Letter from the President

Alan M Rapoport
Clinical Professor of Neurology, The David Geffen School of Medicine at UCLA, Los Angeles, California, USA
Founder and Director-Emeritus, The New England Center for Headache, Stamford, Connecticut, USA

I continue to be amazed at our growing membership that has reached over 1,300 without the Indian members who have joined in huge numbers. Our total membership is now very close to 2,000. We will welcome many more Indian members following the Master School to be held there in December.

Our financial situation is stable and we have had enough money for all of our activities, including the IHS Fellowship, travel grants, Visiting Professors and support of the International Headache Academy (iHEAD) meetings for up and coming headache specialists. One meeting was held in Phoenix, USA, and the other just recently in Leiden, Netherlands. We have just received funding for the next American iHEAD which will probably be held in Phoenix in February 2015. We contributed to the combined International Association for the Study of Pain (IASP) and IHS meeting for young pain and headache interested doctors held in Siena, Italy, under the direction of Arne May. We are supporting the Indian Master School planned for early December under the direction of Dr Ravishankar and Indian colleagues. We have already reached the target of 150 young Indian neurologist delegates and 50 senior mentors. The students have received their reading material and have already taken their first online exam.

There was a very well attended and successful meeting of EHMTIC (European Headache Federation and Migraine Trust International Congress) in Copenhagen, Denmark, where the IHS Advisory Council and Board met. There also was the first meeting of the new Task Force for Improvement of Headache Care worldwide under the leadership of myself and Fumihiko Sakai, and the Cluster Headache committee under the direction of Dr José Maria Pereira Monteiro.

The ARCH (Asian Regional Committee for Headache) meeting in Chiang Mai, Thailand, delayed by a coup, is now set for late January 2015, partially funded by IHS. Plans are in place for a Master School in China in June of next year under the direction of Shenguan Yu, who attended the EHMTIC meeting.

I hope you have downloaded your set of powerpoint slides that go through the new ICHD-3-beta classification and that you use them to help you in giving your lectures around the world and teaching juniors and students.

The Scientific Committee has completed the syllabus and chosen the speakers for an exciting International Headache Congress in Valencia in May 2015. I have just visited the venue with our Treasurer, Wendy Thomas, and we will make a few changes to improve our experience there. Valencia is a beautiful and safe city and the congress center is just the right size for us. The IHS Board has been looking at appropriate venues for the next two IHC meetings after Valencia, in 2017 and 2019.
Cephalalgia, under the direction of our President-elect David Dodick, is publishing excellent articles and has had an increase in its impact factor.

I am pleased with all of our educational and headache promoting activity around the world, our excellent financial position and our slowly growing membership numbers. A special thanks to all of you who spend countless hours working on behalf of IHS. If you are one of the young doctors attending our special teaching sessions, I strongly urge you to make that big step and play an active role in advancing the science and clinical knowledge in our field of Headache Medicine by choosing it as your future field of endeavor.

Email: Alan Rapoport

Report of the Honorary Secretary
Stefan Evers

The time since the last IHS Newsletter was published has been quite busy, in particular from an administrative point of view. The IHS Board of Trustees met in September in Copenhagen face-to-face and held two additional teleconferences in March and June 2014.

Membership
Membership numbers are stable during 2014 – to date there are 1,320 members, 61% of whom are members through their Affiliate Society. In addition, there are 622 Associate Members, specialists living in the 100 developing countries who receive free access to Cephalalgia and the IHS website. This number has greatly increased due to efforts by the Indian Academy of Neurology Headache Section who encouraged over 350 members to join.

Fewer members than in previous years have renewed for 2014. All these members will be contacted and offered complimentary online membership for the remainder of 2014 on receipt of their renewal for 2015. Members who have not renewed will be contacted by Board members to encourage them to renew for 2015.

The Board decided that the membership fees will be increased from 2015 for those members who are online or Affiliate members. The rates for online members will increase from US$ 120 (€ 90; £ 75) to US$ 140 (€ 105; £ 85). The Affiliate membership fee will increase from US$ 99 (€ 70; £ 60) to US$ 120 (€ 85; £ 70). This is the first increase in membership fees since 2011. There will be no increase to the Full (print copy) membership fee.

Cephalalgia update
Cephalalgia had another successful year. The 2013 impact factor has now been released and has increased to 4.12. Cephalalgia is now ranked 32 out of 194 clinical neurology journals.

The new Cephalalgia android App has been launched by SAGE; this is working well and has been well received.
The Chinese version of Cephalalgia has been published and welcomed by Chinese neurologists. Two issues will be published per year.

The new contract with SAGE for publication of Cephalalgia has been signed. From 2015 the journal will be a little smaller in size, to fit with other SAGE journals, and first authors of papers will no longer receive three print copies of the journal as they now receive an electronic file. The contract will expire in 8 years’ time.

**Visiting Professors**

Peter Goadsby and Messoud Ashina were participants in the Estonia Visiting Professor programme. Delegates from Lithuania and Latvia also attended. Thanks are to be offered to Mark Braschinsky from Estonia who organised this very successful meeting.

Other Visiting Professor programmes were organised in Serbia, Dakar-Senegal, and Brazil. Available reports are included in this newsletter.

**Educational activities**

The most recent major activity was the International Headache Academy (iHEAD) in Leiden in October/November 2014 which was a course over 3 days for almost 70 young participants, mostly from Europe. It is hoped that there will be another iHEAD in Arizona, USA, in February 2015.

Following the recent coup in Thailand, the scheduled Asian Regional Conference on Headache (ARCH) meeting in August has been postponed to January 2015. The meeting will still take place in Chiang Mai.

Preparations are ongoing for the 3rd IHS Master School in headache in India. The objective of the course will be to discuss the basics of headache science and expose the younger generation of Indian neurologists to the nuances of headache management. A launch webcast was held in August, and online learning has commenced. This will be followed by a 2-day course in December 2014 in Mumbai, with international faculty.

Twenty-one travel grants were awarded to juniors to attend the European Headache and Migraine Trust International Congress (EHMTIC). Also at EHMTIC, the juniors committee held the second Headache Excellence Tournament, following a successful tournament at IHC 2013. The tournament aims to provide young scientists with the opportunity to present their data during a short talk and discussion. The presenters not only benefit from sharing their research expertise, but also further improve their communication skills and expand their knowledge in the headache field.

A third International Association for the Study of Pain (IASP)-IHS joint meeting will probably be repeated in 2 years’ time.

**Budget**

Due to the International Headache Congress (IHC) being held in May 2015, and the need to promote travel grant and Peri-IHC Short-stay Scholarship applications, the Trainees and Residents budget request was discussed in the Board meeting and approved as follows:

- Travel grants: € 20,000
- Travel budget: € 5,000
- Trainees Excellence Tournament: € 1,200
- Peri-IHC Short-stay Scholarships: € 15,000
A budget of US$ 25,000 was approved to fund international speakers to attend the Headache and Pain teaching programme to be held in Istanbul for Pan-African delegates, which is organised by Dr Hayrunnisa Bolay.

**Collaboration with the Cochrane Library**

The Board noted that Cochrane reviews are well respected and that Cochrane wishes a relationship with IHS. IHS should encourage junior involvement in Cochrane reviews; IHS should contact them and ask for interested members. It was agreed to discuss this further with Chris Eccleston, the field editor responsible for headache. Peter Goadsby and Stefan Evers will serve as liaisons.

**ICHD-3-beta**

Several translations of the ICHD-3-beta have been published: translations in Italian, Korean, Portuguese, Serbian and Spanish are available on the IHS website; a Japanese translation is available from the Japanese Headache Society website and translations are ongoing into Brazilian, Chinese, French, Polish, Romanian and traditional Chinese (Taiwan).

The chronic headaches listed in ICHD-3-beta will become a separate chapter within the new classification of chronic pain disorders in the ICD-11.

**Improvement of headache care worldwide**

A task force to discuss the improvement of headache care worldwide was formed under the chairmanship of Alan Rapoport (USA) and Fumihiko Sakai (Japan) and held its first meeting in Copenhagen in September. The task force comprises worldwide representatives including Luiz Paolo de Queiroz (Brazil), K Ravishankar (India), Rigmor Jensen (Denmark), Stefan Evers (Germany), Hayrunnisa Bolay (Turkey), Peter Goadsby (UK), and Shuu-Juin Wang (Taiwan). Further Ria Bhola, a headache nurse is also included. She has visited headache centres worldwide and in 2011 published an article in Cephalalgia entitled ‘A trans-cultural comparison of the organisation of care at headache centres worldwide’.

Email: Stefan Evers

**IHS education in developing countries**

Alan M Rapoport and Stefan Evers

One of the main missions of IHS is to educate physicians about headache pathophysiology, presentation, diagnosis and treatment all over the world, and as an international society IHS strives to take education to regions where there is an unmet need amongst medical professionals who may not be able to attend the major headache congresses.

We have started the IHS Master School to educate physicians in various parts of the world. The first Master School was held in Brazil, and included delegates from other countries in South America, many of whom are certainly unable to afford such education totally on their own. A second Master School was held in Japan, and included participants from other lower-income countries in Asia. The next Master School will be held in India in December 2014, a country of 1.2 billion people with fewer than 1,500 neurologists and only one dedicated headache expert. Further Master Schools are planned for China and the Arabic world.
For many years IHS has offered travel grants to juniors to attend the bi-ennial International Headache Congress (IHC), and a percentage of these grants are specifically Educational, offered to juniors from developing countries who have not submitted an abstract to the congress but who will greatly benefit from being able to attend. Research travel grants (juniors who have submitted an abstract to the congress) are often also awarded to researchers from developing countries. The same travel grants are also offered to juniors for attendance at the European Headache and Migraine Trust International Congress (EHMTIC), held in alternate years to IHCs.

In 2013 the IHS Juniors committee launched a new initiative for improving headache practice, research and education in developing countries – the Short-stay Peri-IHC Scholarships. The initiative addressed the need for essential and improved clinics, research and education about headaches and their treatment in developing countries, and the aim of the programme is to increase transnational mobility of young researchers living in developing countries by providing grants for short, goal-directed stays in headache centres in the country where the IHC is being held (USA in 2013). Three scholarships were offered to young physicians from developing countries, who were given the opportunity to visit research institutions in the USA for a maximum of 6 weeks, immediately before, during and/or after the relevant IHC. Scholars also received free registration to the IHC 2013 and a free teaching course. The scholarships proved very successful; three bright young physicians from Ethiopia (a country so poor that he has not seen triptans used there), Myanmar and Moldova attended the IHC and then spent up to 6 weeks at Stanford University, Mayo Clinic (Scottsdale) and Albert Einstein College of Medicine (New York), respectively. The scholar from Ethiopia is hoping to obtain a US residency in neurology and become a headache specialist and return to his country to help teach headache to local doctors. A further Short-stay Scholarship was offered to a physician to attend EHMTIC in September 2014, and then spend up to 6 weeks at the Danish Headache Centre, and this has just been completed. Three more scholarships will be available for the IHC in 2015.

Each year we award one or two Fellowships to young future headache specialists who rise to the top in the strict application process. These are very expensive for IHS, but are open to applicants from all over the world, and awarded to the best applicants regardless of their country of origin. In 2011 one of the fellowships was awarded to a young researcher from Ukraine (who had been a previous travel grant recipient); following his fellowship, he was invited to present his data at a lunchtime session at the IHC 2013, for which he also received funding from IHS. In 2012 a third fellowship was awarded to an applicant from Iran for a 2-year placement, and she is currently studying at Harvard Medical School (Boston, USA). Her preliminary report is included in this newsletter.

We have started the Visiting Professor programme that brings well-known headache specialists to the more needy countries to teach about headache and work with young neurologists. We have sent our Visiting Professors to Chile, Colombia and Morocco in 2012, the Dominican Republic, India and Argentina in 2013, and Serbia, Dakar-Senegal, Estonia and Brazil in 2014. This programme will continue, and IHS is open to all requests from any developing country to increase the wide net of this very successful educational initiative.
In 2013 IHS launched the Headache Pioneer Programme. This programme aims to encourage physicians from developing countries or countries in transition to visit a specialised headache institution abroad and actively increase knowledge on headache disorders and specialised headache management. It is intended the pioneer will spread this knowledge to their home countries which often have no headache infrastructure or expertise. After a clinical training period of up to 12 weeks at a headache centre abroad, the award holder is encouraged to return to his/her country of origin in order to apply the acquired knowledge, thus contributing to the advance of patient management locally. Within a supporting phase of 12 weeks the fellow is afterwards asked to present or discuss cases from their home clinical centres to the headache specialist. This project was piloted in 2013, where a young physician from Cameroon worked at Liège University (Belgium) before returning to his home country, where he is planning to affiliate the Society of Cameroonian Neurologists to become an IHS Affiliate Society, and he welcomed his mentor from Liège, Jean Schoenen, as a Visiting Professor in 2014. The 2014 Headache Pioneer was awarded to two young physicians, one from Thailand, who worked at the Jefferson Headache Center in Philadelphia, USA, and one from Georgia who worked at the Danish Headache Centre in Glostrup.

IHS also has a Russian Linguistics Special Interest Group and over the years has funded travel expenses for the committee members and in 2014 part funded (with EHF) a Headache School in the Republic of Georgia.

Although we have members of IHS from 52 countries, our total paying membership is only about 1,300. Physicians and researchers from developing countries are offered free membership and subscription to our journal Cephalalgia because they come from the poorest countries in the world. Our list of eligible countries is generous, as we have not updated it when countries have moved to a higher income band; this is a policy we have had for many years and currently there are over 600 of these members.

In the last 6 years, due to the worldwide financial crises and the change in pharmaceutical company rules and interests, it has been very hard for IHS to raise funding for education. We have actually been spending slightly more than we are taking in (by reducing the reserves from previous years) as we consider worldwide education so critical. In fact, IHS has never spent so much money on education in low- and middle-income countries as we have over the past 4 years.

We are proud of the work we have done and the young neurologists we have helped, and will continue to support advancement in science and clinical work in headache throughout the world.
Headache and other pain entities share some important common pathophysiological mechanisms concerning pain generation and chronicity. On the other hand, some distinct pathophysiological processes have been described that are unique for the development of headache. Thus, the research agendas of both the International Association for the Study of Pain (IASP) and IHS have a considerable amount of overlap that has only rarely been addressed and discussed in the past.

A second joint meeting of the two societies took place from 23–26 April 2014 at the Scuola Superiore Santa Chiara and Refugio in Siena, Italy. The conference centre was located in the old town of Siena. The historical buildings of Siena were spectacular and very stimulating and inspiring for all participants.

The objectives of symposium were to:
- present the two scientific societies and their background
- stimulate a discourse/discussion between the members of the two societies
- improve knowledge of pain mechanisms, diagnosis, and management of headache and other chronic pain states
- identify similarities and differences of headache and other chronic pain states
- actively involve and educate young scientists
- establish potential co-operations and synergies of both societies.

Ninety-four invited young scientists from 21 countries participated. The participants came not only from science, but also from clinical backgrounds, and were either involved in IASP or IHS. Since one of the objectives of the symposium was to support and actively involve younger scientists, each of the moderators was asked to select one speaker for his topic. The societies were also asked to nominate up to 50 additional participants.

The faculty included specialists from both societies. Following the structure of the topics (which were chosen based on the overlapping research interests of both fields), each topic was represented by speakers from both societies and included, amongst others, genetics, epidemiology, nitric oxide, calcitonin gene-related peptide and vascular biology, neurogenic inflammation, neurophysiology, functional imaging, and neurostimulation. In addition to the scientific programme, there was an excellent social programme to further facilitate the interaction between the symposium participants.
The second IHS/IASP joint symposium continues the work of analysing options for future collaborations of both societies in various fields. The symposium turned out to be a very successful event, both in terms of content, structure, and output. The participants realised that both societies are active in various very similar research fields; this overlap of interests has not previously been identified. The symposium demonstrated a clear potential for further collaboration between IHS and IASP in research projects as well as in educational and congress initiatives. Several concrete plans were already formulated during the symposium.

The excellent atmosphere and lively discussions, and also the personal comments and remarks after and between sessions and the completed evaluation forms, confirmed the success of the joint meeting. Such meetings with mostly younger scientists with a lot of interaction are highly welcomed and indeed more than 90% of participants noted that a joint meeting of IHS and IASP offers important and unique opportunities for new co-operations. This is even more important as most participants indicated that they have had little opportunity in the past to learn about the initiatives of the respective other society. Particularly younger scientists suggested new topics for future meetings, asked for publication of contact information/email addresses of all participants, indicated that they will use this meeting for better and new co-operations, and asked for more time and opportunity for personal interaction in the future. It is now up to all of us to fulfil these ideas and co-operations with life and make them reality.

Alan Rapoport
The headache school took place in Tbilisi, Georgia, on 6-7 June 2014, and was supported by the European Headache Federation and the International Headache Society.

This was the second headache school in Georgia after the first in 2004. At that time no headache service existed in Georgia. Over the past 10 years the Georgian Headache Society with support of Lifting the Burden, EHF and IHS performed epidemiological and burden studies and established several “state of the art” headache clinics in Tbilisi and Gori.

The current headache school/conference invited up to 80 participants from all over the country and local health authorities. The programme consisted of case studies, lectures from international headache experts, debates on different headache therapies and discussion of headache services in Georgia.

The conference was a great success with 80 participants from different parts of the country and an excellent teaching programme. Very positive feedback was received from the participants.

The next goals of the Georgian Headache Society are:
• To establish guidelines for diagnosis and treatment of primary headaches for general practitioners
• To establish “state of the art” headache clinics in large cities of the country such as Telavi (Eastern Georgia), Kutaisi (West Georgia), and Batumi (Black sea Coast).
On 30 May 2014 Belgrade hosted an IHS Visiting Professor programme organised by the Headache and Migraine Centre. The gathering was entitled ‘Advanced headache perspectives’ (Savremena stremljenja u glavoboljama). The Serbian Headache Society and the Serbian Migraine Association also took part in the organisation of this event. The IHS Visiting Professor was Professor Dr Cristina Tassorelli of the Mondini Institute, University of Pavia, Italy. Professor Tassorelli is one of the eminent and distinguished doctors and scientists in the field of headaches, who is successfully engaged in both clinical and experimental scientific research. In addition to Professor Tassorelli, 10 eminent lecturers, neurologists from Serbia, from various headache centres within different institutions (Clinical and Hospital Centre Zvezdara, Clinical Centre of Serbia, Clinical Centre of Vojvodina and the Institute for Mental Health in Belgrade) took part in the gathering. The audience consisted of neurology specialists, who were especially interested in headaches, and there were 56 participants in the gathering in total.

The participants were welcomed by the local organiser and director of this event, Dr Srdjan Sretenovic, director and founder of the Centre for Headache and Migraine – ‘Migraine Centre’ in Belgrade, who introduced the audience to the IHS mission and the IHS Visiting Professor project and also to Professor Tassorelli. This was followed by numerous lectures and case studies of, primarily, educational and practical content.

The first lecture was given by Professor Tassorelli on the topic of medication overuse headache. In her lecture, she analysed in detail the aetiology as well as pathogenesis, and the latest specific therapeutic procedures, which caused special attention of the audience, considering the complexity of such a form of chronic headaches. After that Professor Dr Jasna Zidverc opened a topic of rare primary headaches triggered by physical effort: coughing, exercise, sex or a lightning strike, enriching her interesting lecture with a few practical examples of her patients’ cases. Professor Svetlana Simic gave an interesting lecture on a clinically and therapeutically ‘delicate’ field of headaches in women, with special emphasis on a specific therapeutic procedure concerning headaches in pregnancy. Additionally, Professor Dr Aleksandar Kopicic gave a lecture on a supposed mechanism of acupuncture effects in headache treatment and Dr Aleksandra Radojcic gave a lecture on Raeder’s Paratrigeminal Syndrome – an old eponym in the new classification of headaches. In a lecture on secondary headaches, Dr Srdjan Ljubisavljevic laid emphasis on an interesting case of headache from his own practice, the patient suffering from segmental cerebral vasospasm. In another interesting lecture Professor Tassorelli showed, on the basis of the results of numerous multicentre studies and experience from clinical practice, how important it is to use a headache diary in the creation of an adequate therapeutic procedure, especially in the case of patients suffering from chronic headache forms. In the last lecture of the plenary part of the gathering, Dr Srdjan Sretenovic acquainted the audience with the needs and strategy of the organisation of a national health service in the sphere of headaches and with the organisational structure of modern headache centres, showing the structure of the centre in which he is employed. After a lunch break, our
distinguished colleagues, Dr Aleksandar Stanic, Dr Mirjana Jovanovic, Dr Ana Podgorac, Dr Aleksandra Mitrovic and Dr Nikola Veselinovic showed a series of cases of interesting forms of primary and secondary headaches, with numerous diagnostic and therapeutic dilemmas, which was accompanied by active audience participation continuing into the discussion segment.

The all-day gathering ended in a good atmosphere and the participation of the IHS with the eminent Visiting Professor was acknowledged both by the audience and by the local neurologists interested in headache as an excellent way of globalising and standardising high-quality education in this segment of neurology.

The first IHS Visiting Professor Programme in Sub-Saharan Africa was held in Dakar, Senegal from 19–20 June 2014.

Professor Jean Schoenen from the Headache Research Unit of Citadelle Hospital in Liège, Belgium, was the Visiting Professor for this programme. The meeting was a great success with around 50 neurologists and neurology residents attending. The Neurology Department of the Cheikh Anta Diop University in Dakar is the first centre dedicated to training neurologists in the
French-speaking Sub-Saharan Africa and it welcomes neurology trainees from around 15 African countries.

The meeting was opened by Professor Mansour Ndiaye, head of the Neurology Department. He introduced Professor Schoenen and acknowledged his contribution in the training of some African neurologists in headache. He thanked him for accepting this invitation and also thanked the IHS Education Committee for this initiative through which so many neurologists or neurology trainees in developing countries are able to further their interests in headache medicine. He spoke about the advantages of becoming a member of IHS.

Professor Schoenen in his introductory speech said it was a pleasure for him to take part in the training of neurologists in Sub-Saharan Africa through IHS. Then he delivered his opening talk on the ‘Pathophysiology of headache’. He presented anatomic pathways and networks implicated in head and neck pain. He explained peripheral and central sensitisation, mechanisms of referred pain, alldynia, and headache chronicisation. This was followed by a second talk on the principles and evolution of the ICHD and presentation of the recent ICHD-3-beta.

Professor Schoenen then presented a clinical case to illustrate what he presented before. This was followed by a coffee break during which Professor Schoenen discussed and shared greetings with participants.

He next spoke on ‘Clinical phenotypes of migraine’ followed by a talk on ‘Pathophysiology and genetics of migraine’, with emphasis on points with clinical implication. This was followed by a presentation on the principles of migraine management. He detailed international recommendations on migraine treatment, with emphasis on pharmacological and non-pharmacological methods, and he explained the importance of patient education in the management of migraine. Given the non-availability or inaccessibility of many drugs for migraine attack treatment or prevention in the African setting, he also discussed alternative options with comparable efficacy. He presented a clinical case to illustrate diagnostic and therapeutic approach in case of migraine.

Professor Schoenen then delivered a talk on ‘Tension-type headache’, followed by an interactive session with comments, questions and answers. Some participants briefly presented difficult cases for discussion.

In the post lunch session, Professor Schoenen spoke on ‘Facial pain and trigeminal autonomic cephalalgias (TACs)’. He insisted on the fact that TACs are not rare, and are frequently misdiagnosed. He shared the diagnostic clues to identify TACs and to distinguish them from other facial pain, migraine and other primary headaches. This presentation was illustrated by an interactive clinical case.

The next talk was on ‘Diagnosis and management of headaches at the emergency department’, where he mentioned the value of lumbar puncture when dealing with febrile acute or subacute headaches, to exclude meningitis after ruling out a space occupying lesion. This was followed by two presentations on ‘Headache attributed to CSF pressure modification’ and ‘Cervicogenic headaches’. The session closed with an interactive clinical case discussion.

The second day began with a talk on ‘Medication overuse headache’. Professor Schoenen explained that frequent use (more than 2 days/week) of over-the-counter painkillers such as paracetamol or ibuprofen is associated with medication overuse headache and headache chronicisation in patients suffering from recurrent headaches. He also noted that prophylactic treatments of primary headaches are ineffective when the patient is overusing attack medications.
The next talk was ‘Clinical neurophysiology of primary headaches’ where Professor Schoenen explained that neurophysiological methods are particularly suited for the study of primary headaches (which are not caused by a structural lesion). He mentioned that lack of habituation of visual evoked potentials is the most reproducible finding in migraine electrophysiology. He next spoke on imaging in headache disorders; in clinical practice the main indication of imaging is to exclude a secondary headache. He highlighted the red flags that should prompt brain imaging in a patient presenting with headaches and then presented an interactive clinical case to illustrate his previous talk.

Professor Schoenen then spoke on the impact of nutrition on primary headaches, especially migraine. He said nutritional factors such as alcohol intake or fasting are major triggers of migraine attacks. Craving for chocolate and sugar are prodromes of migraine attacks and he advised that this information should be included in the patient education programme. The next talk was on comorbidities of migraine. Professor Schoenen invited the participants to always look for disorders which are associated with migraine more frequently than predicted by chance factor. This could have important implications especially in therapeutic options choice.

The next three talks concerned treatment of primary headaches. Professor Schoenen briefly presented peripheral nerve blockade and neurostimulation in the treatment of severe or intractable headaches. He described the mechanism of action, efficacy and side effects of these methods. He listed the indications and described the technique of sub-occipital nerve blockade in primary headaches. These were followed by a talk on ‘The art of treating headaches’. Professor Schoenen presented the approach and reasoning process to be adopted by a practitioner dealing with patients suffering from recurrent or chronic headaches. This session ended with an interactive clinical case illustrating therapeutic reasoning in front of a patient with headaches.

All the participants were very satisfied with the quality of presentations and discussion and received a certificate of attendance to the course.

Socially, Professor Schoenen and some participants went to Gorée Island and ‘Monument de la Renaissance Africaine’, two major historical sites in Africa.

We thank the IHS President, Alan Rapoport, Guus Schoonman Chairman of the Education Committee, and Carol Taylor, the IHS secretary for her constant help and support. We also thank the local organising team especially Drs Camara, Toffa, Ndiaye and Ba.

The IHS Visiting Professor programme is a useful initiative that will surely help to reduce the burden of headache disorders worldwide.
On 7 August 2014 the Estonian Headache Society (EHS) had its annual meeting, which this time was in collaboration with the IHS Visiting Professor programme. As a contribution to regional development in the field of headache, two distinguished world-class headache specialists visited Estonia within the named programme: Professor Peter Goadsby and Professor Messoud Ashina.

Thanks to close cooperation between the national headache societies of Baltic countries, during the pre-registration process approximately 100 participants were registered not only from Estonia, but also from Latvia and Lithuania. The latter brought the level of the participating audience to a truly international level. This achievement was assisted by provision of transportation from other Baltic countries to Tartu and back, which was organised by EHS’s supportive member and a co-supporter of the event, Berlin-Chemie (Menarini Group). The delegates were mostly neurologists (both adult and paediatric), but there were also some general practitioners who are interested in the field of headache and Estonian headache nurses.

The event took place in the largest conference centre in southern Estonia in Tartu. After a welcome message announced by the President of EHS Dr Mark Braschinsky, the following topics were covered by the visiting presenters:

- Diagnosing and treating episodic migraine (Messoud Ashina)
- Diagnosing and treating trigeminal autonomic cephalalgias (Peter Goadsby)
- Mechanisms of migraine (Messoud Ashina and Peter Goadsby)
- Treating chronic migraine (Messoud Ashina)
- Other indomethacin responsive headaches (Peter Goadsby).

The format of presentations was divided into three major types: lectures, ‘pros and cons’ debates and practical discussion of presented cases. Every presentation was followed by a Questions and Answers session, through which interaction with the audience was encouraged.

Well-structured lectures covered mostly clinical aspects of migraine, trigeminal autonomic cephalalgias and other primary and indomethacin responsive headaches. Fundamental diagnostic aspects of the International Classification of Headache Disorders, 3rd edition (beta version) were highlighted, describing diagnostic criteria of named primary headache disorders. Several video case presentations were used by the presenters to illustrate diagnostic work-up. Disorder-specific treatment recommendations were based on the known evidence with extra attention paid to currently available treatment guidelines.

During the ‘pros and cons’ section presenters had to defend two major directions in known migraine pathogenesis – vascular and neurogenic. This section was especially well received by the audience.

The meeting was concluded by the extra session dedicated to interesting headache cases, which were presented by participants. Diagnostic difficulties and challenges in the management
of such cases attracted the attention of participants and were extensively discussed by the visiting professors.

As a generous contribution of Professors Messoud Ashina and Peter Goadsby, event-related materials were made available after the event on EHS’s official website, www.peavalu.ee. As a part of a social programme, visiting historical Tartu and a farewell dinner was provided to our guests.

The first-hand feedback from the audience was highly positive. Several points were noted; very high level of presentations, practical selection of topics and a priceless chance to communicate with world-leading experts in the field were mentioned. The geographical location of the event was also noted as very good, since being the largest city in the southern part of Estonia, Tartu, with its academic history, presents a favourable destination for other Baltic states, especially Latvia. Last, but not least, to our knowledge it was the first time in the history of the region when a Past President of IHS with a Special Recognition Award visited one of the Baltic countries within the framework of a scientific format.

All named factors are essential for facilitating comprehensive developments within the headache field in the region. Further collaboration at an international level is very much warranted.
Fellowship report

Increased susceptibility to hypoxia in familial hemiplegic migraine 1 migraine mutant animals (interim report)

Homa Sadeghian, Iran

Fellowship from October 2013 to October 2015
Massachusetts General Hospital, Harvard Medical School, USA
Mentor: Dr Cenk Ayata

Overview
Migraine, particularly with aura, is associated with increased risk of stroke both during and between attacks. Stroke risk is also increased in familial hemiplegic migraine (FHM), a monogenic migraine subtype with hemiplegic auras.

Biological mechanisms underlying the association between migraine and stroke are unknown, although in both diseases dynamic interactions among the constituents of the neurovascular unit are important to the pathophysiology. At the onset of cerebral ischaemia the gradual failure of Na+, K+-ATPase causes a rise in extracellular K+ and initiation of anoxic depolarisation. FHM1 mutations shift the Ca, 2.1 channel opening voltage to more negative membrane potentials so that channels open with smaller depolarisations triggering glutamate release, which can explain faster anoxic depolarisation onset in the mutants. Anoxic depolarisations exacerbate the metabolic mismatch by stimulating O₂ and glucose consumption, and by worsening tissue perfusion via vasoconstrictive neurovascular coupling. Hence, migraine with aura increases stroke vulnerability that enhances susceptibility to ischaemic depolarisations, and accelerates stroke evolution.

In the current study, we investigate neuronal responses to low-grade chronic hypoxia in migraine mutant mouse strain compared to wild type. We hypothesised that genetic mutations conferring cerebral hyper excitability and migraine susceptibility increase the vulnerability to both low-grade hypoxia and global ischaemia as one mechanism to explain the migraine-stroke association, and tested this using Ca, 2.1 S218L transgenic mouse models of FHM1.

Research methods
The project consists of three phases:
1) FHM S218L mutant mice and littermate were submitted to continuous flow (2 L/min) of 7% oxygen (O₂) at 27°C in a normal atmospheric pressure chamber. Mice were kept in the chamber for a maximum of 6 hours or until they developed neurological signs. After exposure to hypoxia, mice were returned to their cages for 3 days, brains harvested after transcardiac perfusion, sectioned for Fluoro-Jade B and c-Fos staining.
2) Global ischaemia is induced in FHM S218L mutant and littermate by occluding both common carotid arteries. A midline incision was made to expose the bilateral common carotid arteries, and exposed carotid arteries were ligated for 20 minutes. ElectroCorticography and DC recording is performed to identify presence of anoxic depolarisation and cerebral blood flow is monitored by laser Doppler ultrasonography during the occlusion. Arterial blood pressure and arterial blood gas (ABG) were monitored though femoral artery cannulation and systemic...
physiologic state sustained with intubation ventilation in normal range values. Rectal temperature was maintained at 37.0 ± 0.5°C with a heating pad during surgery.

3) Primary cultures of hippocampal cells of both FHM S218L mutant and littermates were obtained and cultured. After successful growth in incubation media cells were replaced with media with reduced oxygen content.

Problems encountered
As the setting needed to perform the experiments is well established and frequently used in our laboratory, and the study design was meticulously prepared and anticipated by our team, the project was performed with few problems. However, seizure was our frequent phenomena in the hypoxic chamber experiment; FHM mutant animals tend to develop seizure sooner compared to littermates, which increased the risk of losing animals during the experiment. In this regard we monitored animals carefully to observe their behaviour under hypoxia and to resuscitate them if seizure developed.

Conclusion
Working and training under the supervision of Dr Ayata, well known for his solid research in one of the leading biomedical research institutes, will definitely have a fundamental impact in my future career. The most obvious benefit is to improve my research skills and capabilities and to get familiar with multiple novel research methodologies. This project consisted of many sophisticated experimental and surgical techniques, which was difficult but interesting for me to learn and perform. However, as the project proceeds, the consequences are totally rewarding and the results are promising enough to consider publication in a high-ranking journal in the field. Additionally, working in such a great atmosphere, I am exposed to the ideas of many people from all around the world on a daily basis, and I see how other researchers approach and solve their problems and questions in research. This has given me a better sense of neuroscience research in terms of the hot topics and problem solving. Moreover, I had a chance to work on my own and on several other projects with access to many resources, which has given me a chance to have more creativity and get the most out of my work.

The first year in my fellowship has been a perfect combination of research and training, which will eventually shape my career development. Massachusetts General Hospital (MGH) hosts one of the world’s largest hospital-based neuroscience research programmes and many breakthroughs in neuroscience have been pioneered here by its investigators and clinicians. Working within an institution with such a strong research programme has given me an invaluable chance to access and learn how to use and implement many state of the art technologies in my own research. As a graduate of medicine, I have always been concerned with the translation of findings in basic research into practice and I am very impressed by the focus on translational research within the MGH research facilities to foster bridging of the gap between basic research and the clinic. Having extended my knowledge about migraine, and its underlying cellular and molecular pathophysiology, as well as learning new experimental and surgical techniques, I am eager to use my expertise in future projects. All I have learnt during this period has opened a new window for me in both basic and clinical neuroscience, especially in the field of migraine research.

The IHS fellowship is definitely going to change the course of all applicants careers. As a clinician-scientist, knowledge is the base of my profession and the least I will get from this fellowship is more knowledge that is priceless. This knowledge will be in so many aspects such as neuroscience, research methodology, social interactions and numerous other areas. Each one of these areas will change the way I look at my career and select, approach and handle my prospective projects, questions and problems. Over the course of the years, I have always been looking for ways to improve myself as a physician, researcher, and a human being and this fellowship was an invaluable chance for me to do so.
Fellowship introduction

Marta Vila, Spain

Fellowship from January to December 2015
King's College London, UK
Mentors: Peter Goadsby and Philip Holland

My name is Marta Vila and I feel very honoured to have been awarded the IHS Fellowship. It will certainly give me a great opportunity in order to become a much better headache neuroscientist.

I graduated in Biology in 2007 and then I obtained the master in Advanced Genetics in the Autonomous University of Barcelona, Spain. I started my PhD in Neurosciences in 2010 in the Paediatric Neurology Group and in collaboration with the Headache and Neurological Pain Group, both from the Vall Hebron Research Institute, Barcelona, under the supervision of Dr Alfons Macaya and Dr Patricia Pozo-Rosich.

During my thesis I studied the genetic and epigenetic basis of migraine and of different paediatric paroxysmal neurological disorders, such as benign paroxysmal torticollis of infancy and alternating hemiplegia of childhood. During the last years, our research group became a member of the International Headache Genetics Consortium, which allowed me to meet some of the most renowned international experts in the migraine genetics field. Within this Consortium, we have collaborated in several projects, some of which are ongoing.

Although I have been mainly involved in genetic and epigenetic research, I do also have experience in cortical spreading depression animal models. My involvement in electrophysiological experiments has enlarged my interest in studying the pathophysiology of migraine. Hence I contacted Professor Peter Goadsby in order to become a member of his research group.

The fellowship proposal is entitled ‘Brainstem modulation in the pathophysiology of migraine’. The aim of this project is to explore the involvement of the locus coeruleus and associated brainstem nuclei in experimental models of headache.

Working with Professor Peter Goadsby and Dr Philip Holland will be a great honour and a great chance to improve my scientific skills and to build long lasting collaboration between Spain and the UK.
By observing the top headache specialists in the world, my experience and knowledge in handling chronic intractable headaches has been enhanced.

Headache Pioneer Programme

Kiratikorn Vongvaivanich, Thailand

Programme undertaken in June 2014
Jefferson Headache Center, Philadelphia, USA
Mentor: Stephen Silberstein

During my observation at Jefferson I was involved in the daily outpatient clinic at Jefferson hospital, the BOTOX clinic, headache inpatient unit rounding at the Methodist hospital with Professor Silberstein and colleagues, and multidisciplinary headache team care (biofeedback, relaxation techniques, yoga, nutritional education). There is a weekly headache inpatient unit conference at Methodist hospital with a linked teleconference to Jefferson hospital, and a weekly presentation of interesting topics. I also attended educational conferences.

With Professor Silberstein and Professor David Dodick I wrote two papers, one literature review (Late-life Migraine accompaniments) and one case report with review (Cerebral amyloid angiopathy presenting as auras in late-life migraine accompaniments). The literature review has been accepted for publication in Cephalalgia.

Through this fellowship I have had an opportunity to successfully and comprehensively observe various headache patients and learn the treatment for both outpatients and inpatients, and the multidisciplinary team approach. I can fully say I have achieved all of my initial aims.

By observing the headache specialists and team who all are the top-notch experts in the world, my experience and knowledge in handling chronic intractable headaches, including chronic migraine, chronic TACs, and atypical headache, has been enhanced, especially in intravenous headache treatment (inpatient unit). Not many centres in the world practice intravenous medicines in the systematically holistic treatment as such. The multidisciplinary team as observed was very efficiently disciplined, which has greatly inspired me to improve and develop a framework for my own headache clinic in Thailand.

I would like to thank the IHS committee for having developed the excellent programme which allows applicants across the world to enjoy an opportunity to observe and learn in a world-class headache centre. I would also like to thank David Dodick for recommending me to the Jefferson Headache Programme and helping me with the article.

Applicants will enjoy the opportunity to observe various headache patients and learn how the treatment is done in both standardised and advanced way by headache experts, which benefits both the applicants and the countries.
Congratulations to the Headache Excellence Tournament and Poster Prize winners

With Stephen Silberstein and Nucharin Jindawong

With William Young

IHS Juniors' activities at EHMTIC

Anna Andreou

During the European Headache and Migraine Trust International Congress (EHMTIC) in Copenhagen, the IHS Trainees and Residents special interest group (a.k.a. Junior’s committee) successfully organised a number of activities that aimed to promote scientific research driven by young scientists and networking opportunities among juniors.

In the last 2 years, we have successfully organised the Headache Trainees Excellence Tournament. This year, we gave the opportunity to six young scientists, who were shortlisted after blinded assessment of their submitted abstract, to present their research and be judged by the audience, not only for the scientific content of their presentation, but also for their presentation skills. Our two winners chosen by the audience were Yurong Gao and Inga Kröger. They were both awarded an impressive display trophy and €500 that they can use for their registration to the next International Headache Congress.

During the closing ceremony our committee awarded the best Junior poster award, chosen by our committee members, and the People’s choice award, selected by the public vote. We congratulate Faisal Amin and Dorthe Kjeldgaard Nielsen, the first authors of the awarded posters.

On the Saturday of the 2014 EHMTIC the traditional Juniors’ Forum took place at Café Apropos. Every year this forum has been well attended and aims to promote networking among young scientists in a laid-back atmosphere. This year’s event attracted nearly 100 young headache researchers and clinicians from all around the world. The evening started with a typical Danish dinner following which the attendees hit the dance-floor.

Most importantly, our committee offered over 22 travel grants to young headache researchers, many from developing countries, providing them with a valuable opportunity to attend EHMTIC. We also offered through a short-stay scholarship the opportunity for a young scientist from a developing country to spend 6 weeks as a visiting scholar at the Danish Headache Centre. This initiative aims to improve headache practice, research and education in developing countries,
and to increase transnational mobility of young researchers living in developing countries by providing grants for short, goal-directed stays in headache research centres and clinics. This year Cristina Chicu-Hadirca from Moldova was awarded this scholarship and we would like to thank Messoud Ashina for housing Cristina in his clinic.

Within the Trainees and Residents SIG we are committed to promote activities that will benefit junior headache scientists. We will be organising similar activities during the International Headache Congress in 2015 and you can find more information and application forms on the IHS website. We do invite all of you to join us and support our activities.

IHC 2015 meeting highlights

Messoud Ashina and Andrew Charles, Programme Co-Chairmen

- Current and future leaders in headache medicine speaking about recent research, including the most up-to-date understanding of headache mechanisms and application of this understanding to headache patients
- Presentations regarding promising new therapies on the horizon
- Practical tips for diagnosing and managing headache in adults and children
- A joint symposium with the International Association of the Study of Pain which will enable cross-talk between researchers and clinicians specialising in headache and those specialising in other pain disorders
- A relaxed and collegial environment in the beautiful city of Valencia

For full programme details visit the IHC 2015 website
IHS Fellowship 2015
Applications now invited for basic or clinical research, or a combination of both

APPLY NOW – visit the IHS website

Application criteria
Applicants should be within 4 years of completing training (MD, PhD, specialty training, whatever was last) not including non-professional periods

Value of fellowship £ 50,000

Deadline for applications 1 April 2015

Headache Pioneer Programme
Programme of up to 12 weeks offered to young researchers from developing countries

Pioneers will visit a major headache centre and work with a mentor of their choice

APPLY NOW – visit the IHS website

Application criteria
Applicants should have finished their neurology training no more than 10 years ago and be resident in any of the Hinari countries

See the IHS website for more information

Value of grant US$ 10,000

Deadline for applications 15 March 2015
Travel grants to the 17th International Headache Congress (IHC) Valencia, Spain, May 2015 now available

**APPLY NOW – visit the IHS website**

**Application criteria**
Currently a trainee or resident (graduate or PhD students, postdoctoral scholars or clinicians in training; priority will be given to those who are less than 7 years in postdoctoral or clinical training)

- At least one submitted abstract to IHC
- OR
- Young physicians from developing countries

**Value of grant**
European destinations: € 525 or US$ 700 / Non-European destinations: € 975 or US$ 1,300

**Deadline for applications** 7 February 2015

---

**Peri-IHC Short-stay Scholarships**

Scholarships of up to 6 weeks offered to young researchers from developing countries

- Scholars will attend IHC and visit one of three headache centres in Spain

**APPLY NOW – visit the IHS website**

**Application criteria**
PhD students, residents in Neurology or Neurophysiology or post-graduate research fellows within 7 years from completion of their training, who are resident in any of the Hinari countries

**See the IHS website for more information**

**Value of grant** € 5,000

**Deadline for applications** 1 February 2015
## Calendar of events

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Country</th>
<th>Contact/information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14–17 May</td>
<td>5th International Congress on Neuropathic pain</td>
<td>Nice, France</td>
<td>neupsig.kenes.com/</td>
</tr>
<tr>
<td>18–21 June</td>
<td>57th Annual Scientific Meeting of the American Headache Society</td>
<td>Washington, USA</td>
<td><a href="http://www.americanheadachesociety.org/home/">www.americanheadachesociety.org/home/</a></td>
</tr>
<tr>
<td>20–23 June</td>
<td>1st Congress of the European Academy of Neurology</td>
<td>Berlin, Germany</td>
<td><a href="http://www.eaneurology.org/berlin2015/">www.eaneurology.org/berlin2015/</a></td>
</tr>
<tr>
<td>31 October – 5 November</td>
<td>XXII World Congress of Neurology</td>
<td>Santiago, Chile</td>
<td><a href="http://www.wcn-neurology.com/">www.wcn-neurology.com/</a></td>
</tr>
</tbody>
</table>

If you would like IHS to include your meeting on the IHS website and newsletter please contact Carol Taylor with the details

## IMPORTANT DATES

IHS Short-stay scholarship application deadline: 1 February 2015
IHS IHC Travel Grant application deadline: 7 February 2015
IHS Headache Pioneer Programme application deadline: 15 March 2015
IHS Fellowship application deadline: 1 April 2015
To advance headache science, education and management and promote headache awareness worldwide

Join the IHS

- Subscription and online access to Cephalalgia and The Neuroscientist
- Be a member of a privileged network of professionals
- Free access to the IHS Online Learning Centre
- Early access to IHS International Guidelines
- Eligibility to apply for IHS Fellowships and other awards
- Free download of Cephalalgia App

Affiliate Membership – if you are a member of the American Headache Society you can join as an Online-only member through them – please see the AHS website www.americanheadachesociety.org or email ahshq@talley.com for more details.

Affiliate Membership fee: $120

If you prefer full membership, with a print copy of Cephalalgia, please join directly with IHS

Browse the journal and listen to free podcasts at http://cep.sagepub.com
Submit your paper at http://mc.manuscriptcentral.com/cephalalgia

To learn more about our different membership categories and related benefits please visit us at www.ihs-headache.org