



## Elizabeth Wangeci Njuguna

2020 One Planet Laureate Candidate

### Position

Postdoctoral Research Fellow

### Institution

Biopesticide Group of the International Centre for Genetic Engineering and Biotechnology, Cape Town, South Africa

### Country

Kenya

### Education

PhD, Biochemistry and Biotechnology, Ghent University, Belgium

### Mentor

Prof. Douglas Watuku Miano, Associate Professor, University of Nairobi Department of Plant Science and Crop Protection

### Area of research

Assessment of the policy, regulatory and technical barriers to biopesticide research and development in sub-Saharan Africa.

Elizabeth Wangeci Njuguna was born in Nyeri in central Kenya and raised in Nakuru. Growing up, she remembers reading and being intrigued by the books and brochures her dad received from pharmaceutical companies and the drug manufacturing images. She dreamt of being a pharmacist one day but ended up studying biochemistry for her undergraduate degree at the University of Nairobi.

Her experience as a technician with the International Institute of Tropical Agriculture in Nairobi exposed her to the competitiveness of the research world and the fact that she needed to advance her education to succeed as a scientist. A fellowship from VLIR-UOS, Flemish Interuniversity Council–University Development Cooperation, allowed her to undertake a Master's degree in molecular biology at KU Leuven University and then a Ph.D. in biochemistry and biotechnology Ghent University, both in Belgium.

Elizabeth is a postdoctoral research fellow at the Biopesticide Group of the International Centre for Genetic Engineering and Biotechnology in Cape Town.


Her research focuses on promoting safe and sustainable means of pest control by enhancing the use of biopesticides. The idea is to develop pesticides that are safe for humans and the environment.

Her research interest is informed that many biocontrol agents have been identified and isolated over the years. Still, only a few have been developed or registered for commercial adoption. Regulatory barriers and lack of awareness about biopesticides among farmers and policy-makers are among the hindrances.

Elizabeth is intrigued by developing biopesticides to control the fall armyworm that struck Africa in 2016. This is because a solution would have broad applicability in sub-Saharan Africa and significantly impact food security in the region. Her research involves evaluating potential phytochemical compounds to identify promising botanical agents that can work against the pest.

She is aware that several safer solutions can be deployed on a wide scale on pests, which can be a quicker solution than molecular techniques. Elizabeth's work has significant implications for climate change mitigation since the climate substantially bears pests and diseases' pervasiveness.

Elizabeth aspires to be a key scientist whose work contributes to solving some of the immediate food security and environmental challenges facing sub-Saharan Africa while improving people's livelihoods on the continent. She wants to be a policy advisor on agricultural biotechnology.



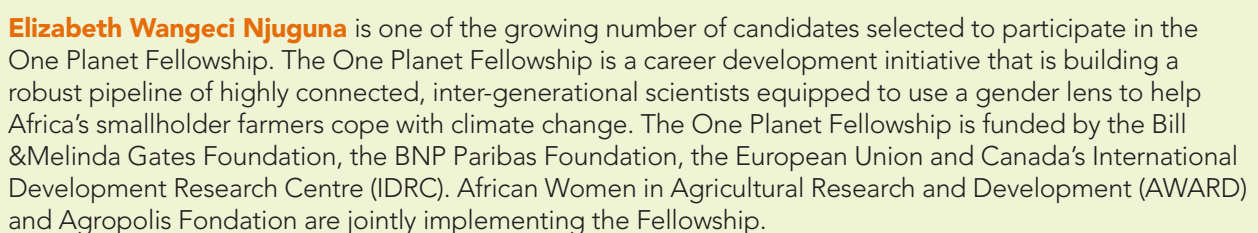
Elizabeth is developing biopesticides to control fall armyworm Africa. Her research involves evaluating potential phytochemical compounds to identify promising botanical agents that can work against the pest.

The One Planet Fellowship will prepare her to interact and advise leaders by enhancing her leadership skills and building her confidence.

The Fellowship will benefit her institution, as she intends to mentor her younger colleagues once she has acquired that skill. Her new leadership and communication skills will allow her to connect with the research community in and out of her institution, creating opportunities to share knowledge and collaboration in research.

Her new advanced research skills will enrich her approach to research and contributions to policy-making regarding agricultural biotechnology.

She is transitioning from working on her doctorate in research labs abroad to finding her professional place back home in Kenya, one of the challenges Elizabeth has encountered as a scientist, which delayed her progress after acquiring her Ph.D.



**Elizabeth Wangeci Njuguna** 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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