

International Brain Research Organization (IBRO)

Report for the IBRO/ARC/Egypt School

Theme of the School: Epigenetic and Neurodegenerative Disorders from Bench side to Bedside: PD in focus

Location: Mansura, Egypt

Dates: October 20-24, 2014

Organizers:

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The Specialized African Neuroscience School On *“Epigenetic and Neurodegenerative Disorders from Bench side to Bedside: PD in focus”* was held in Mansura, a city in the Nile Delta of Egypt from October 20th to 24th, 2014. The school was organized and financially supported by the International Organization of Brain Research (IBRO). Along with some other organizations, IBRO supported this ambitious project to make this scientific event a success. The partners of this school were: The International Society of Neurochemistry (ISN), International Parkinson and Movement Disorders Society (MDS), and Science Technology Development Fund (STDF), the World Academy of Science (TWAS), and Mansura Experimental Research Center (MERC). The school was also sponsored by the

local authority of Mansura University and Mansura Neurology Department

This IBRO-ARC Specialized African Neuroscience School on Neurodegenerative disorders provided an opportunity for 13 selected African students originating from different African countries including Morocco, Algeria, South Africa, Mali, Cameroon, Nigeria, Ethiopia (*see table below of participants*), to acquire knowledge of the theoretical and technical advances in the neuro-scientific study of animals in Africa and elsewhere, that can be applied to their own research. The training was performed by a panel of 15 professors and experts all with extensive experience in the neurodegenerative disorders, coming from USA, Germany, Ireland, UK and India (*see table below of participants*) as well as Egyptian outstanding neurologists and neuroscientists.

The school provided a 3-day comprehensive course (*for details please see attached the scheduled program*). The school was declared open by the organizers during an official opening ceremony with presence of the president of Mansura University and the Heads of local authorities and associations. The school started at the Ophthalmology center, Mansura University and MERC with three modules: Basic, Clinical and translational.

The first day schedule was dedicated to basic neuroscience and involved the following lectures: Spinal cord trauma technique, Microbiota and neurodegeneration, Patch clamp technique, Research experience in Duke, and HPLC principals. Moreover there was a tour at MERC animal facility and hands on techniques that include: induction of spinal cord trauma in rat, a run using HPLC and bases of patch classical patch clamp techniques. The students had the

opportunity to work in groups on induction of unilateral traumatic spinal cord injury in rats. The first day was ended by a social event and a tour at the Mediteranean Sea in Ras El Bar.

During the second day, students began to understand the concept of translational research with PD in focus. The day started with a series lectures on genetics of PD, translational neuroscience, clinical diagnosis of movement disorders, peripheral biomarkers of neurodegeneration, search for novel modulators of ion channels as potential therapeutics. Moreover, students had the opportunity to learn and to apply techniques during two technical workshops. The first was about clinical case discussion. The school provided 3 rare cases of PD: familial PD, Early onset PD and Resistant PD patient. The second workshop was focused on Botox use in spasticity treatment and migraine. There were 3 cases of spasticity with different grades and severity. Our instructor (Dr Khaled El-Toukhy) explained the principals of Botox use and how to inject it in different affected muscles.

The third day was dedicated to clinical cases. The day started with a rapid tour at neurology department in Mansura teaching hospital with explanation of different cases and their treatment. That tour was guided by prof. Dr. Huw Morris from Royal college of London, UK. The lectures of that day included: effects of pesticides in neurodegeneration, dementia diagnosis, stem cell use in neurodegeneration, genetic aspects of MS and cerebral stroke, and epigenetics of AD. Furthermore, there were some inspirational lectures like: Mentor-mentee relationship, How to advance national neuroscience activities, Benchmarking of research, and Annals of neuroscience journal experience.

Students also had the opportunity to discuss their own PhD project and to learn about current trends in neurosciences from the school faculty. This school turned

out to be an excellent platform for scientific and human exchange.

Besides the scientific and educational program, the school provided different social events that augmented communication and interaction between the faculty and the students from different countries. First, at the arrival to the hotel, a welcome party was offered with welcoming remarks of the organizers. Also during Day 1 of the school, a trip to the Mediterranean Sea was organized with a special presentation of how the Mediterranean Sea meets the Nile River and its significance. At the end of this day, a special Gala dinner was provided at Hawaii Restaurant on a lovely terrace overlooking the Mediterranean Shore with entertainment provided by instrumental D-J. Furthermore, some faculty and students were moved earlier to Cairo to see Pyramids and we arranged for their transportation and secure their tour.

The evaluation of the School was made at two levels:

- An evaluation of the activities was done by students at the end of each day by providing their impression of each lecture and activity.
- An evaluation by students and faculty by discussion on one-to-one bases

The results of these different evaluations show that there is an overall satisfaction of students and they commended the faculty for high quality teaching and appreciated the topics of the school; they were very satisfied by:

- 1) The various valuable lectures
- 2) The interaction with the speakers
- 3) The school gears design that include: a bag and a unique t-shirt

4) as well as the venue itself.

The students declared that this advanced school was very helpful for their own research projects and that they benefited from the different lectures and discussions with faculty. The faculty were also appreciative with lot of thankful notes

A page group was also created on the social network: facebook:
https://www.facebook.com/IBROEgypt2014?ref=aymt_homepage_panel

The page contains lot of pictures for various school activities

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“The organization had proof of sincere engagement, efficacy and coordination are some one of multiples qualities. The session like this is real occasion for me to get new skills and up date my knowledge” (Anonyms student comment)

