The SONA Newsletter
The Society of Neuroscientists of Africa

PROMOTING NEUROSCIENCE IN AFRICA
Neuroscientists meet with primary school students
Brain Awareness Week, South Africa

On Monday, 23rd March 2015, two neuroscientists (Dr. Veneesha Thaver and Miss Rivona Harricharan; photo above) from the University of KwaZulu-Natal embarked on an initiative to promote neuroscience at a primary school. This initiative had coincided with International Brain Awareness week. The researchers visited Atholton Primary School, where their presentation was welcomed by enthusiastic learners (grade 0 to grade 7). The students were fascinated and eager to learn about different facets of brain health. The researchers also showed the students a model of the brain, in addition to actual preserved brain slices to spark curiosity in the young minds. Both researchers had hoped to engage with the local community and wish to extend their initiative targeting other schools and institutions interested. Dr. Thaver and her masters student, Miss Harricharan, are aligned with the School of Laboratory Medicine and Medical Sciences Neuroscience group in collaboration with Prof. W. M. U. Daniels. Their particular aspect of research focuses on understanding HIV-associated neurocognitive disorders. Dr. Thaver, Miss Harricharan, and Miss Evashini Moodley have recently been affiliated with TREND in Neuroscience as their Durban ambassadors as they wish to expand the promotion of neuroscience beyond the borders of South Africa. (To be continued in the following issue).

Neuroscientists meet with secondary school students
Khouribga neuroscience school, Morocco

On Sunday, May 17th 2015, an IBRO-ARC school was held in Hassan First University (Faculty of Khouribga). The school’s program included an opportunity for neuroscientists to interact with students from the secondary school Al-Khansa located close to the faculty facilities. Participants exchanged on how neuroscientists share their knowledge with future generations. Neuroscientists answered questions in a simplistic way to ensure secondary school visitors understood. The photo below include faculty members, IBRO school participants, and college Al-khansa instructors and students (other event’s details are on the RPP in page 4).

COMMENT
It is certain that these initiatives which target young generations at different levels of their education are necessary to promote neurosciences in Africa. Those teenager young students could be one day a brick on the wall of African neurosciences. Our society need to invest on these new generation by supporting and spreading such interactions which will increase interest of young students toward neurosciences and make them ready to contribute from their early age.

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THE ISSUE IN BRIEF
The present issue includes activities that promote neurosciences in Africa within young students from primary and secondary schools during events held in South Africa and Morocco respectively. History of neurosciences also makes part of this issue where Wael Mohamed addresses the contribution of Arabs and Muslims to modern neurosciences during the period called ‘the dark ages’. The issue also include a brief view on societies of potential interest for SONA members that promote north-south exchanges, notably the Mediterranean Neuroscience Society. On page 3, a message from IBRO about the IBRO-ARC plans for 2016 is addressed to the SONA community. This issue also include a list of most important SONA, and IBRO-ARC activities during 2015-2016. Specifically our readers will find an announcement of a ‘nature supplement' launched this week about Brain Disorders in Developing Countries. We hope that the SONA members find the content suitable. Looking forward receiving your comments and contributions.
ARABS’-MUSLIMS’ CONTRIBUTIONS TO MODERN NEUROSCIENCE

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There were many civilizations that carried the responsibility of medicine development. Among these civilizations, namely: Egyptian, Greek, Roman, Persian, Indian, Chinese and the European renaissance era. There was a period called ‘the dark ages’ during which the medical flame was hosted by the Arabs or the Moslems. That era between 7th and 13th centuries had been commonly neglected although the biomedical science of the Arabic-Islamic world underwent remarkable development during that era with a blossoming of knowledge that influenced medical practice throughout Europe (Falagas et al., 2006).

The modern discipline of psychology began in the 19th century. Early Arab and Muslims scholars wrote extensively about human psychology. They used the term Nafs (self or soul) to indicate individual personality and the term fitrah as an indication for human nature. Nafs is a broad term that includes the qalb (heart), the ruh (spirit), the aql (intellect) and irada (will). Early Muslim scholars had a certain philosophy in their writing, which encompassed all areas of human enquiry i.e. the knowledge of all things, both divine and human (Ashy, 1999). Therefore, Islamic psychology or Ilm-al Nafsian refers to the study of Nafs (self or psyche) and is related to psychology, psychiatry and neurosciences (Deuraseh and Abu Talaib, 2005). Al-Ilaj al-nafs in Islamic medicine is simply defined as the study of mental illness and is equal to psychotherapy as it deals with curing/treatment of the ideas, soul and vegetative mind. The psychiatric physician was referred to as al-tabib al-ruhani or tabib al-qalb (Deuraseh and Abu Talaib, 2005). Moreover, Islamic and Arabic psychological era includes the establishment of the first mental hospitals, the development of the first clinical approach to mental illness and the unique experimental approach to the study of the mind (Khaleefa, 1999; Paladin, 1998). The first psychiatric hospitals and insane asylums were built in the Islamic world in Baghdad in 705, Fes (the third largest city in Morocco) in 8th century, Cairo in 800, Damascus and Aleppo (halab) in 1270 (Syed, 2002). The most characteristic features for the medieval Muslim psychotherapy was the use of clinical observations of mentally ill patients. As they made significant progress in psychiatry by providing the first application for moral treatment, baths, drug medication, music therapy and occupational therapy for mentally ill patients (Syed, 2002).

In conclusion, the way the Muslims and Arabs handled their responsibility towards mankind is unique. They added a lot to earlier achievements in medicine. They have fostered the flame of civilization, made it brighter, and handed it over to Europe in the best possible condition. Europe, in turn, passed it to the United States of America, and the cycle continues. A thousand years ago Islamic medicine was the most advanced in the world at that time. Even after ten centuries, the achievements of Islamic medicine are amazingly advanced. A thousand years ago the Muslims were the great torchbearers of international scientific research. Every student and professional from each country outside the Islamic Empire, aspired, yearned, and dreamed to go to the Islamic universities to learn, to work, to live and to lead a comfortable life in an affluent and most advanced and civilized society.

Bibliography:

- Khaleefa O. "Who Is the Founder of Psychophysiology and Experimental Psychology?" American Journal of Islamic Social Sciences. 1999; 16 (2).
The MNS was created in 2009 by a group of mediterranean neuroscientists willing to (i) strengthen exchanges between mediterranean neuroscientists; (ii) promote education in neuroscience and increase public awareness; and (iii) sustain the Mediterranean Neuroscience Conference.

To reach these objectives, the MNS’s policy is to work in close cooperation with existing national and international Neuroscience and Scientific Societies. Research on brain function in health and disease is among the priorities for today’s societies, and several indicators put the mediterranean research area among strategic issues for building new profitable relationships. Many South-North collaborations and networks have emerged in recent years through bilateral and multi-lateral actions, supported by the EU or by international and national actions, whether for setting up teaching curricula, or by building human potential. The MNS was created to support and help strengthening all initiatives that bring together mediterranean neuroscientists. Today, MNS counts 250 members and is governed by the following officers including Marc Landry (President, France), Liana Fattore (Vice-President, Italy), Youssef Anouar (Secretary-General, Morocco/France), Sherine Abdel Salam (Secretary-General, Egypt), Giuseppe Di Giovanni (Treasurer, Italy), and Said Boujraf (Vice-Treasurer, Morocco).

The last MNS conference was organized in Sardinia (Italy), after four previous successful editions (Montpellier 1997; Marrakech 2006, Alexandria 2009 and Istanbul 2012). These conferences gather up to 400 scientists from Mediterranean and extra-Mediterranean countries, and offer a rich program with world-class lectures, symposia, poster sessions and social events. These meetings have proved to be highly beneficial, not only for the scientific exchanges, but also in terms of training opportunities for students and young researchers. The next meetings of the MNS will be held in Malta and Morocco.

In addition, MNS was involved in the following events:

- July 2013; the second MNS Summer School took place in Samsun (Turkey). The topic of the course was Stereotaxis surgery in Neurological and Psychiatric disorders.
- In October 3-5, 2013; a SINS joined symposium was organized by Dr Fattore on “Dysregulated food intake and eating disorders: social, neuroendocrine and neuromodulatory factors”.
- July 4, 2014; a FENS satellite meeting was organized in Busto by Prof. Daniela Parolaro and Dr Tiziana Rubino on “Drug addiction and psychiatric comorbidity: factors of vulnerability and therapeutic targets”.
- November 2014 (17-21) ; the 3rd edition of the MNS School was organized by Pr Mohamed Najimi in Beni Mellal (Centre de Conférences de l'Université Moulay Slimane, Marocoo) on “Food intake regulation: Physiological and Physiopathological aspects”. The school was primarily intended for doctoral and post-doctoral students (20 participants from Morocco, Ivory Coast, Senegal and Tunisia).
- October 2015 (Sep.28-Oct. 3); the IBRO-KEMALI SCHOOL in Neuroscience in Naples (Italy) where the vice-President of MNS, Dr Liana Fattore, was invited to present MNS.

**A MESSAGE FROM IBRO SG AND ARC CHAIR TO SONA COMMUNITY**

Sten Grillner and Pierre Luabeya

To the Members of the SONA Neuroscience Community

Information regarding the IBRO-ARC plans for training in neuroscience

The International Brain Research Organization (IBRO) has since 2000 been able to provide some modest support to the development of African Neuroscience, primarily through its regional committee (ARC). The support has mainly been directed to courses in different aspects of neuroscience including teaching tools for neuroscience that have been circulated to different parts of Africa and also support to the SONA meeting, which serves to promote African neuroscience and foster interaction within the region. IBRO will continue to support this type of courses through ARC in different parts of Africa as well as SONA each second year, at a level similar to the present support.

In collaboration with the University of Cape Town, and the Mohammed 5th University in Rabat, IBRO has in addition initiated two permanent training sites, one in Cape Town and the other in Rabat, in which two courses will be given annually in each site. The local organizing committees are chaired by professors Vivienne Russell for Cape Town and by Nouria Lhakdar-Ghazal in Rabat. These IBRO-African centres for advanced training in neuroscience will provide courses at a somewhat higher level as the current ARC courses, but also allow for hands-on teaching of different techniques, when relevant. The advantage of having two permanent training sites is that it will facilitate the organization of courses through a local organisation with a coordinator, and infrastructure with regard to lecture halls, space for demonstrations, housing of the students, and strategies for other practicalities. For the individual courses, one can also in some areas have course directors from the outside, who can organize the curriculum in interaction with the local committee.

The total 2016 budget for the IBRO contribution to activities in Africa will be € 312 000, which will include € 152 000 for the traditional courses at a similar level to that of 2015, except for the special support to the SONA meeting itself. For the Cape Town and Rabat sites, there will be a budget of € 160 000. This will thus be a substantial addition to the training in neuroscience, and of course all courses welcome students and faculty from all parts of Africa. We foresee that when the new structure has developed, we will also foster alliances with other organizations, to further promote and coordinate the training courses.

Sten Grillner
Secretary General IBRO

Pierre Luabeya
Chair ARC Committee
RETROSPECTIVE IBRO/ARC NEUROSCIENCE SCHOOL, 13-17th May 2015, Khouribga, Morocco Neurotoxicity and Brain Disorders

The school focused on aspects of brain disorders due to neurotoxicants, and included technical workshops. The school also focused on professional skills through intense proactive discussions and individual presentations. Another important achievement for students was a deep insight on important questions related to neurosciences research challenges and opportunities. Overall, the program included 5 days of lectures, professional writing, and communication skills, technical workshops, as well as group discussions and social activities. The local organizing committee included Driss Nehari, Rajaa Jebbouj, and Samir Ahboucha from the Hassan First University, Polydisciplinary Faculty of Khouribga.

Sponsoring was provided by the International Brain Research Organization - African Regional Committee (IBRO-ARC), the Hassan First University and the Office Chérifien des Phosphates (OCP), whose help is very gratefully acknowledged. More details are available at: https://www.ibromena/morocco.html

PROSPECTIVE IBRO-UCT AFRICAN ADVANCED SCHOOL ON EPILEPSY
Cape Town, South Africa,
2-16 December 2015

Prospective IBRO-UCT African Advanced School on Epilepsy, Cape Town, South Africa, 2-16 December 2015, a SONA co-sponsored event. It will be the first School of the IBRO-African Centers for Advanced Training in Neuroscience at the University of Cape Town. The school is being organised by Prof Dirk Lang (dirk.lang@gmail.com) and aims to provide advanced research training in both clinical and basic aspects of epilepsy. The main scope of the school is to provide researchers with technical experience in advanced neuroscience techniques (molecular methods, in vitro recording of seizure-like activity, whole cell-patch clamp, immunohistochemistry and calcium imaging) to gain a greater understanding of the pathogenesis of seizure activity and epilepsy. Other specific content that will be covered include the role of surgery in epilepsy and the role antiepileptic drugs on behaviour and cognitive function which are affected in patients with epilepsy.

The two week long advanced school on epilepsy will comprise of two major components: a clinical epilepsy component and a basic epilepsy research component. The clinical part is being organised by paediatric neurologist Prof Jo Wilmshurst and neurosurgeon Prof Graham Fieggen whilst the basic research component is being organised by the neuroscientist Dr Joseph Raimondo. The clinical component will include lectures, practicals and visits to speciality epilepsy clinics at local hospitals. Students will learn about the effect of antiepileptic drugs on behaviour and cognitive function in patients with epilepsy as well as the role of surgery in treating epilepsy. The basic epilepsy research component will be focused on learning techniques for understanding and investigating both normal and epileptic activity in the nervous system. Students will learn both computational and experimental techniques. For example they will build their own bio-amplifiers for recording neural activity. These will be used to study seizure-like activity in invertebrate and mammalian model systems. Lastly, students will also be exposed to cutting edge techniques in epilepsy research including patch-clamp recordings and calcium imaging.

For more information: http://ibo.info/events/ibo-uct-african-advanced-school-on-epilepsy/
The Biological Psychiatry Congress, 24-27 September 2015 was held at The Lord Charles Hotel set among the beautiful Cape winelands. The theme of the meeting was “Trends & Treatments: The Changing Landscape” to encapsulate the ever changing landscape of technological advances and the challenging interpretation of translational research between basic and clinical neurosciences of brain disorders and disease. The challenges of both the recent changes to the diagnostic classification systems (DSM-5 and R-DOC [Research Domain Criteria]) and the void between research development and best treatment practice was also addressed as these gaps have not fully been assimilated. The scientific programme included pre-congress workshops that dealt with women’s health across the lifespan, an update on and clinical applications of pharmacogenomics in psychiatric practice, and old age psychiatry and an excellent line-up of speakers that addressed various psychiatric aspects. As part of the Biological Psychiatry meeting, Southern African Neuroscience Society (SANS) had a parallel symposiums and poster session which covered research conducted at University of Cape Town (UCT), Stellenbosch University (SU) and University of KwaZulu-Natal. The two parallel SANS symposiums was entitled “Basic and clinical neuroscience: pieces of a puzzle” and “Insights from ADHD, trauma and psychosis”. The congress was hugely successful and provided valuable clinical and research advances in the field and provided the opportunity for delegates to network and communicate their research findings.

The Biological Psychiatry Prize for the best oral presentation was awarded to joint winners Ms Antoinette Burger (UCT) and Dr Stefanie Malan-Miller (SU) and the Paula Heron Prize for the best poster presentation was awarded to Mr Lyndon Zass (SU).

GLANCE AT THE SONA CONSTITUTION
SONA MEMBERS
Revised, Rabat, June 2013.

- a) The Society shall have the following categories of members:
  i) Corporate membership: National and regional societies of neurosciences in Africa or Neuroscience Interest Group or Committee of individuals devoted to neuroscience or cognitive discipline as corporate members. All individual members of the corporate Member Organizations shall be entitled to individual membership of SONA;
  ii) Regular membership: Any individual anywhere in Africa who has contributed notably to neuroscience research and who supports the mission of SONA may apply for the status of individual membership;
  iii) Associate membership: Supporting members either as independent individuals of commercial organisations, foundations or other bodies who wish to contribute to the objectives of the Society;
  iv) Honorary membership: Individuals anywhere in the world who have made outstanding contributions to neuroscience research and to recognize SONA for such, on recommendation of the Executive Committee may be elected Honorary Members of SONA by simple majority of the Governing Council.

- b) Each member shall pay a nominal subscription fee on an annual basis and their name will be kept on the membership register. The level of the fees for the type of membership shall be determined by the Executive Committee as proposed by the Secretary-General.

- c) Each Corporate Member shall pay an annual subscription fee to SONA in accordance with the number of individual members of the Corporate member, subject to a minimum of US$ 100. The subscription fee shall be payable no later than the 30th day of June each year.

- d) Annual fees could be subject to change as the need arises for reasons of economic climate upon ratification by the Executive Committee through postal/electronic ballot or meeting;

- e) Any member desiring to withdraw from the Society shall submit intention of such withdrawal to the Secretary-General, which shall take effect from the date of receipt by the Secretary-General of such notice.

- f) Any member may be expelled from the Society if the Executive Committee so recommends and if the Governing Council of the Society shall resolve by two-thirds majority of the members present that such a member should be expelled for proper cause. The Executive Committee shall have power to suspend a member from the membership of the Society until the meeting of the Governing Council following that suspension, but notwithstanding such suspension, a member whose expulsion is proposed shall have the right to address the Governing Council at which the expulsion is to be considered.

- g) Any member who withdraws or is removed from membership shall not be entitled to a refund of the subscription fees or any part thereof or any moneys contributed at any time.

- h) Any fee paying member who falls into arrears with the annual subscription for more than 12 months shall automatically cease henceforth to be a member of the Society. The Executive Committee may, however, at its discretion, reinstate such a member on payment of the total amount of the subscription outstanding.
BRAIN DISORDERS ACROSS THE LIFESPAN: FOGARTY NIH PROGRAM ACCESS TO NATURE SUPPLEMENT PUBLICATION (NOV19)

Raj Kalaria, IBRO Liaison officer, WFN-EFNS and past ARC Chair

This ‘nature supplement’ to be launched next week is in celebration of a decade of the Brain Disorders in Developing Countries program established by Fogarty International/ NIH and assisted by other partners including IBRO. Several IBRO alumni, some SONA and past officers have contributed to the articles in this issue. Don Silberberg (Penn) and Raj Kalaria (UK-Kenya) along with Kathleen Michaels and Nalini Anand (NIH staff) have had the privilege to edit the series of review articles on Brain Disorders Across the Lifespan in Developing Countries. IBRO’s contribution to the success of the program has been appropriately acknowledged in the editorial. The supplement reviews the overarching and intersecting research priorities for addressing causes, prevention, treatment and rehabilitation, as well as opportunities to strengthen scientific capacity that can promote global nervous system health. The content of the issue can be downloaded from the website through the link: www.nature.com/brain-disorders

REGIONAL ACTIVITIES

- SACNA - South African Clinical Neuropsychological Association
- Everything Neuro Workshop-November, 2015 - Durban, KZN at the Makaranga Lodge on 13 & 14 November 2015. Closing date for registrations is November 10, 2015. More info: events@rca.co.za
- 12th Biennial SASCA (The South African Spinal Cord Association) Conference, Spier Conference Centre, Western Cape, South Africa, 7 - 9 April 2016, events@ca.co.za
- NASA - Congress of the Neurological Association of South Africa, 17-20 March 2016, Champagne Sports Resort Central Drakensberg, more info www.mynasa.co.za

NEUROSCIENCE ACTIVITIES IN THE WEST AFRICAN SUBREGION

THE 13TH ANNUAL CONFERENCE AND GENERAL MEETING OF NEUROSCIENCE SOCIETY OF NIGERIA (NSN)

The Neuroscience Society of Nigeria will hold its 13th Annual Conference and General meeting from the 11th -14th November, 2015. The theme of the Conference is” Nervous System Disorders-The African Challenge”.

The conference will take place at the College of Medicine and Health Sciences, Afe Babalola University, Ado Ekiti Nigeria. There will be preconference workshop on Behavioral Neuroscience Protocols from the 10th - 11th of November, 2015. About 50 abstracts in various research areas in Neuroscience have been received for short and Poster presentations. The Key note address will be taken by Prof. Richard Brown on The Theme of the Conference. Topics for Plenary lectures include;
- Neuroscience Research Challenges in Nigeria, past, present and future by Prof. Sola Ogunniyi
- Exposure to stimulants and brain health by Prof Isa M. Hussani
- Neuroscience Teaching and Research in Africa- A need for improvisation by Prof. Rabli Magali.
- Hippocampal plasticity in Health and diseases by Prof. Amadi Ihunw

An advocacy programme will take place around the University community to create awareness on Neuroscience.

The venue for 2016 conference will be determined at the Annual General meeting. A number of Universities have indicated interest. There will be workshops on Neuroimmunology and experimental methods on stroke. The date for the conference will be posted on SONA website.

By Theresa B. Ekanem, President NSN