



## Remy Kindanloun Bationo

2020 One Planet Laureate Candidate

### Position

Researcher

### Institution

National Centre for Scientific and Technological Research/ Institute for Research in Applied Sciences and Technologies (CNRST/IRSAT)

### Country

Burkina Faso

### Education

PhD, Phytochemistry, Joseph Ki-Zerbo University,

### Mentor

Dr. Elisabeth P. Zida, Senior Research Fellow in Phytopathology at the Environmental Institute for Agricultural Research - Burkina Faso (INERA)

### Research Area

Natural substances with bio-fungicidal properties in plants (herbaceous).

33-year-old Remy Kindanloun Bationo is a researcher at the National Centre for Scientific and Technological Research (CNRST) in Ouagadougou, Burkina Faso.

His research work focuses on finding alternatives to synthetic fungicides using natural substances. In collaboration with other researchers, this work has developed three bio-pesticides derived from essential oils of three different species to protect leguminous plants. He is currently studying a combination of essential oils from these species to optimize its effectiveness.

Remy enjoys researching millet, maize, and rice. Since childhood, he has always been interested in cereals, and today, as a phytochemist, he wants to promote post-harvest food conservation through local products.

Through his research, he plans to develop a solution to increase farmers' resilience to the toxins in cereals. His research work has identified a close link between climate change and the use of synthetic pesticides.

This research will help strengthen producers' resilience while improving food quality. Chemically synthesized pesticides contain compounds proven to be toxic, particularly to the environment and humans (main polluters of the environment).

As a result, excessive use of these insecticides affects the food system and leads to the development of resistance. These molecules can be found in the soil, which results in soil denaturation.

Remy aims to identify formulations with an effective response to mould, which is less toxic to the environment and people. This bio fungicide testing is conducted in the field in collaboration with agricultural producers. "We have already run tests on conserving cereals (maize) and legumes (cowpeas and groundnuts) to develop products which meet their needs," he says with satisfaction.

Remy was born in Réo in Sanguié province, Burkina Faso. He continued his schooling in the town of Réo, notably in the first secondary school in the area. As a child, he helped his parents working in the field and storing food. He remembers the time spent bonding with his mother while preparing traditional sauces and believes that this experience inspired his interest in applied food research.

After completing his high school diploma in 2007, Remy left for Ouagadougou, where he enrolled in the first year of a Life and Earth Sciences (LES) program at the University of Ouagadougou, now known as the Joseph Ki-Zerbo University.

Remy's research focuses on finding alternatives to synthetic fungicides using natural substances. He hopes to develop a solution to increase farmers' resilience to the toxins in cereals. His research work has identified a close link between climate change and the use of synthetic pesticides.

In the second year, he specialized in chemistry and obtained a Bachelor's degree in Pure Chemistry in 2010. Between 2011 and 2013, he continued his studies to the Masters and PhD levels.

Remy holds a Master's degree in Phytochemistry, specializing in bioactive molecules (anti-fungal and anti-radical). In 2019, he defended his PhD thesis on the topic: "Phytochemical Study and Evaluation of Biological Properties of Extracts from the Different Organs of *Cymbopogon Giganteus*."

In keeping with his linear career path, Remy aims to become a Research Director in his field of study. Additionally, he hopes to advance his career in synthetic pollutant alternatives. He plans to establish a dynamic, intergenerational network of agricultural scientists to drive research focused on supporting and training farmers. He also aims to become a leader in his field of competence and participate actively in young scientists' training and capacity-building.

According to Remy, the Fellowship will be beneficial on multiple levels. His institution will benefit from capacity-building. The One Planet Fellowship will enable him to share knowledge with his colleagues, especially young researchers, and will help build the institution's reputation.

Remy will provide better support to Master's II and Postgraduate Engineer students and develop closer links with partner institutions. He believes that his skills will benefit organizations at all levels of the food production chain, including rural farmers.

In conclusion, Remy has identified three main challenges in his research work.

1. Financing. To overcome this issue, Remy has applied for several projects. Funding is essential, even if it's limited.
2. Technical capacity. It is glaringly apparent that there is a lack of available equipment. To obtain specific equipment, it is sometimes necessary to collaborate on projects. However, this is not always easy because due to the few contacts available.
3. Collaboration with other research institutions.

"The best way to overcome all of the above challenges is by obtaining the maximum amount of funding possible," emphasizes Remy.

**Remy Kindanloun Bationo** 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](mailto:oneplanet.award@cgiar.org)

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