

Setting up an open synthetic biology lab in Abuja, Nigeria

Project summary

The purpose of this project was to develop an open synthetic biology lab at the University of Bingham in Abuja, Nigeria, where the equipment in the lab can be used freely by any African researcher.

The project was to be performed in two parts:

Part 1: collect and ship equipment from Europe, and set up at the University of Bingham. (completed in May 2016)

Part 2: deliver a molecular biology skills training workshop (to be delivered in Oct 2016)

Part 1: equipment shipping

There were some unanticipated delays at the beginning of this project, so the whole schedule has been pushed back significantly. A large shipment of equipment was originally ready and packed to be sent from Cambridge in Aug 2015. Unfortunately, due to flooding in the Cambridge area, all electrical equipment was seriously damaged and had to be disposed of, setting the project back significantly.

Thankfully we were able to collect a second shipment of equipment instead. Volunteers in Switzerland (led by Lukas von Tobel) reached out to their local universities, and successfully collected 550kg of equipment, which was then shipped over to Nigeria, and has now been set up as a new lab at University of Bingham. The coordinator at Bingham University was Dr Judith Alawa.

The shipment included molecular biology equipment such as a PCR machine, centrifuges and consumables. The full list of equipment sent is included as a supplementary file to this report.

Part 2: molecular biology workshop

This workshop is scheduled to run in Oct 2016, and will include basic molecular biology techniques as well as an overview of synthetic biology and plant genomics. Instructors from Europe will go over and teach the staff at the University of Bingham. The course coordinator is Mrs Ibukun Akinrinade.

Funding

This project was co-funded by OpenPlant (£4000), and by University of Bingham, who provided \$500 towards the equipment shipping.

Funds spent so far:

- \$2213.13 for equipment shipping from Switzerland. (£1520)

The remainder of the £4000 funds are planned to be spent on:

£1000 - 1x instructor airplane ticket to Abuja (for Ibukun Akinrinade)

£500 - 4x DNA extraction kits with a 50% discount from Promega

£500 - PCR reaction mix

£480 - additional consumables (ethanol, isopropanol, agarose, DNA polymerase, Sybr Safe, DNA ladder)

The additional £1000 would be used to send a smaller package of consumables from Cambridge to University of Bingham, and fund additional instructor travel.