From Kinshasa to Würzburg

On the day of their arrival already, the Congolese students handed out the plant from the rain forest into the caring hands of the Botanical Garden: Andreas Kreiner, an expert in dealing with sensitive and delicate tropical plants professionally plants the young Congolese liana. Likewise to be seen (from right to left): Blaise Pascal Kimbadi Lombe, Jean-Pierre Mufusama Koy-Sita, and Dieudonné Tshitenge Tshitenge. Photo: Gerhard Bringmann

Cordial reception in front of the students' hostel: the Wolf family from Gerbrunn (near Würzburg) welcomes the Congolese students with bed linens, towels, and other useful everyday-life objects. In the 1980s, the Congolese student Virima Mudogo, who later co-initiated the BEBUC excellence scholarship system, has been living with the Wolf family. From left: Dieudonné Tshitenge Tshitenge, Guoliang Zhang (a Chinese PhD student from G. Bringmann’s group), Gerhard Bringmann, Jean-Pierre Mufusama Koy-Sita, Christine Wolf, Hannah Wolf, Susanne Wolf, and Blaise Pascal Kimbadi Lombe. Photo: Stefan Wolf

For the first time, three BEBUC scholars from the African partner university of Kinshasa (UNIKIN), Democratic Republic of the Congo, are guest students at the University of Würzburg. They perform their experimental work for their master's theses in pharmacy and chemistry. "This research stay shall help to permit the students to learn modern concepts and techniques of natural products and pharmaceutical chemistry", says Professor Gerhard Bringmann, who together with Prof. Virima Mudogo from the University of Kinshasa, has initiated the scholarship program BEBUC.

Early in April they arrived in Würzburg: the Congolese students of pharmacy, Dieudonné Tshitenge Tshitenge and Jean-Pierre Mufusama Koy-Sita, as well as the student of chemistry, Blaise Pascal Kimbadi Lombe. They will stay here for six months as regular exchange program students, in order to perform experiments for their master theses in the Faculty of Chemistry and Pharmacy. After that they will return to the Congo in order to finalize their masters studies – in a 'sandwich model' Kinshasa-Würzburg-Kinshasa.

Analyzing Anti-Malarial Drugs from the Congo

In Würzburg, the two pharmacy students will analyze medical drugs as available on markets and in pharmacies in the Congo. The background: In the Congo the insufficient standardization of medical drugs is a problem: One cannot always rely on the composition and content of the agents of tablets and ointments as they should be.

In the labs of professors Gerhard Bringmann (chemistry) and Ulrike Holzgrabe (pharmacy) and assisted by Dr. Karine Ndjoko from the University of Geneva, the students therefore investigate plant-derived and synthetic anti-malarial drugs from their home country. "By using modern methods like high-pressure liquid chromatography (HPLC), thin-layer chromatography (TLC), and capillary electrophoresis (CE), they shall analyze the remedies in a comparative way", says Bringmann. By this way the quality of the medical drugs can be analyzed/validated and standardized in a comprehensive way. This work is embedded in the scientific network SFB 630 ('Agents against Infectious Diseases') coordinated by G. Bringmann.

Plants from the Rain Forest in the Luggage

Within the SFB 630 and the Clinical Research Group 216 ('Multiple Myeloma'), and within a collaboration with the Congolese Ministry the student of chemistry, Blaise Pascal Kimbadi Lombe, investigates plants from the Congolese rain forest in the lab of Prof. Bringmann. "He has collected them under difficult conditions by himself and transported them on a motor bike over 500 kilometers over bumpy roads to Kinshasa", tells the professor from the University of Würzburg. This effort could be rewarding: According to Bringmann this is a
possibly as yet unknown plant species. Maybe it contains new natural products with chemically interesting structures and biological activities against pathogens or tumor cells. Besides dried plant material, Kimbadi Lombe also brought a living plant. In the Botanical Garden of the University the gardeners presently try to cultivate and propagate it. If that succeeds, it will greatly facilitate further research on the plants and their chemical constituents.

**BEBUC Scholars from the First Pilot Phase**

All three students from Kinshasa are pioneers within the BEBUC program, which was launched in 2008. It is substantially sponsored by the German foundation Else-Kröner-Fresenius-Stiftung. BEBUC identifies and supports outstanding students and pupils at meanwhile three Congolese high-schools and eight universities, all linked to the University of Würzburg by joint agreements.

Support to the up-and-coming young scientists is granted in all phases of the academic pathway – from high-school via bachelor and master studies to the postdoctoral stay abroad and, in particular, during the subsequent return to their home country to attain professorships, because this is the aim of BEBUC: To diminish the permanent 'brain drain' of the best young scientists from the Congo and to improve substantially and sustainably the quality of the universities there.

For more information from the University of Würzburg on the BEBUC scholarship system:


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