase producers' yields and improve their living conditions.

At the start of her thesis, Djeneba conducted field surveys in Baginéda among rural communities. Djeneba laments that farmers are not aware of the dangers posed by chemical pesticides and fertilizers.

After completing her thesis, Djeneba would like to join the public sector as an Associate Professor because she would like to surpass her parents' achievements, whom she greatly admires. Therefore, she plans to progress as far as possible in her career by working on numerous projects and, consequently, on publications.

A 2015 AWARD Fellowship laureate informed Nantoume about the One Planet Fellowship and encouraged her to apply. The Fellowship will open up a wealth of opportunities for a young researcher.

Through the different modules, she is sure to meet international experts working in the same field and should be able to make important contacts, especially with researchers from other countries.

Djeneba was highly impressed and encouraged by the video presentations of successful women researchers in science during the program induction activities.

The One Planet Fellowship is an excellent opportunity for personal and scientific capacity-building. She also wants to share the knowledge gained with her institution.

Djeneba acknowledges the need to be creative due to the lack of equipment by changing the protocol or adapting the project as

needed. Since she got married and became a mother, Djeneba has had to be incredibly organized, but she excels in her research through determination, perseverance, and courage.

Djeneba Nantoume is one of the growing number of candidates selected to participate in the One Planet Fellowship. The One Planet Fellowship is a career development initiative that is building a robust pipeline of highly connected, inter-generational scientists equipped to use a gender lens to help Africa's smallholder farmers cope with climate change. The One Planet Fellowship is funded by the Bill & Melinda Gates Foundation, the BNP Paribas Foundation, the European Union and Canada's International Development Research Centre (IDRC). African Women in Agricultural Research and Development (AWARD) and Agropolis Fondation are jointly implementing the Fellowship.

Do you have any further questions? Send an email to: oneplanet.award@cgiar.org

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