ISN scientific report: Fly Neuroscience workshop, Kumasi, Ghana

Last December 14-17, 2015 took place the **Fly Neuroscience workshop – Drosophila as a tool for understanding brain and behaviour** in the Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi, Ghana. It was organised by FLiACT graduate students (http://fliact.org) in collaboration with the NGO TReND in Africa and funded by the CAEN round August 2015. One of the exciting aspects of the workshop is that most of the teaching was done by PhD students together with local experts. The goal of this workshop was to introduce and promote the use of Drosophila as an inexpensive and powerful, genetically tractable model organism to study the brain.

After going through a highly competitive process involving applications from about 70 students from 9 African countries, we welcomed 22 students from 4 African countries (Ghana, Ethiopia, Congo and Nigeria) and different scientific backgrounds spanning from biology, through pharmacology to computer engineering. 4 FLiACT graduate students, 1 graduate student from United Kingdom, 2 FLiACT principal investigators and 2 local principal investigators, gave the practical and theoretical lessons of the workshop.

The workshop focused on the theoretical and practical aspects of 4 topics (see the workshop agenda for detailed information), such as (i) the fly as a model organism for neuroscience research, (ii) the fly for behavioral studies, (iii) olfaction for applied neuroscience research, and (iv) human diseases models. Besides, learning the subject matters, the students learned how to apply the techniques in other scientific contexts. Ideas included using flies to study the effects of: 1) cyanide poisoning from cassava-based dishes (konzo), 2) khat leaves (a popular drug in the horn of Africa, 3) retinal degeneration, 4) tropical diseases and 5) drug screening. Furthermore, learning that flies can be used instead of other animal models to study neuroscience will allow African students who have to self-finance their PhD project a cost-effective alternative. The workshop was such a complete success that, students and teachers reached a clear consensus to start a Ghana Neuroscience Society.

ISN sponsorship made possible to invite relevant local scientists working with Drosophila and knowledgeable on the country needs, as well as students outside Ghana that couldn't afford the travel expenses. In fact, these students were all very engaged with the workshop and, presented some excellent proposals on how to apply what they had learned in their own fields. More than that, these students will most likely be able to spread this knowledge to their native countries as well. The ISN funds have also provided with the all the necessary materials to carry out the workshop since most of the materials weren't available in the host university. It was also possible to provide accommodation to students with less favorable economic conditions but with outstanding curriculums and extreme motivation.

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Photo of the workshop participants and instructors

FLiACT

ISN International Society for Neurochemistry

CRG Centre for Genomic Regulation