



OPEN DOORS FELLOWSHIP PROGRAM- APPLICATION TEMPLATE FOR RECEIVING LABORATORIES IN FLANDERS

APPLICATION MODALITY A: This modality has been conceived for research institutions in Flanders' higher education institutions or research centres looking for new scientific partners in Africa and willing to explore new joint research streams with their counterparts.

Objective: The application presented by the candidate ODFP fellow shall align with the scope and the requirements of open slots offered by the Flemish research laboratories and published on the ODFP web page.

Examples of the testimonies and open slots offered by the Belgian research laboratories are published [on the ODFP web page](#).

Information from the hosting institutions in Belgium

Contact details of a focal point	✉: danny.geelen@ugent.be ☎: +3292646076
Name of the research or academic institution	Ghent University
Name of the research group	HortiCell
Website of institution /research group	horticell.ugent.be

Present the group's research line(s) and activities, including a list of commonly used technologies (e.g. *bioinformatics, genetic engineering, chromatography, sequencing, metabolomics, metagenomics*).

The HortiCell research group at Ghent University focuses on sustainable agricultural innovation. Their key areas of study include the use of biostimulants to enhance crop resilience in changing climates, in vitro plant regeneration techniques to advance biotechnology, and the exploration of plant sexual reproduction processes. Their work aims to improve crop production and support sustainable agriculture practices through cutting-edge research and technology. The HortiCell group has several research projects hosted under three main lines of research: Biostimulants, In vitro regeneration and plant's sexual reproduction. Although the group is open to host post-doctoral fellow researchers working in any of these lines, the HortiCell group's prefer area for partnership under the ODFP is currently under candidates with projects in vitro regeneration of protoplasts and microspores.



Specifically, the HortiCell group is interested in regenerating microspores and protoplasts from plants for which we do not yet have expertise. They provide a pipeline for isolating flower buds, identifying the microspore developmental stage, isolating microspores, culturing, imaging, and evaluating regenerated plant material.

Other expertises and research lines from the African post-doctoral fellow that will be considered during the Short Research Stay in Ghent are:

- in vitro adventitious root induction
- biostimulant research (mostly in vitro)
- molecular analysis (DNA extraction, gel electrophoresis, sequencing, PCR) on materials for regeneration and rooting
- Genetic engineering, transformation
- Microscopy
- Plant meiosis and plant genetics

Describe the primary hard and soft skills desirable from the awarded ODFP fellow to deliver the task at hand.

The HortiCell group is looking for a post-doctoral African woman researcher with the following skills and competencies, to match the needs of the group:

Proficient in these hard and soft skills:

- Tissue culture technology: culturing of protoplasts and microspores, transformation and regeneration technology
- Capacity to work in a manner that avoids microbial contamination
- Statistic data analysis
- Laboratory techniques, such as pipetting, weighing, measuring, counting

Somewhat conversant in these hard and soft skills:

- Microscopy
- Biosafety

Basic or minimal knowledge of these hard and soft skills:

- Planning
- Reporting
- Excel, Word, PowerPoint,

Language preferences: English

Interpersonal skills: communicative, hability to work under minimal supervision, self-driven and proactive.



Indicate the short and long-term outputs and synergies the PI in Belgium would like to see arising from this collaboration.

Expected Short-term synergies	Expected Long-term synergies
• student engagement in contributing to our research • exchange of protocols and methods	• incoming students who want to start a PhD program.

Summarise (between 400 - 800 words approx.) the research project(s) or activities where the ODFP fellow would contribute to her/their research.

More information: www.horticell.ugent.be

Are there additional resources relevant to the work/project related to the short research stay (e.g. articles, videos, project documents and summaries, repositories) that would help the fellow have a broader background of the intended project? If so, please list them below.

More information: www.horticell.ugent.be

An official letter from the Principal Investigator of the Belgian receiving group confirming the collaboration with the ODFP should be sent together with this form duly filled.

Applications can be submitted electronically to IPBO@vib-ugent.be (The application form must be named as follows: "ODFP_ModalityA_name of research group". Please send the application form and supporting letter as a **single PDF file**).