THE CURRENT SPECIALTIES AT AUBMC

**Neurosurgery:**
- Epilepsy surgery
- Brain tumors
- Brain mapping
- Spinal surgery
- Skull base surgery
- Functional neurosurgery

**Neurology:**
- Epilepsy
- Sleep disorders
- Neuromuscular diseases
- Multiple sclerosis
- Neurodegenerative disorders

**Pediatric Neurology:**
- Neuro-genetics
- Epilepsy

**Psychiatry:**
- Substance abuse
- Psychometric testing
- Individual, couple, family and group psychotherapy
- General psychiatry
- Mood disorders
- Child and adolescent psychiatry
- Neuromodulation
- Sleep disorders

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**THE FIRST AHNI NEUROSCIENCE SYMPOSIUM**

The Abu-Haidar Neuroscience Institute (AHNI) at the American University of Beirut Medical Center (AUBMC) in joint Sponsorship with Cleveland Clinic will organize the First Neuroscience Symposium on **Neuromodulation in CNS Disorders: Bench to Bedside**. It will take place on Saturday January 12, 2013 from 9:00 AM - 17:30 PM. This activity has been approved for **AMA PRA Category 1 Credit™**.

The deadline for submitting abstracts is November 30, 2012. Abstracts to be submitted electronically to ahni@aub.edu.lb.

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Please feel free to contact the CME Office for any questions.

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Fax: +961 744467

**Working Hours**
Monday to Friday from 8:00 AM to 5:00 PM (GMT +2)

**Location**
Dale Home Building, First Floor,
Room(s): 109-110-114-115

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The American University of Beirut Medical Center (AUBMC) is a private, nonprofit medical center. The mission of AUBMC is to maintain a leadership role in providing excellent, accessible, and comprehensive health services to the people of Lebanon and the region while continuing its tradition as a distinguished academic and research medical center.

The Institute is the publication of the Abu-Haidar Neuroscience Institute.
Epilepsy is one of the oldest conditions known to mankind and one of the most common neurological condition affecting individuals of all ages. It is a disorder characterized by recurrent, unprovoked seizures, presenting with episodes of sensory motor or autonomic phenomenon, with or without loss of consciousness. At any given time, it is estimated that 50 million individuals worldwide have a diagnosis of epilepsy. 3-5% of the general population will experience a seizure sometime in their lifetime. Epilepsy is the second most common chronic neurological condition seen by neurologists, with an incidence of 50 per 100,000 cases annually in Western countries. A recent systematic review of the epidemiology of epilepsy in the Arab world concluded that there was an immense deficit in epidemiological data regarding epilepsy in Arab countries, and that well designed studies are needed to accurately determine the burden of epilepsy in the Arab world.

Additional aims of the study are to determine the usefulness of EEG and MRI in stratifying epilepsy syndromes, and to test the hypothesis that they will significantly increase the yield over clinical evaluation alone. In addition, we will evaluate the remission rate in localization-related epilepsy according to MRI findings to test the hypothesis that patients with specific imaging findings such as mesial temporal sclerosis have a significantly lower remission rate compared to cryptogenic and other lesional epilepsies. In addition, we will determine the yield of detecting epileptiform discharges on the EEG according to its duration in IGE and LRE to test the hypothesis that the time of the first epileptiform discharges is significantly longer in LRE. The study will also aim to determine the effect of specific AEDs on bone densitometry in various age groups, and to test the hypothesis that bone loss is significantly lower with newer generation AEDs compared to standard AEDs. We will also determine the effect of specific AEDs (valproic acids and derivatives) on total and fetal hemoglobin production to test the
hypothesis that valproic acids and derivatives may induce fetal hemoglobin and increase total hemoglobin levels. The study will also evaluate the quality of life in this population using an NQoL questionnaire to determine if patients in remission have significantly better quality of life measures, and to study the correlation between adverse events’ severity and the quality of life measures.

Patients enrolled in this study are referred by a number of adult and pediatric neurologists from multiple geographical areas of Lebanon. Those physicians will refer patients with suspected newly diagnosed seizures/epilepsy to the American University of Beirut, where a full evaluation will be performed. This includes a detailed description of the spell, full physical and neurological examinations, a 3-hour sleep deprived video EEG recording, an epilepsy protocol brain MRI, bone densitometry, and quality of life questionnaires. In addition, blood for genomic testing will be drawn. All EEGs will be reviewed by two board-certified epileptologists, and all MRIs will be reviewed by a neuroradiologist with expertise in epilepsy, blinded to the clinical history and the diagnosis.

Based on the history, physical and neurological examination, the patients will be stratified into one of five categories. Category 1: patients with definite epilepsy; category 2: patients with a single unprovoked seizure, category 3: patients with definite non-epileptic spells; category 4: unclear if the event represented a seizure or non-epileptic spells; category 5: acute symptomatic seizures. Following EEG, MRI and clinical follow-up, the various categories will be adjusted, and category 1 patients will be stratified into those suffering from an idiopathic generalized epilepsy, idiopathic localization-related epilepsy, symptomatic localization-related epilepsy, and symptomatic generalized epilepsy. In addition, specific electroclinical syndromes will be defined in the adult and pediatric age groups. Following their initial evaluation, patients will be followed with monthly phone calls inquiring about seizure recurrence, adverse events, or medications changes or dose adjustment. A follow-up EEG and quality of life questionnaires will be performed at months 3 and 12, and a follow-up bone densitometry at months 12 and 24.

So far, a total of 806 patients were recruited in the trial, with 454 in category 1, 73 in category 2, 170 in category 3, 96 in category 4 and 13 in category 5.

Of the patients in category 1, a total of 23% and 62% were diagnosed with generalized and localization-related epilepsy, respectively with 15% of patients still unclassified. In patients with generalized epilepsy, 66% were diagnosed with idiopathic and 34% from symptomatic generalized epilepsy. In patients with localization related epilepsy, 20.8% had idiopathic partial epilepsy.

**Syndromic Classification**

Of the 163 adult patients in category 1, 12% were diagnosed with generalized epilepsy (all idiopathic) and 66% with symptomatic localization-related epilepsy.

**Syndrome Classification Pediatric Age Group**

Of the 285 pediatric and adolescent patients in category 1, 28% had generalized epilepsy and 60% had localization-related epilepsy with 12% of patients still unclassified.
Syndrome Classification
Adult Age Group

In addition to these results, our preliminary data yielded a number of additional important findings that were presented as 4 posters at the American Epilepsy Society meeting that was held in Baltimore in December 2011. In addition, two posters were recently presented at the French Society of Pediatric Neurology. Finally some important neuroimaging data will be presented at the upcoming American Society of Neuroradiology in New York.

News from the Bench

From the Department of Anatomy, Cell Biology and Physiology:

In June 2012, two graduate students defended their master’s thesis successfully and earned their Master of Science with topics in Neuroscience.

Ramzi Mardam Bey, MD
Thesis Title: Reversal of local inflammation and hyperalgesia by a peptide analogue to thymulin (PAT): Involvement of cholinergic mechanisms.
Committee: Drs: Nayef Saadé, Advisor
Suhayl Jabbur, Member
Samir Atweh, Member
Marwan El-Sabban, Member

Yunis Mayasi (MD)
Major: Department of Anatomy, Cell Biology and Physiology (Neuroscience)
Thesis Title: Attenuation of endotoxin-induced apoptosis in rat’s brain by a synthetic peptide analogue to thymulin (PAT).
Committee: Drs: Nayef Saadé, Advisor
Suhayl Jabbur, Member
Samir Atweh, Member
Marwan El-Sabban, Member
Assaad Eid, Member

At any given time, it is estimated that 50 million individuals worldwide have a diagnosis of epilepsy. 3-5% of the general population will experience a seizure sometime in their lifetime.
1. **Tell us about your education and work on pain at AUB, after AUB and back to AUB.**

I received my BSN from AUB and MSN and PhD from the University of Florida. My research since the 1980s has focused on pain management in children and later expanded to include pain management and palliative care across the life span. My first research project started at the University of California in San Francisco. It focused on ‘Assessing Children’s Responses to Pain’ and was published in 1984 in the journal Pain. The article was considered a seminal work at the time. A number of projects followed in the USA and later in the Netherlands, namely at the University of Maastricht, where I served as Head of Nursing Science and Director of the Centre of Nursing Research. Research has always been a passion of mine. In the Netherlands, I was the PI on a large number of funded projects, some of which were NWO funded, which is an NIH-type funding in the Netherlands. When I left Maastricht, I had a large number of PhD level projects, which I continued to supervise, the last of which was defended in January 2009. At AUB, I have conducted a number of funded projects on pain relief and palliative care in cancer patients, adults and children, the results of which have been published in national and international refereed journals. One of the things that I strongly believe in is coaching and mentoring of faculty and students in research. Research and scholarly productivity will continue to be an important part of my appointment at AUB. Children were suffering from unnecessary pain and nurses and physicians were hesitant in prescribing and administering pain medications.

### Facial Grayscale

<table>
<thead>
<tr>
<th>Verbal Descriptor</th>
<th>Wong-Baker Facial Grimace Scale</th>
<th>Activity Tolerance Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORST PAIN POSSIBLE</strong></td>
<td>Eyes closed, moaning, crying</td>
<td>BEDREST REQUIRED</td>
</tr>
<tr>
<td><strong>SEVERE PAIN</strong></td>
<td>Slow blink, open mouth</td>
<td>INTERFERES WITH BASIC NEEDS</td>
</tr>
<tr>
<td><strong>MODERATE PAIN</strong></td>
<td>Wrinkled nose, raised upper lips, rapid breathing</td>
<td>INTERFERES WITH CONCENTRATION</td>
</tr>
<tr>
<td><strong>MODERATE PAIN</strong></td>
<td>Furrowed brow, pursed lips, holding breath</td>
<td>INTERFERES WITH TASKS</td>
</tr>
<tr>
<td><strong>MILD PAIN</strong></td>
<td>No humor, serious face</td>
<td>CAN BE IGNORED</td>
</tr>
<tr>
<td><strong>NO PAIN</strong></td>
<td>Alert Smiling</td>
<td>NO PAIN</td>
</tr>
</tbody>
</table>
2. What triggered your interest in the field of pain research?

My first academic appointment at the University of California in San Francisco involved the clinical supervision of nursing students on pediatric wards at a number of major academic teaching hospitals. It was obvious to me that children were suffering from unnecessary pain and nurses and physicians were hesitant in prescribing and administering pain medications. This observation led to a number of research studies on pain assessment in children of different age groups and cultural backgrounds and to the development and psychometric testing of a number of assessment tools to measure pain in children with different disease conditions and in a variety of clinical settings. I have done similar work in France and in the Netherlands and was able to compare results across countries. The field of pain in children was then truly in its infancy.

3. What are, in your opinion, the challenges that face health care providers in addressing pain management in general? Do you see a way to overcome these challenges?

Pain relief has received a great deal of attention in the last 20 years. In the USA and Europe, pain has become the fifth vital sign and in some countries pain management is usually based on evidence-based pain protocols and guidelines. Many challenges remain however. Health care providers are not always aware of the array of pain treatment methods, pharmacological and non-pharmacological, to treat acute, chronic and recurrent pain. A number of myths still haunt the practice of health professionals, preventing them from intervening promptly and effectively to relieve pain. Policies at the institutional and national levels do not adhere to international standards, widening the gap between knowledge development and actual practice.

These challenges can be overcome by education and policy change. Pain assessment and management should constitute an important part of the curriculum of nursing and medical students. Nurses and physicians should receive continuing education in the field of pain and should be tested for competencies in this area. The creation of multidisciplinary pain clinics and the development and implementation of pain management guidelines in hospitals should become a priority. Finally and at the policy level, pain management should be seen as a human right and opiates should become more available and accessible to those suffering from pain.

4. What are, in your opinion, the challenges that face policymakers in addressing pain management nationally? Do you see a way to overcome these challenges?

The lack of knowledge, the lack of awareness of this important health care problem among policymakers in particular, remains a challenge at the national level. The increase in the number of health care professionals with expertise in the field of pain and the founding of professional and scientific societies in Lebanon has been instrumental in overcoming these challenges. As an example, the work of the Lebanese Society for the Study of Pain, which was founded in 1999, has helped create more awareness among health professionals and policymakers about the importance of effective treatment of pain. More recently, the establishment of the National Committee on Pain Relief and Palliative Care by the Minister of Health, of which I am Vice-President, and which has a mandate on education, practice, research and health care policy, will be instrumental in developing this field further in Lebanon.
5. As the president of the Lebanese Society for the Study of Pain (LSSP), tell us about the society, mission, members and accomplishments?

The Lebanese Society for the Study of Pain (LSSP) was founded in 1999 under the auspices of the CNRS, which is a Chapter of the International Association for the Study of Pain (IASP). The LSSP promotes multidisciplinary collaboration to stimulate and support the advancement of pain management and research and to influence public policy in Lebanon. The LSSP has an elected board made up of a President, President Elect, Treasurer, Secretary and 3 members at large. The LSSP currently has 65 members, 3 honorary members, and a number of trainees. Since its founding, the LSSP has held a number of international conferences with prominent keynote speakers from different countries of the world. In the last 3 years, the board has made the decision to hold scientific symposia on a variety of pain topics at different universities in Lebanon. The ultimate aim was to actively involve the new generation of health care professionals in pain research and management and in the activities of the LSSP, and to create more public awareness in this field. To that effect, a total of 9 symposia were organized at different universities in Lebanon. All symposia attracted a large number of participants with multidisciplinary backgrounds.

Children were suffering from unnecessary pain and nurses and physicians were hesitant in prescribing and administering pain medications.

6. Tell us more about the goals and the future of the LSSP.

LSSP is a vibrant organization embodying the mission and goals of IASP. Future activities are envisioned to include a Conference on Visceral Pain and its Management in line with the IASP Global year against Visceral Pain and the possible launching of the IASP award winning DVD on ‘Life Before Death’ with emphasis on Pain management and palliative care. The LSSP will continue to work closely with other professional societies to promote pain relief and palliative care initiatives in Lebanon and the region.

7. Since pain is a major field of studies in neuroscience, you have surely worked with many neuroscientists throughout the years. How do you describe this collaboration?

I have worked very closely with a large number of neuroscientists and experts in the field of pain in the USA, Canada, Europe, and currently Lebanon and the Middle East. These efforts have been most inspiring in my research work and more recently in my efforts to influence public policy in this field. Multidisciplinary collaboration is absolutely essential for the success of any effort in this domain. It is through collaboration that we can achieve our desired goals.

8. How can the LSSP support the Abu-Haidar Neuroscience Institute and vice versa?

The Abu-Haidar Neuroscience Institute at AUB can only mean a stronger and more powerful LSSP. After all, it is the efforts of the neuroscientists at AUB that led to the founding of the LSSP. I hope that a closer association between the two can be created in the near future.
9. Many do not see the link between nursing and neuroscience in the field of pain in particular. How can nurses benefit and contribute to pain research?

Nurse scientists have contributed significantly to the developments in the field of pain over the last 30 years. They were the pioneers in developing pain assessment methods and in testing them clinically across all age groups. Pain management, pharmacological and non-pharmacological, has also been the focus of numerous studies in nursing. Of particular importance has been the study of pain in special populations such as neonates, cognitively challenged, and the elderly. Neuroscience is as such an important field for nursing research, which has direct relevance for practice.

10. What fascinates you the most about the study of pain?

I have been working in the field of pain for 30 years and it has never stopped to fascinate me. It is certainly a field where interdisciplinary collaboration is at its best and this has always been what has fascinated me about this field.
On the occasion of the World MS Day on May 30, the MS center at AUBMC organized a series of professional and community service activities.

On May 2, the second MS Symposium was held at the Gefinor Rotana Hotel in Beirut. Renowned speakers from the field of MS presented series of talks about the latest in the clinical management and research in MS. Among the speakers were the center’s own neurologists, in addition to international and regional scholars. Dr. Samia Khoury talked about the immunology of MS, Dr. Bassem Yamout discussed the new oral therapies in MS and Dr. Nuhad Abou Zeid described the differential diagnosis of MS. Dr. Richard Ransohoff from the Cleveland Clinic Foundation discussed the cortical demyelination early in the course of MS, and its implications for pathogenesis, and the search for molecular biomarkers to explain the therapeutic effect of interferon-beta in MS. Dr. Ernst Radue, Director of Medical Image Analysis Center (MIAC) at the University Hospital of Basel talked about diagnostic MRI criteria and novel imaging techniques in MS. Dr. Giovanni Martino, Director of the Division of Neuroscience at San Raffaele Hospital in Italy, addressed the regeneration of the brain and the role of neural stem cells. Dr. Mohamad Jumaa discussed the genetics of MS in Saudi Arabia. Dr. Khaled Al Salem presented the epidemiological study of MS in Jordan. Dr. Dirk Deleu talked about MS in Qatar. Dr. Mohamad Sahraian discussed MS in Iran.

The symposium was attended by 76 regional and local physician (35 Lebanese and 41 non-Lebanese).

On May 25, a Laughter Yoga Session was offered to the MS Center’s Patients. The event was held at the Charles Hostler Auditorium at AUB.

Laughter yoga is a simple exercise that combines laughter with yogic breathing techniques. It is based on the principle that anyone can laugh for no reason. Laughter is simulated in a group as an exercise, using some simple child like playful techniques that turn into real and contagious laughter. The concept of laughter yoga is based on a scientific fact that the brain cannot differentiate between fake and real therefore one gets the same physiological and psychological benefits of laughter. The event was conducted by Ms. Sabine Al Jizi (Laughter Yoga Certified Trainer) and attended by the MS Center’s patients and staff. The event was a real success.
THE ACTIVITIES ENDED ON MAY 30 WITH A SUCCESSFUL MS AWARENESS DAY THAT WAS HELD AT THE MS CENTER.

Around 110 MS patients and families attended this event. This educational day is the first of a series of educational days that the center will be offering as part of its soon-to-be-launched MS awareness campaign. This event included multidisciplinary educational sessions that tackled various aspects of the disease, treatment, clinical management and coping strategies. It was presented in the form of oral presentations followed by an open forum for questions and answers related to each presentation.

Furthermore, quizzes followed each session and symbolic prizes were distributed to the winners. Written educational material that addressed MS-related symptoms were also prepared and distributed. The sessions were presented by the center’s physicians, nurses, and pharmacist, and in the presence of the MS Center’s friends.
Dr. Ziad Nahas, Chairman of the Department of Psychiatry, recently announced the establishment of the Child and Adolescent Psychiatry Program (CAP Program) within the Department of Psychiatry at AUBMC, and appointed Dr. Fadi Maalouf as the director of the program. The mission of the AUBMC CAP Program is to provide leadership in the field of child and adolescent mental health by integrating research, clinical practice, teaching and advocacy. The CAP Program offers comprehensive diagnostic evaluation and treatment of children and adolescents with a variety of emotional and behavioral problems including mood disorders, anxiety disorders, psychotic disorders, suicidality, disruptive behavior disorders in addition to developmental and learning disorders.

A child psychiatrist, two child psychologists, a special educator, a social worker and other mental health clinicians staff the CAP Program. It interfaces regularly with the psychometric assessment unit, pediatric neurologists and other pediatricians from a full range of medical subspecialties. The program aims to be a center of excellence in the Arab region that would attract patients, trainees, funders and policymakers.

Here is a summary of the clinical, teaching and research activities of the program:

A. Outpatient Care

1. The Diagnostic Intake Service provides evaluation of all children and adolescents within the department of Psychiatry. Following a telephone screening with the parent, caregiver and/or referring professional, the case is discussed in a treatment team meeting to best strategize the evaluation process. An evaluation includes a clinical interview/observation of the parent and the child, collecting information from other informants (school, previous treaters) and administration of rating scales as needed. This assessment usually requires around 3 visits. This data is synthesized into a case diagnosis, and the formulation and provision of treatment recommendations in consultation with parents and child. Many children are then referred for treatment in other services within the program (outpatient services, intensive outpatient services or inpatient unit).

2. Outpatient Clinics: Outpatient Clinics offer pharmacotherapeutic and psychotherapeutic services. In addition, the clinics offer special education services, parental guidance and support, counseling and psychotherapy for children with developmental disorders and learning disorders and their families. The CAP Program is also planning to launch a Partial Hospitalization Program (PHP) that will serve as a ‘step-up’ program for patients in outpatient programs who need more intensive treatment. Conversely, the PHP will act as a ‘step-down’ program for patients on inpatient units who are transitioning back to outpatient care.

C. Inpatient Program

The CAP Inpatient Service offers developmentally appropriate therapeutic activities in a closely supervised environment. Extensive opportunities for observation, assessment, and intervention are possible in this setting. Referrals for specialized assessments, including neuropsychological testing, speech and language testing, and occupational therapy assessments are also available. Staff members develop an individualized
treatment plan emphasizing safety for each patient during the hospital stay. Its multidisciplinary staff emphasizes a family-oriented approach, and parents and caregivers are encouraged to be active participants in the treatment team throughout a child’s stay.

D. Consultation-Liaison (CL) Service

The CL service provides evaluation and brief treatment of medically ill children and adolescents treated at AUBMC’s pediatric floors, emergency room and St. Jude. These are children who present with psychiatric complications of a medical illness or a primary psychiatric disorder complicating a medical illness. Child maltreatment, complicated neuropsychiatric syndromes, medical illnesses presenting with psychiatric symptoms, emotional adjustment to medical illness, somatization syndromes and compliance with care are among the many types of problems investigated in collaboration with pediatricians in order to facilitate medical care and emotional well-being.

III. EDUCATION

CAP Program serves as a training site for psychiatry residents who are rotating through their child psychiatry module, psychology interns and pediatric residents interested in elective clinical clerkship. It is expected that a fellowship program in child and adolescent psychiatry will be launched within a year.

Other educational experiences include elective clerkships for 4th year medical students (AUB students as well as visiting students), in addition to electives for pediatrics and family medicine residents. Training opportunities for psychology interns will also be offered.

IV. RESEARCH

Numerous research activities are being conducted by faculty members within the program, and these projects offer the opportunity to collaborate with other departments across the medical center and faculties across AUB.
On June 16, the Department of Neurology celebrated the first graduation of its senior fellows and blew the candle of the department’s first anniversary at a dinner party held at Amareddine Restaurant, Achrafieh. In an exquisite Lebanese environment, Dr. Samir Atweh, Chairman of the Department, acknowledged the achievements of the 2012 graduating fellows: Dr. Ahmad Fawaz (General Neurology), Dr. Jaafar Wazneh (Chief Resident) and Dr. Maher Arabi (Epilepsy). The graduating fellows celebrated with the department’s faculty, nurses, and staff. Dr. Atweh and Raja Sawaya also presented Mrs. Esgohie Shamigian, Chief Technician of the Clinical Neurophysiology Lab, with the Departmental Shield on the occasion of her retirement after many years of dedicated service to the department.

The dinner was also attended by many of the previous graduates of the neurology training program, as well as Dean Mohammed Sayegh, Dr. Samia Khoury, Director of the Abu-Haidar Neuroscience Institute, Associate Dean Kamal Badr, and Dr. Salah Zeineddine, Director of Graduate Medical Education.
IBRO FORMALIZES ITS SUPPORT OF NEUROSCIENCE IN THE MIDDLE EAST AND NORTH AFRICA MENA BY CREATING A MENA SUBREGION

The International Brain Research Organization (IBRO), a global federation representing more than 75,000 neuroscientists worldwide, announced the establishment of its new Middle East and North Africa (MENA) sub-region. A grassroots organization, IBRO carries out its activities through its six regional committees covering the globe, and the new MENA sub-region will likewise have a direct voice in defining its own needs and priorities in neuroscience research and education. To help launch the sub-region, IBRO will provide seed funding for organizing the MENA founding meeting and a regional neuroscience school, both taking place in Tunisia in the fall of 2012.

The launch of this new sub-region is the culmination of efforts by a group of MENA region-based neuroscientists of Arab descent - working both locally and abroad - and the leadership of IBRO to identify actions that could be taken to provide enhanced opportunities within the Arab-speaking world for young investigators pursuing a career in neuroscience research.
There are currently no neuroscience centers of excellence in Middle Eastern and Northern African countries. Governmental bodies responsible for funding higher education programs have not yet been motivated to make neuroscience research a priority, largely due to a lack of awareness regarding its link to quality of life issues.

This situation results in loss of human capital, as many neuroscientists coming from MENA countries travel to overseas laboratories for training, and remain there due to more favorable career opportunities.

THE BEGINNINGS OF IBRO-MENA

Along with the United Arab Emirates (UAE) University Neuroscience Group and expatriate neuroscientists, IBRO organized a neuroscience school and conference in February 2011 in Al-Ain, UAE. These events brought together a number of neuroscientists interested in promoting a culture of research-based education and supporting the research activities of faculty at academic institutions in the MENA region. Facilitated by IBRO President Carlos Belmonte (Alicante, Spain) and IBRO Secretary-General Pierre Magistretti (Lausanne, Switzerland), the attendees agreed to implement a plan to formally ask for the formation of an IBRO-MENA chapter.

NEUROSCIENCE AT THE 45TH MIDDLE EASTERN MEDICAL ASSEMBLY

The Wilder Penfield Special Lecture was presented by Dr. Harry Chugany, Professor of Pediatrics, Neurology and Radiology, Chief of Pediatric Neurology and Developmental Pediatrics and Director of the PET Center at the Children’s Hospital of Michigan at the Detroit Medical Center. Dr. Chugany discussed epilepsy and neurodevelopmental disorders.

The Diana Tamari Sabbagh Memorial Lecture was presented by Dr. Andres Lozano, Professor and Dan Family Chair in Neurosurgery, and the Canadian Research Chair in Neuroscience at the University of Toronto. Dr. Lozano addressed electrical stimulation to adjust the activity of circuits and networks in the human brain.

From AHNI, Dr. Ziad Nahas, Professor and Chair of the Psychiatry Department, talked about post-partum depression.