



Newsletter

Leading headache science, education and management globally

Letter from the President

Contents

**Update from the
Honorary Secretary**
Patricia Pozo-Rosich

**IHS Regional
Headache Conference**
Marco Lisicki

7th HEAD 2022
Eduardo Rivera
Mancilla and Edoardo
Caronna

**A history of IHS
grants and their
impact on headache
careers**
Francesca Puledda,
Shuu-Jiun Wang,
Hans-Christoph Diener
Henrik Schytz

**IHS Fellowship
reports**
Connar Westgate
Vimala Bharadwaj

**IHS Short-stay
scholarship reports**
Renato Arruda
Garik Yeganyan

**IHS Allied specialty
scholarship reports**
Arão Belitardo de
Oliveira
Valeria Caponetto

**IHS Visiting Professor
reports**
Kenya – Dilraj Sokhi
Moldova – Oxana Grosu

**Report of the 9th
ARCH meeting**
Tissa Wijeratne

**Grant opportunities
2023**

Calendar of events

Editorial board

Cristina Tassorelli
Patricia Pozo-Rosich
Mario Peres
Henrik Schytz
Carol Taylor



Cristina Tassorelli

Dear Colleagues and Friends,

The last quarter of 2022 has been full of activities and achievements for IHS. They were so numerous and worth attention that we decided to report details of only some of them in the following sections of the newsletter, others were postponed to the next edition to grant the well-deserved visibility.

This is of course good news because it means that all the energy and preparatory work that IHS, with its Directors and Committee and SIG Chairs, has invested in moving forward has not been held back by the hurdles imposed by the unfavourable global situation endured over the past few years. Quite the contrary, one by one, planned IHS initiatives are transitioning from the incubator to full daylight and are doing so with a success and an impact that in some cases far exceeds expectations.

The precious possibility to interact directly in meetings has probably favoured and catalysed these results. We have all become great experts in holding and participating in virtual meetings, we are very effective in raise-my-hand, lower-my-hand, add a comment in the chat box, but let's admit it, nothing compares with the collaborative participation and teamwork thinking that we can achieve with in person participation, when the conversation is not regimented by tools. We were all longing for the possibility to network, plan and even dream again in person with friends, colleagues and partners who we have not had the possibility to see for such a long time. This has become true (again) in this past quarter and it is an immense joy.

I will not rob any more room to the report of activities. Despite our hurried lives and busy schedules, this is one time of the year when we should take one another and what we have less for granted. This is why I will close this letter with a picture taken during the course on headache held by IHS last November in Malawi in collaboration with the DREAM charity within the ROPE-IHS initiative (Regional Outreach Programme of IHS). It shows a group of smiling people on a sunny day: they are happy because all together they are doing a thing that is small but has the potential to improve the lives of many, even if only a little. This is the core of the IHS mission and this is what keeps us going when we are tired and busy.

For now, enjoy the Season with our best wishes for safe, happy and healthy holidays. A new year is around the corner and IHS is already preparing its contribution to make the world a better one for its constituency and for those affected by headaches around the world.



ROPE-IHS – 1st IHS educational event in Malawi



With our best wishes for a peaceful and prosperous 2023.

Cristina Tassorelli, MD, PhD
cristina4IHS@gmail.com

Update from the Honorary Secretary



Patricia Pozo-Rosich

IHC 2023 – abstract submission now open

It is my pleasure to be able to share with you an update on IHS activities since the last Newsletter distributed in July 2022.

IHS International Headache Congress (IHC) 2023, Seoul, Korea

We are hugely excited to bring the IHC to Seoul in September 2023. This will be the first in-person IHC since Dublin in 2019, and the first held in Asia since 2005. Those local to the region will be familiar with everything that the wonderful city of Seoul has to offer; delegates who will be making their way to Seoul, and the Republic of Korea, for the first time will be able to enjoy the incredible sights, sounds, smells and tastes throughout the city. The congress theme is 'Rising sun over headaches: towards a global access to headache science, technology and healing' and an exciting programme has been put together by the Scientific Programme Chairs, Gianluca Coppola, Hayrunnisa Bolay and KC Brennan. Abstract submission is open – deadline 10 May 2023. Registration will open within the next month. Reduced early-bird registration is available until 28 June 2023 and IHS members receive discounted registration fees! More information on the **IHC 2023 website** We look forward to seeing you in Seoul.

Cephalalgia

As mentioned in the July newsletter, from 2023 *Cephalalgia* will transition to a gold open-access journal, therefore all papers accepted for *Cephalalgia* will be immediately free to view by everyone. This will remove all barriers to clinicians and researchers worldwide in learning of the latest developments in the field of headache medicine and research. As the journal will be open-access, reading and downloading articles will no longer be an IHS member benefit. IHS members will receive discounted Article Processing Charges for *Cephalalgia* and *Cephalalgia Reports* accepted manuscripts.



**IHS members
receive
discounted APC
charges for
*Cephalalgia***

**Ottar Sjaastad,
founding Editor
of *Cephalalgia*,
has passed
away aged 94**

**Revised cluster
headache
clinical trial
guidelines
published**

Professor Arne May, current Editor-in-Chief, is due to end his term of office in December 2023, but has kindly offered to remain as Editor-in-Chief for an additional period of 1 year in 2024. IHS is now inviting applications for the position of a new Editor-in-Chief who will officially assume responsibility on 1 January 2025, but will be invited to work alongside Professor May during 2024 to continue the successful transition to the new editorial operation with the open-access publication. All IHS members who fulfil the eligibility criteria are invited to apply for this vacancy. The application deadline is 9 January 2023.

Professor Ottar Sjaastad

Professor Ottar Sjaastad, founding Editor-in-Chief of *Cephalalgia*, passed away on 30 August 2022, aged 94. Professor Sjaastad was central to the establishment of the Norwegian Migraine Society, the Scandinavian Migraine Society, and IHS. He founded *Cephalalgia*, originally published by the Scandinavian University Press, in 1981 and was Editor-in-Chief for 9 years, and his leadership in those years helped make *Cephalalgia* the leading headache journal it is today. He will be most remembered for his lasting scientific achievements with the description of new headache entities (chronic paroxysmal hemicrania [CPH] in 1974, hemicrania continua in 1984, and SUNCT in 1989, which are still included in the International Classification of Headache Disorders (ICHD). A full obituary authored by his Norwegian colleagues Lars Jacob Stovner, Torbjørn Fredriksen and Trond Sand, can be **read in *Cephalalgia***.

IHS Clinical Trial guidelines

IHS is pleased to have published the revised **Guidelines for Controlled Clinical Trials in Cluster Headache** in the December issue of *Cephalalgia*. The last cluster headache guidelines were published in 1995; the abstract states that 'With the emergence of new medications, neuromodulation devices and trial designs, an updated version of the International Headache Society Guidelines for Controlled Clinical Trials in Cluster Headache is warranted. Given the scarcity of evidence-based data for cluster headache therapies, the update is largely consensus-based, but takes into account lessons learned from recent trials and demands by patients.' We are grateful to the authors, lead by Jean Schoenen and Michel Ferrari, and the Chair of the Clinical Trials Committee, Gisela Terwindt, for their dedicated efforts on this publication.

Development of guidelines on idiopathic intracranial hypertension and post-traumatic headache are ongoing and we hope will be published during 2023.

Grants and fellowships

Many of the delayed grants from 2020 and 2021 have taken place over the last few months and many of the reports can be read in this newsletter.

The Board has just approved the budgets for the grant opportunities in 2023 and these are listed on page 22.

The Visiting Professors project has also re-opened with Visiting Professors teaching in Kenya, Cameroon, Cambodia, and at a virtual meeting in Moldova. Reports from Kenya and Moldova are included in this newsletter, and the Cameroon and Cambodia reports will follow in the next issue.

IHS Regional Headache Conference

The first IHS Regional Headache Conference (RHC) was held in Buenos Aires, Argentina, from 29 September to 1 October. The varied programme including 15 international speakers and 19 regional speakers was given to an audience of around 150 delegates from many countries in the Latin American region. The report is included in this newsletter and thanks go to Conference Chairs, Maria Teresa Goicochea and Messoud Ashina, and Scientific Programme Chairs, Marco Lisicki and Jan Hoffmann, for their dedicated work in ensuring this highly successful conference which we hope to repeat in different regions in non-IHC years.



**Members –
remember to
renew your
membership
before the end
of 2022!**

IHS International Headache Academy (iHEAD)

IHS held the 7th European iHEAD in London immediately before the Migraine Trust International Symposium. Chaired by Professors Peter Goadsby and Patricia Pozo-Rosich, around 80 junior delegates from Europe and many other countries experienced high-level teaching from some of the world's leading headache researchers and clinicians. The academy report is available in this newsletter.

Membership

Members – it's time to renew your membership for 2023. Please help our administrative team by renewing before the end of the year. You should have received invitations to renew by email. As an IHS member you will receive discounted registration fees to IHC 2023, Seoul, September 2023, discounted Article Processing Charges for *Cephalalgia* and *Cephalalgia Reports* accepted manuscripts, access to the IHS website Online Learning Centre – videos, podcasts, webinars, learning institute, access to the deep backfile of *Cephalalgia*, online access to *The Neuroscientist* journal, and the opportunity to contribute and have early access to IHS guidelines. If you have any queries regarding your membership please contact **Carol Taylor**.

Patricia Pozo-Rosich
ppozo@vhebron.net

IHS Regional Headache Conference: bringing headache education where it is needed the most

**1st IHS Regional
Headache
Conference
held in Latin
America**



Marco Lisicki

Most of the burden associated with headache disorders is carried by people living in developing countries.¹ Latin America encompasses numerous economically-struggling nations that together represent about 9% of the world population. Recent analyses suggest that there are several barriers significantly hampering the progress of the headache field in this region.²

To help address this situation, from 29 September to 1 October the first IHS Regional Headache Conference (RHC) was held in Buenos Aires, Argentina. One hundred and fifty participants from eight different Latin American countries ranging from Mexico to Chile attended the meeting. The event was founded by the IHS and Co-Chaired by local IHS Board member Maria Teresa Goicochea and IHS Past-President Messoud Ashina. The Scientific Programme Co-Chairs were Marco Lisicki and Jan Hoffmann.

The scientific programme started with a workshop aiming to provide basic skills to those wishing to get involved in headache research, followed by stimulating update sessions on specific topics considered locally relevant. Topics included medication overuse headache, refractory chronic headache, red flags in the emergency room, tension-type headache, cluster headache and current and emerging treatments in migraine. The practical workshops offered advice on how to set up a headache laboratory, plan a study, and write a grant research proposal. Keynote speakers



RHC facilitated interaction between top international clinicians in the headache field and local enthusiastic HCPs

included IHS President Cristina Tassorelli, President-elect Rami Burstein, Past-President Messoud Ashina and Honorary Secretary Patricia Pozo-Rosich, plus 11 other international key opinion leaders and 19 regional specialists. There were also spaces for interactive clinical-case discussions as well as sessions where the best posters were presented.

The RHC facilitated the interaction between some of the top clinicians and scientists in the headache field and local enthusiastic headache-dedicated healthcare providers, widening the horizons of patient care and research for regional professionals.



The submitted abstracts were published in *Cephalalgia*; the abstracts and posters are available on the **RHC page of the IHS website**.

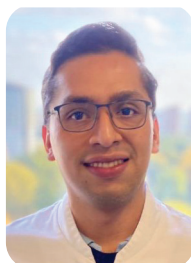


While the conference could be considered a success from several perspectives, only the advancement of the field in the region within the next years will confirm that IHS' commitment along with local efforts constitutes the means towards inclusive global development.

1. Ashina M, Katsarava Z, Do TP, et al. Migraine: epidemiology and systems of care. *Lancet* 2021;397:1485–1495.
2. Lisicki M, Souza MNP, de Oliveira AB, et al. Bridging the gaps of headache care for underserved populations: current status of the headache field in Latin America. *Cephalalgia* 2022;42:1086–1090.

7th International Headache Academy 2022 London, UK

Delegates from 26 countries attended the unique iHEAD academy



**Eduardo Rivera Mancilla
and Edoardo Caronna**

The 7th International Headache Academy (iHEAD) was held at the Hallam Conference Centre, London, UK, from 6–7 September 2022. The 1.5-day course was run by IHS and invited delegates from around the world to meet and participate in an educational programme focused on clinical and basic research aspects of headache. This unique course offered highly interactive masterclasses on an overview of headache, including its pathophysiology, diagnosis, and management of migraine and related headache disorders, as well as different practical workshops on clinical trial designs, manuscript preparation and publication, and animal and human headache research methodology.

In total, 75 delegates from 26 different countries attended this educational programme including neurology residents, headache medicine fellows, medical doctors, and both PhD clinicians and researchers in order to address the most important and recent clinical and research aspects of headache medicine.

On day 1, a lively debate was generated by the interactive clinical teaching cases, which focused on: Perfusion-CT alterations in a patient with migraine with aura mimicking stroke (Case 1); Persistent post idiopathic intracranial hypertension (IIH) headache (Case 2); and Headache associated with muscle weakness (Case 3). This session was followed by discussion on three hot clinical topics: 1) Challenges with complex chronic headache



The programme included debates, case discussions, and workshops lead by experts in headache medicine and research



In each debate, two opponent teams provided arguments either in favour or against the assigned topic. The debates were highly interesting and allowed a structured revision of the research published on those subjects.

The second day provided relevant educational content thanks to two outstanding lectures by well-recognised professionals in the headache field. The first talk, by James McGinley, Biostatistics Editor of *Cephalalgia*, focused on Significant errors and irritations in statistical methods, providing important practical suggestions to iHEAD delegates to improve statistics in their own research. The second talk, by Patricia Pozo-Rosich, provided a clear overview of a novel topic, Omics in migraine.

On day 2, each delegate also had the opportunity to follow two different interactive workshops held by opinion leaders in headache. The workshop choices were: 1) New alternative trial designs and outcome measures for migraine and cluster headache; 2) How to publish and why this is not enough; 3) Human models of migraine: the pitfalls; 4) What can be done to improve the field of headache and IHS; and 5) Medication overuse headache.

Overall, iHEAD delegates expressed a high degree of satisfaction on the scientific quality of the workshops which provided valuable take-home messages for both clinicians and researchers. They were also particularly positive on the interactive format, creating lively discussions.

Continuing the programme on day 2, iHEAD delegates also received a talk by Rob Music, Chief Executive of The Migraine Trust, the UK headache patient association, who provided insight into the patients' perspective of the disease. In the afternoon, there was a session dedicated to discuss three relevant basic science papers: 1) Genome-wide analysis of 102,084 migraine cases identifies 123 risk loci and subtype-specific risk alleles; 2) Migraine therapeutics differentially modulate the calcitonin gene-related peptide (CGRP) pathway; and 3) Changes in the gene expression profile during spontaneous migraine attacks. As a final activity, two teams presented their research proposal to all other iHEAD delegates. The teams had previously been created based on iHEAD participants who expressed an interest in doing collaborative projects, gathering people from different countries and with different educational backgrounds within each team. Team A proposed a project aiming to describe access to migraine care in different countries, while Team B proposed to investigate the role of the endocannabinoid system as a potential biomarker in migraine. Following the academy the projects were circulated to iHEAD participants who voted for the best project. iHEAD 2022 concluded with some final remarks and messages from Peter Goadsby.



The debates allowed a structured revision of the research published on the subjects

All young clinicians and researchers enrolled in the headache field should keep an eye open for future iHEAD events



To continue the networking opportunities for the delegates, a drinks reception was held at the Hallam Conference Center on the first evening, and a meeting at a local pub on the second evening, giving iHEAD delegates the opportunity to socialise, interact and get to know each other better.

On behalf of all participants, we would like to thank the Organising Committee, in particular the Chairs Professors Peter Goadsby and Patricia Pozo-Rosich, and IHS for their support and collaboration in this magnificent event. We would also like to thank the sponsors (Lilly and Lundbeck) for their support of iHEAD 2022.

Finally, to all young clinicians and researchers enrolled in the headache field who could not attend this time, please keep an eye open for future iHEAD events.



A history of IHS grants and their impact on headache careers



Francesca Puledra, Shuu-Jiun Wang, Hans-Christoph Diener and Henrik Winther Schytz

IHS has been offering multiple award opportunities for young researchers and clinicians for many years, with the aim of supporting the development of careers in headache science and medicine.

In order to assess the outcomes of the IHS grants, a questionnaire was sent to all previous recipients, investigating a series of aspects related to their work, both during and after award completion.

Of 44 total questionnaires sent, 36 were returned. Eighty-one percent of the recipients reported to have remained in the headache field since the award, half of them held a current academic position and over three-quarters had stayed in contact with the host institution. The totality of questionnaire responders stated that the grant had had a significantly positive impact on their careers.

81% of IHS grant recipients have remained in the headache field



**Application for
IHS grants in
2023 will open
in January 2023
– visit the IHS
website early in
the new year**

**Specific grants
available
for young
clinicians and
researchers
from lower-
income
countries**

IHS grants have assisted many young researchers in building an academic and clinical career in the field of headache throughout the years.

This is the abstract of an article written and published in *Cephalalgia*. The full article can be read [here](#).

IHS Grants

IHS will be offering grants in 2023 – check the IHS website for more details early in 2023.

IHS Clinical and Basic Science Headache Research Fellowship Award

The IHS Fellowship is a 1-year fellowship award which aims to support innovative and impactful research from young investigators, promote the career of young investigators in the field of headache, and increase the knowledge base of headache disorders. Applications for basic or clinical science headache research, or a combination of basic and clinical research, are considered. Details of past IHS Fellowship recipients can be found on the [Science and Research Committee page](#).

IHS Junior Research Grant

The IHS Junior Research Grant aims to support innovative and impactful research from young investigators, promote the career of young investigators in the field of headache, and increase the knowledge base of headache disorders. Applications for basic or clinical headache research, or a combination of basic and clinical research, will be considered.

IHS Secondary Headache Research Grant

The IHS Secondary Headache Research Grant aims to support research related to secondary headache disorders, including preclinical and clinical aspects, from epidemiology, pathophysiology, clinical presentation to diagnosis and treatment. Applications for basic or clinical headache research, or a combination of basic and clinical research, will be considered.

IHS Research into Headache in Children and Adolescents – Seed Funding Grant

IHS funds grants to initiate projects that study headaches in children and adolescents. The purpose of these awards is intended to initiate new projects that will result in extramural funding.

IHS Headache Science Awards

Two Headache Science Awards are offered, one for early-career scientists, and one for mid-career scientists. The Awards are offered on an annual basis to recognise promising early- and mid-career basic, clinical or translational scientists who are members of IHS and whose research has contributed to the headache field.

IHS Allied Specialties Scholarships

The IHS Allied Specialties Scholarships aim to develop expertise in the field of headache for allied specialties, e.g. nurses, therapists. The Allied Specialties Scholarship facilitates training through a short-stay scholarship for clinical training/research project in a major headache centre.

IHC Travel grants

Travel grants are offered to young researchers and physicians to attend the bi-ennial International Headache Congress (IHC).

Grants for young physicians and researchers living in countries included in the World Bank listing as Lower-, Lower-middle and Upper-middle income

These programmes aim to encourage physicians to visit a specialised headache institution abroad and actively increase knowledge on headache disorders and specialised headache management. It is also intended to spread this knowledge to their home countries without headache infrastructure or expertise.

IHS Trainee Programme

Clinical training period of up to 12 weeks at an international headache centre.

IHS Short-stay Scholarship

Clinical training period of up to 6 weeks at an international headache centre. In IHC years this will be in the region where the IHC is held and scholars will attend the IHC. In non-IHC years the scholar will attend a major headache congress and headache centre in the same region.

IHS Fellowship reports



Connor Westgate, UK

The search for disease mechanisms and new drug targets in idiopathic intracranial hypertension (IIH)

Fellowship from October 2019 to September 2021

Danish Headache Center, Glostrup, Denmark

Mentor: Sajedeh Eftekhari

Overview

The initial plan was to address the three aims of the fellowship: 1) Assess whether diet induced obesity modulated intracranial pressure (ICP); 2) Assess whether raised ICP can modulate headache-like behaviour; and 3) Assess whether pharmacological agents assumed to modulate ICP actually modulate ICP.

In aim 1, we aimed to assess the effects of diet induced obesity induced by a high fat diet and a 'cafeteria diet' as well as determine whether there were sex differences in the effect of obesity on intracranial pressure and assess potential molecular changes at tissues of interest. In aim 2, we were to use the rats generated in aim 1 and assess the effect of obesity in the context of raised pressure on cephalic cutaneous allodynia and assess molecular outcomes. In aim 3, we were to assess the effect of acetazolamide, topiramate and somatostatin analogues on ICP reduction at clinically relevant doses and then treat the phenotypes observed in aims 1 and 2.

Summary of research

My initial research activities focused on learning the techniques to allow me to complete the aims of the fellowship – telemetry implantation surgery for the ICP recording and von frey testing for allodynia. I established the standard procedure for ICP analysis within my group. This initial period led to two publications, a method paper for our ICP measuring method in fluids

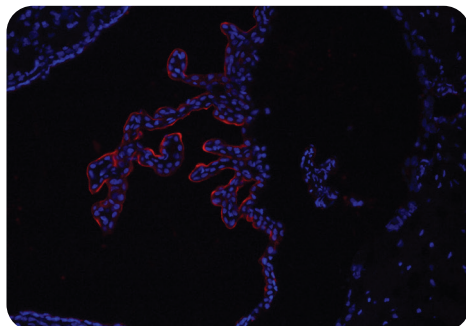


The effects of diet induced obesity induced by a high fat diet and whether there are sex differences in the effect of obesity on intracranial pressure is investigated

We demonstrated that trigeminal ganglia from obese rats had increased expression of CGRP

The final year of the fellowship focused on investigating the effects of acetazolamide and topiramate on intracranial pressure

and barriers of the CNS (<https://doi.org/10.1186/s12987-020-00199-z>), and a review focused on the regulation of ICP pressure, also in fluids and barriers of the CNS (<https://doi.org/10.1186/s12987-019-0155-4>).



Delicate apical staining of aquaporin-1 (red) at choroid plexus performed by myself.

Addressing the first two aims of the fellowship, we assessed the effects of diet-induced obesity on intracranial pressure, cephalic sensitivity, and also ocular outcome. Here we demonstrated that obesity in female rats increases ICP and causes cephalic sensitivity and retinal swelling. Moreover, we demonstrated that trigeminal ganglia from obese rats had increased expression of CGRP and transient receptor potential cation channel subfamily V member 1 (TRPV1), corroborating our behavioural studies. Finally, we assessed the effect of acetazolamide and topiramate on ICP in lean female rats. Here we focused on

assessing both the chronic effects and the acute effects of these drugs. Additionally, we assessed the molecular consequences of these drugs on their proposed site of action, the choroid plexus. Here we demonstrate that these drugs lower ICP independently of weight loss. This was combined with alterations in gene expression at the choroid plexus with topiramate but not acetazolamide.

In the following 9 months, my experimental work focused on investigating the role obesity has on ICP, headache behaviour and ocular outcome. Over the course of three experimental rounds, each lasting 20 weeks, the obese female rats had raised ICP and cephalic cutaneous allodynia. Following completion of the rodent experiment I carried out molecular analysis on the trigeminal ganglion. During this period, we collaborated internally and a student within our institute assessed the ocular outcome in the rodents. This collaboration strengthened our research, allowing us to demonstrate that diet induced obesity recapitulates multiple facets of IIH. This work was published in *Scientific Reports* (<https://doi.org/10.1038/s41598-022-13181-6>). This work coincided with the start of the COVID-19 pandemic.

During the time of the pandemic, I conceived the idea for and wrote a review focusing on the link between obesity and headache. This was published in the *Journal of Headache and Pain*: <https://doi.org/10.1186/s10194-021-01337-0>.

The final year of the fellowship focused on investigating the effects of acetazolamide and topiramate on intracranial pressure. I spent my time doing ICP surgeries and assessing the effects of these drugs. During this period, I supervised two masters students from The Pharma Institute, Copenhagen University. These students assessed the role of these drugs at the choroid plexus, the organ that secretes cerebrospinal fluid (CSF), thus allowing a determination of whether these drugs act at this organ. Also during this period I fostered a collaboration with a group at the University of Copenhagen where they carried out CSF secretion assays for us to complement our ICP data. This manuscript is ready to submit.

During the fellowship the work was presented at various meetings: DHOS October 2021, Copenhagen: Invited talk 'Diet induced obesity causes cephalic cutaneous allodynia in the context of raised intracranial pressure'; IHC September 2021, online: IHS Fellowship lecture 'The search for disease mechanisms and drug targets in IIH; Brain water symposium August 2021, Copenhagen: Invited talk 'Towards an animal model of IIH'.

Conclusion

The COVID-19 pandemic necessitated re-evaluation of the aims so the primary aims could be achieved, whereas the more secondary aims were excluded. However, we have achieved a broad set of results which are in keeping with the original aims.



The fellowship has allowed me to network within multiple fields, allowing the formation of productive collaborations

We demonstrated that obese female rats have increased ICP and this is accompanied by optic disk swelling and cephalic cutaneous allodynia, reaching our goals for aims 1 and 2. Additionally, for aim 3 we assessed the effect of the ICP modulating drugs in ICP in normal pressure female rats, showing a reduction in ICP. Despite the pandemic limiting our research, I am incredibly pleased with the work that I have produced.

The fellowship will affect my future career in a multitude of ways. From 1 October 2022 I am starting a post-doctoral fellowship at the Danish Headache Centre which was awarded by the Lundbeck Foundation, allowing me to investigate in detail the interplay between headache and ICP. This would not have been possible if not for the training and skills that I gained because of the fellowship. Moreover, the fellowship has allowed me to network within multiple fields, allowing the formation of productive collaborations. Finally, the fellowship, in combination with the pandemic, has allowed me to gain my first real experience of student supervision.

I would recommend taking the opportunity to take up mentoring/supervision positions while undertaking the fellowship. For me this was the highlight as it has helped facilitate my transition from a pure bench researcher to a position of responsibility. Don't be afraid to foster collaborations, these will add substantially to your work.



Vimala Bharadwaj, India/USA

Calvarial periosteal nociceptors in post-traumatic headache: oxytocin delivery strategy

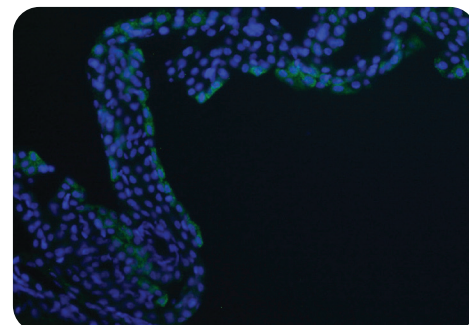
Fellowship from September 2021 to August 2022

Stanford University, Stanford, USA

Mentor: David Yeomans

Overview

A critical gap exists in our understanding of the pathophysiology of post-traumatic headache (PTH), a common sequela to mild traumatic brain injury (mTBI). A potential strategy to alleviate these headaches may be by targeting the oxytocin receptors expressed on trigeminal nerve branches innervating the damaged calvarial periosteum (CP). Seminal studies suggest that the activation of CP trigeminal (CPT) sensory nerve terminals may play a role in some headaches. Previously, we reported that the binding of oxytocin (OT) to oxytocin receptors (OTR) on trigeminal ganglion (TG) neurons in vitro decreased their excitability, and nasal OT delivery reduced headache pain in mTBI-induced rats and chronic migraine patients. In addition, encapsulating OT into microparticles has been shown to have prolonged drug delivery abilities. Here, our objectives are to evaluate if: 1) CPT neurons and CP fibres express OT; 2) CP stimulation leads to activation of the TG neurons, and 3) mTBI induced inflammation increases OTR expression; 4) CP injection of OT following mTBI will reduce PTH-like allodynia; 5) CP injection of OTR antagonist prior to OT injection for PTH-related pain analysis; 6) co-label CPT neurons with OTR+CGRP expression; 7) develop OT-loaded microparticles; 8) test



Staining of a G-protein coupled receptor of interest in green at choroid plexus; note that not every cell expresses the protein of interest.

A critical gap exists in our understanding of the pathophysiology of PTH



Oxytocin receptor expressed on calvarial periosteal trigeminal afferents can be a potential target for oxytocin delivery for PTH-related pain modulation



OT-loaded microparticles in PTH rodent model to investigate the sustained analgesic effects.

Summary of research

Research till date: 1) CPT neurons and CP fibres expressed OTR: TG sections show abundant retrograde tracer labelling of the CPT neurons that co-express OTR. In CP tissue, OTR staining was significantly increased in the lipopolysaccharide inflammation vs saline; 2) CP stimulation led to rapid activation of the TG neurons: pERK levels (indicating neuronal

excitation) were significantly increased in the inflammatory mediators vs synthetic interstitial fluid group; 3) OTR expression in the TG is increased after mTBI; and 4) CP injection of OT following mTBI was anti-allodynic after 30 minutes and 1 hour after injection; 5) CP injection of OTR antagonist prevented the OT analgesic effect on the PTH-related pain in mice model of mTBI up to 1-hour post-injections; 6) we show CPT neurons co-label with OTR and CGRP antibody expression; 7) we developed poly lactic-co-glycolic acid (PGLA) microparticles encapsulated with OT; and 8) we demonstrate that PGLA-OT microparticles injected into the CP produced sustained analgesic effect in mTBI-induced allodynia for up to 24 hours post-injection.

In conclusion, we demonstrate that oxytocin receptor expressed on calvarial periosteal trigeminal afferents can be a potential target for oxytocin delivery for PTH-related pain modulation. This approach may enable the development of novel targeted therapeutic strategies for PTH.

Conclusion

Within the 1-year the fellowship I was able to complete the proposed research aims. I successfully transitioned from Dr Frank Porreca's group at the University of Arizona to Dr David Yeomans' laboratory at Stanford University where I gained expertise in novel techniques and concepts that will help me develop my independent career. I gained critical thinking, collaboration, networking and preliminary results to apply for my independence grant.

The IHS fellowship has been highly impactful for my career due to the new avenues and opportunities it opened up. The fellowship has supported my long-term goal by providing a rich environment for success. As an international postdoctoral trainee in the US, the eligibility criteria for many fellowships and grants are largely limited to US citizens. Therefore, gaining the IHS fellowship has been critical to my career development and has helped highlight my research work to the international headache community.

Over the course of the fellowship, I have applied for an early career development NIH grant: K99/RO1 (eligible for international postdocs). To be successful in gaining the grant, a critical component is the preliminary results. With thanks to the IHS fellowship, I was able to collect the required preliminary data for the NIH K99/RO1 deadline and I am currently in the process of re-submitting my grant application. Obtaining the highly competitive K99/RO1 grant will be exceedingly advantageous for my early career development.

I am continuing to work with Dr Yeomans for the next year and I plan to gain independent funding and transition to a faculty position at a highly regarded US university by mid-2024.



The IHS fellowship has been critical to my career development and has helped highlight my research work to the international headache community



I highly recommend future IHS fellowship applicants be open to explore new avenues. In addition, I would highly recommend reaching out to your mentors for guidance and support. I would not be in this position, if not for all of my mentors' support!

IHS Short-stay Scholarship reports



Renato Arruda, Brazil

Guy's and St Thomas' Headache Centre, London, UK
Mentor: Anna Andreou

I had the opportunity to follow several different and complex cases many of which I had not seen before

After 2 years since the COVID-19 pandemic begun, I could finally enjoy the opportunity of my short-stay scholarship and visit Guy's and St Thomas' Headache Centre for 2 months between May and June 2022.

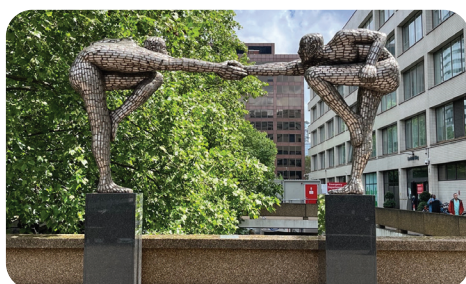
The Headache Centre has activities related with assistance, research and education. As in the Brazilian National Health System, the UK National Health System (NHS) is divided in complexity levels of care. The Guy's and St Thomas' Headache Centre is considered a high complex tertiary care centre. This means that usually only refractory headache patients are referred to this centre. Accordingly, I had the opportunity to follow several different and complex cases, many of them (diagnosis with unusual presentations, and different associated features) I had not seen before.



Social event with Dr Andreou and Dr Giorgio Lambru

Besides the great deal of clinical appointments, I could follow other activities related to headache treatment such as peripheral nerve blocks, botulinum toxin injections, neuromodulation techniques and even surgery sessions (spinal cord stimulation for refractory chronic pain conditions). I learnt a lot how the headache service is divided and settled, as well as the roles of different professionals involved in the care of a headache patient. I was also able to participate in research activities. The Guy's and St Thomas' Headache Centre co-ordinates and collaborates with several clinical studies, being an important centre of headache research. In this sense, I had the opportunity to get in contact with different branches of studies, design and methodology, and operational aspects of research. Furthermore, I was invited to participate in some study's data collection and analysis, and this was deeply rewarding to me.

This experience has enhanced the way I approach and manage headache disorders



"Cross the Divide" (2000), sculpture at the St Thomas' Hospital entrance

I am certain this experience enhanced the way I approach and manage headache disorders. During the observership period, I could follow rare, difficult to treat, complex cases that surely contributed to my knowledge. Furthermore, I have come back to my country, Brazil, packed with a bunch of ideas to implement in terms of research, and organisational aspects of a headache centre.



Mostly importantly, I have made great new friends and I am sure we will see each other again soon. I want to thank Dr Andreou and Dr Giorgio Lambru immensely for the hugely kind and warm welcome. Both were very accessible and open to questions and discussions during my time in London. Thanks to the headache nurses Beth Hill, Maddie Murphy and Bunmy for their cordiality. Thanks to my new and already wonderful friend Valeria Caponnetto; it was amazing to have your companionship these months. I want to deeply thank IHS for such an exquisite opportunity and I could not forget to thank Carol Taylor for her empathy and patience despite my concerns along the turbulent pandemic times.



With my new and already very good friend, Valeria Caponnetto from Italy



Garik Yeganyan, Armenia

Danish Headache Center, Glostrup, Denmark, and Hull Royal Infirmary, Hull, UK
Mentors: Rigmor Jensen and Fayyaz Ahmed

In 2019 I was awarded an IHS short-stay scholarship to visit the Danish Headache Centre. The COVID-19 pandemic postponed my visit for 2 years but I was finally able to travel in 2022.

From 29 August to 21 October I visited Danish Headache Centre (4 weeks) and Hull Royal Infirmary (4 weeks). These visits were incredible. I met many headache specialists and learned a lot of new knowledge from them.

In the Danish Headache Centre I had an opportunity to work with Professor Rigmor Jensen, Dr Henrik Schutz, Dr Nunu Lund, Dr Vlasta Vuković Cvetković, Dr Aydin Gozalov, and others. During clinics we were seeing patients, discussing cases, and made decisions together. The supervision system with senior doctors was an excellent opportunity to discuss the case one more time and fill in the gaps in the cases because of the language barrier. The Danish experience of managing patients with migraine, tension-type headache, post-traumatic headache, idiopathic intracranial hypertension, cluster headaches, etc. was very interesting, starting from taking history, discussing all the types of headaches and symptoms in detail, and finishing with treatment options according to guidelines. Here I understood how important patient education is – it helps both a patient and a doctor to deal with the disease as well as possible.



Danish Headache Center team

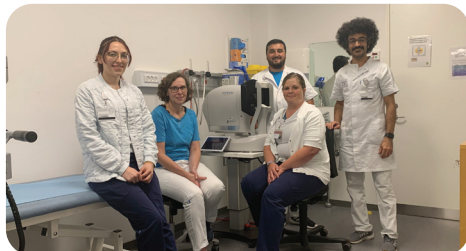
In the UK I participated in clinics with Professor Fayyaz Ahmed and other doctors from Hull Royal Infirmary and learned essential skills for working with botulinum toxin in chronic migraine patients. The UK model of patient management was faster and more focused on quick diagnosis and treating. This model is very useful in case of emergencies and large flow of patients.

**I met many
headache
specialists
and learned
a lot of new
knowledge
from them**



I am thinking about the possibilities to integrate my international experience into Armenian healthcare

In the UK I also had an opportunity of one visit to Leeds General Infirmary. With Dr Luis Idrovo I had an excellent clinic with very interesting and unusual cases and learned the technique of great and lesser occipital nerve blocks.



The Danish team and IHS grant recipient Faraidoon Haghdost (right)



Hull Royal Infirmary team

During this trip, I met new friends from all over the world, including but not limited to other IHS short-stay scholars. I am sure that this international friendship/partnership is useful for every young specialist. I am trying to start my career as a headache specialist in Armenia and am thinking about the possibilities to integrate my international experience into Armenian healthcare. Both the British and Danish models of patient management will be useful to create an Armenian model which will suit Armenian needs and capabilities.

IHS Allied Specialties Scholarship reports



Arão Belitardo de Oliveira, Brazil

Danish Headache Center, Glostrup, Denmark
Mentors: Rigmor Jensen, Henrik Schytz

This Scholarship was an immersion in the Danish Headache Center's (DHC) clinical and research activities and an overview of the Danish Public Healthcare System. I followed daily patients' appointments with neurologists, physiotherapists, psychologists, and nurses to know the full DHC multidisciplinary approach. During appointments with neurologists, first and follow-up visits, I followed and discussed everyday cases and their respective acute and preventive pharmacological approaches for primary and secondary headaches with medicines and procedures (e.g. greater occipital nerve blockage, botulinum toxin application, blood patch).

With the physiotherapy team, I followed the assessment and management of patients with post-traumatic headache, migraine, chronic tension-type headache, etc., the conduction of tenderness test assessment, craniocervical tests, and the prescription of deep muscle neck exercises, aerobic exercise training, and neck and whole-body strength and stretching exercises.

I learned from the psychologists' team the 8-step psychological approach with comprehensive patient education content and biofeedback sessions for anxiety, depression, and stress management related to headache disorders. With the nurse team, I followed the supporting care from in-person visits and telemedicine, also some acute and preventive procedures (intramuscular sumatriptan for cluster headache patients, botulinum toxin, etc.).

This scholarship was an immersion in the Danish Headache Center's clinical and research activities

My scholarship has resulted in a research collaboration between the University of São Paulo and the DHC

I learned from Professor Jensen current clinical and epidemiological research, in particular investigating idiopathic intracranial hypertension (IIH) headache. Also, I learned and discussed with other postdoctoral researchers working with Professor



Messoud Ashina and Dr Henrik Schytz several other projects investigating emerging neuropeptides and inflammatory biomarkers of headache disorders, in particular migraine and post-traumatic headache.

At Professor Inger Jansen-Olesen's Lab, under the supervision of Sarah Tangsgaard Christensen, I had the chance to learn from their translational models and current IIH research projects.

Finally, in terms of research, although not constituting an original goal of the Scholarship, we ended up settling on a research collaboration between the University of São Paulo (USP) and DHC to work with the dataset of the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil) cohort. The research collaboration will be developed in the next few months as we are still waiting for the ELSA-Brasil Research Board to share the data. The research project consists of exploring the influence of a physically active lifestyle on the associations between occupational health, headache disorders, sleep, and inflammatory biomarkers. The research title is 'The moderating effects of physical activity on the associations between job stress, sleep quality, inflammatory biomarkers, and headache disorders: a cross-sectional analysis in the ELSA-Brasil study'.

This Scholarship will impact my personal, professional, and academic activities. Through the research collaborations, we will together improve research quality and output in the headache epidemiology and physical activity field. In my clinical practice, learning from the DHC team enabled me to deliver more goal-oriented and specific management to a wider headache population. Besides this comprehensive clinical and scientific experience, living in Denmark represented a profound multicultural experience, which completely opened my mind as a healthcare professional, researcher, and person, considerably widening my world's vision.

Learning from the DHC team enabled me to deliver more goal-oriented and specific management to a wider headache population



I would like to acknowledge the DHC team as the kindest, most generous, and most hospitable group I have ever met. I cannot help mentioning especially the humble, wise, inspirational, and kind leadership and guidance of Professor Jensen and Dr Schytz who also made me feel at home by taking me into their personal family circle as I had to be distant from my family to attend this scholarship.



I learned a lot about headache and facial pain therapies that I would not have had the possibility to see in my country

I hope to improve the role of nursing in headache care in Italy, giving Italian nurses the possibility to increase their skills and be more involved in facing patients' needs



Valeria Caponnetto, Italy

Headache Centre, Guy's and St Thomas' NHS Foundation Trust and King's College London, London, United Kingdom
Mentor: Giorgio Lambru

During my stay, I had the possibility to follow both clinical and research activities. In particular, I followed clinics treating headache and facial pain from Monday to Thursday and I performed research activities on Fridays. In clinics I observed prescription of oral preventives, single pulse transcranial magnetic stimulation, and the prescription and administration of botulinum toxin and nerve blocks. I was also able to observe multidisciplinary clinics, involving also surgeons, for the treatment of facial pain and trigeminal neuralgia. In this way, I learned a lot about neuromodulation in headache pain management and surgical strategies. I also had the possibility to observe the placement of a neuromodulator in theatre. All clinics were led by very skilled professionals, either consultants or clinical nurse specialists, who were very inspiring for my future activities.

I also attended two educational and sharing-experience events: Headache Team Day in London – the clinical team shared the results of their services and shared new opportunities with the management team. During the meeting I had the opportunity to present a research project which will hopefully be realised as an international collaboration between my centre and Dr Lambru's team; Lilly Headache Specialist Practitioners Group Meeting; and 32nd Anglo Dutch Migraine Association annual conference.



On Fridays I collected and analysed data about anti-CGRP antibody long-term effectiveness (erenumab) and switch (erenumab to fremanezumab). Two manuscripts were written. I also drafted the protocol 'Multidisciplinary educational intervention in migraine care: an international multicentre feasibility study' which will be submitted for ethical approval.

The Scholarship has fully met my initial aims. I had the possibility to observe very skilled professionals and learned a lot about headache and facial pain therapies that I would not have had the possibility to see in my country. This was a very useful experience.

I hope to improve the role of nursing in headache care in Italy, giving Italian nurses the possibility to increase their skills and be more involved in facing patients' needs. In particular, I hope to maintain the collaboration with the centre I attended to export the clinical model in my centre regarding patient education and therapies administration.



IHS Visiting Professor reports

Presentations included lectures on episodic and chronic migraine and update on treatments, and a demonstration of injection treatment

The event brought together 16 of the 19 neurologists in Kenya



Kenya, May 2022 Dilraj Singh Sokhi

The IHS Visiting Professor (VP) grant, awarded in February 2020, was delayed until May 2022 when the pandemic continued to ease across the world. As per the original application, the grant would facilitate the travel and accommodation expenses of two internationally renowned headache expert neurologists as well as the delivery of a 1-day headache workshop.

The headache workshop on 21 May 2022 at Movenpick Hotel, Nairobi, followed nicely on from another separate neurology exchange endeavour, 'Neurology Connect Week 2022', from Aga Khan University (AKU)-Karachi, facilitated by Roche, that took place on

19–20 May. This allowed a longer conference-style meeting and was more attractive for local and regional physicians and neurologists to attend, including remotely via Zoom.



The two VPs who graciously took the opportunity to come to Nairobi to educate us on headache were Dr Manjit Matharu and Dr Cristina Tassorelli. The day was split into

three sessions: the first session included lectures on episodic and chronic migraine for general physicians and neurologists, and neurobiology and update on treatments for migraine and cluster headache; the second session was local experiences on headache management based on cases, including concurrent mental health issues with headache in Ethiopia, delivered by Dr Mamushet.

In the afternoon, the VPs went through injection treatment of migraine, including a didactic session first followed by a live demonstration from Dr Matharu on how to deliver the treatment; a patient who has previously received injection treatment was invited to attend.

The event brought together 16 of the 19 neurologists in Kenya, as well as our two new fellows in neurology at AKU, and neurologists from Tanzania and Ghana; 40–50 people also joined virtually.



The programme included international speakers from 8 countries



Moldova, October 2022 Oxana Grosu

The National Conference with international participation 'Update on chronic headache and pain' brought famous names in the headache and pain field virtually to Chisinau, Moldova.

It was a unique scientific and educational event, hosted by the Diomid Gherman Institute of Neurology and Neurosurgery in collaboration with the Society of Neurologists, the Society for the Study of Pain (European Pain Federation [EFIC] chapter), the Society of Headache and Pain (IHS chapter) and Nicolae Testemitanu State University of Medicine and Pharmacy from the Republic of Moldova.

The scientific programme was endorsed by IHS and EFIC and included international speakers from eight countries: USA (1), Italy (1), Israel (2), Germany (3), Denmark (2), Spain (1), Portugal (1), Ireland (1). Moderators were well-known specialists from the Republic of Moldova, Romania and Ukraine.

The first session dedicated to chronic headache was opened by Cristina Tassorelli (Italy – IHS President) who spoke about the pathophysiological mechanisms that determine the chronicity of migraine. Oved Daniel, President of the Israeli Headache Society, then updated the audience in the treatment of chronic migraine. The session dedicated to chronic headaches was concluded with relevant information regarding the management of chronic tension-type headaches presented by Sait Ashina (USA), vegetative trigeminal headaches presented by Arne May (Germany), and secondary headaches by Rigmor Jensen (Denmark).



A workshop dedicated to young specialists focused on practical aspects of diagnosis and management of chronic pain

The second session was dedicated to chronic pain and was opened by Rolf-Detlef Treede (Germany) who presented the Chronic Pain Classification recently introduced in the International Classification of Diseases, version 11 (ICD-11) by the World Health Organization and recommended to all countries for use from February 2022. Presentations followed on chronic neuropathic pain (Ralf Baron, Germany), chronic musculoskeletal pain (Catherine Doody, Ireland) and cancer-related pain (Silviu Brill, Israel).

On the second day, a workshop dedicated to young specialists was held to discuss practical aspects of the diagnosis and management of chronic pain. It was organised with the IHS Juniors Group.

There were 380 registered participants from Moldova, Romania, USA, Peru, India, Thailand, Tunisia, Turkey, Finland, UK, Chile, Ukraine, Israel, Brazil, Poland, Mexico, Portugal, Australia, and Russia.

Chronic pain is a poorly developed topic in the Republic of Moldova and through this event it is hoped to increase awareness of this topic among professionals, civil society, and decision-makers.

Report of the 9th Asian Regional Conference of Headache

**ARCH 2022 –
Bringing Asia
closer to the
rest of the
world**

**International
experts from all
over the world
presented at
the virtual
conference**



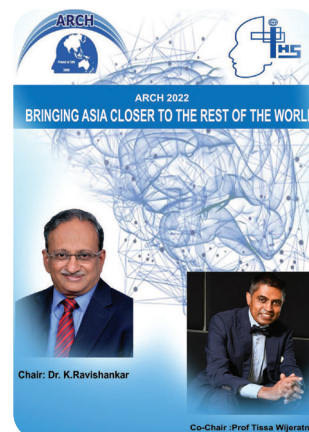
Tissa Wijeratne, Chair

The 9th Asian Regional Conference of Headache (ARCH) was a comprehensive virtual congress with webcasts from the Australian Institute of Migraine, Melbourne. In collaboration with the Asian Oceanian Association of Neurology (AOAN), Migraine Foundation Australia, Western Health and Australian Institute of Migraine and the support of IHS, the 9th ARCH and the fifth Lance Oration, Goadsby award was held from 28–29 July 2022. Over 1,500 local and international delegates participated in this virtual ARCH meeting, the highest participation in a comprehensive ARCH congress since its inception in 2014.

The main theme of the conference was 'Bringing Asia closer to the rest of the world'. The 9th ARCH Co-Chairs, K Ravishankar (India) and Tissa Wijeratne (Sri Lanka and Australia), introduced the opening event as 'The decade of the brain. David Dodick delivered the opening talk 'Advances in headache medicine – pharmacological treatment during the last 5 years,' which nicely summarised the knowledge and insights learned from the advances in pharmacotherapy in migraine from 2017–2022. Peter Goadsby inspired the audience with the second presentation on advances in headache medicine from 2022–2027. Min Kyung Chu moderated the live Q&A session to a packed audience from Asia-Oceania.

The case-based approach to conquer headaches was the next session: Debashish Chowdhury presented a series of cases with ample teaching points on acute migraine in the emergency department and Surat Tanprawate covered the dilemmas in migraine prevention through a series of cases from Thailand. Charles Siow presented a series of cases from Singapore on cluster headaches and other TACs and Past-President of ARCH, K Ravishankar, presented a series of secondary headache cases.

Four world experts in the field covered the pathophysiology of headache disorders: Rami Burstein addressed the important topic 'Migraine-correlating pathophysiology and therapeutic advances'; Anan Srikiakhachorn delivered a lecture on the pathophysiology of medication overuse headaches; Shuu-Jiun Wang covered the important topic on 'Intracranial hypertension – recent advances in diagnosis and management', and Manjit Matharu delivered a lecture on the pathophysiology of cluster headaches and the other TACs.





**Headache
'Potpourri'
sessions
covered a
variety of key
topics**

Frontiers in headache medicine session were covered by Lars Edvinsson who delivered a lecture on the CGRP story – from laboratory to launch; Stewart Tepper delivered a lecture on neuromodulatory options, when pharmacotherapy fails; Fayyaz Ahmed presented on secondary headaches – how not to miss them in a busy practice; Alan Rapoport delivered a lecture on medication-overuse headache diagnosis and management strategies.

The session, Headache 'Potpourri' covered a variety of key topics including real-life experiences with CGRP antagonists, high-pressure headaches and challenges, simplifying the genetics of migraine to the practicing clinician, self-care for chronic headaches and COVID-19 and headaches – a case-based discussion. The last session for day 1 was dedicated to dealing with headache disorders through better education.

Tissa Wijeratne delivered a comprehensive lecture on ARCH, the history, and what the future holds for this important region, with nearly 5 billion people living there. Professor Henrik Schytz delivered a comprehensive lecture on how IHS can help ARCH grow.



ARCH region

Day 2 commenced with the fifth Lance Oration – Lyn Griffiths delivered the oration on 'The long-term journey of migraine genetics with personal reflections'. This was followed by a combined session with the American Headache Society, a live session with Teshamae Monteith and Nina Riggins covering the topic of an approach

towards comprehensive migraine management. A session on women and headache was presented by Bronwyn Jenkins (menstrual migraine), Soo-Kyung Kim (migraine and lactation), Dawn Buse (can lifestyle factors and behavioural approach help women with headache disorders) and Manjula Caldera (migraine, women and workplace – case-based discussion).

The second 'Potpourri' session covered paediatric headache disorders, post-traumatic headache and primary thunderclap headaches.

The Goadsby prize presentation was followed with regional challenges covering India, Sri Lanka, Taiwan, Bangladesh, Malaysia, and New Zealand.

The ARCH 2022 was a massive success, and the organisation is growing as per the community demand. Please visit our website www.archhub.org and join us in the fight to end the disability of migraine and other headache disorders.

**ARCH 2022
was a massive
success,
and the
organisation is
growing as per
the community
demand**

Calendar of events

| Date | Event | Country | Contact/information |
|------------------------|---|---------------------|----------------------|
| 2023 | | | |
| 23–26 March | 17th World Congress on Controversies in Neurology (CONy) | Dubrovnik, Croatia | Visit website |
| 22–27 April | 7th Annual Meeting of the American Academy of Neurology | Boston, MA, USA | Visit website |
| 15–18 June | 65th Annual Scientific Meeting of the American Headache Society | Austin, TX, USA | Visit website |
| 1–4 July | 9th Congress of the European Academy of Neurology | Budapest, Hungary | Visit website |
| 14–17 September | 21st International Headache Congress (IHC 2023) | Seoul, Korea | Visit website |
| 15–19 October | XXVI World Congress of Neurology | Montreal, Canada | Visit website |

Important note: Events may be cancelled, postponed or go virtual due to the COVID-19 pandemic. Please check each event website for updated information.

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

IHS Grant Opportunities 2023

IHS Fellowship
IHS Allied Specialties Scholarship
IHC travel grant

IHS Junior research grant
IHS Research into Child and Adolescents seed-funding grant
IHS Secondary Headache research grant

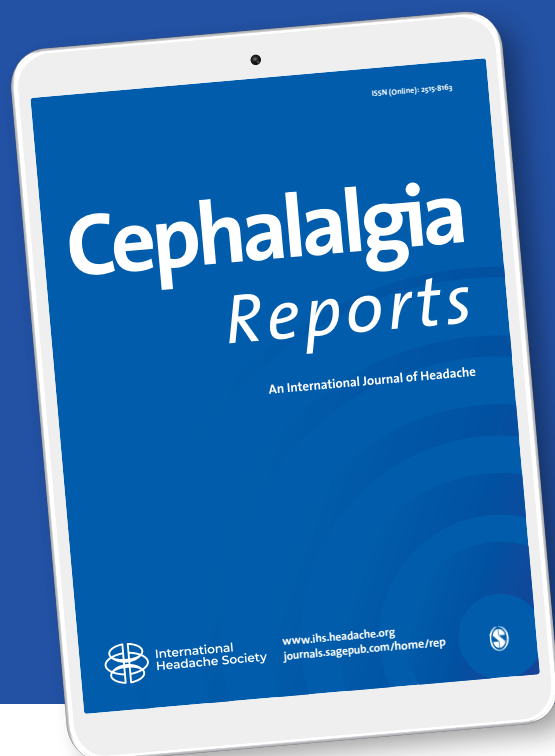
Grants for IHS members from lower-income countries

IHS Headache Trainee programme
IHS Short-stay Scholarship

Check the IHS website early in 2023 for more information

Call for papers

Cephalalgia Reports



Cephalalgia Reports is a peer reviewed, open access publication published on behalf of the International Headache Society, the world's leading membership organization for those with a professional commitment to helping people affected by headache. The journal provides an international forum for research on all aspects of headache and facial pain including preclinical and clinical research, diagnosis and treatment referred to the head and face.

Published with the same internationally respected editorial team and rigorous peer review as Cephalalgia, Cephalalgia Reports operates under an open access publishing model, where an article processing charge (APC)* enables the article to be free to access. Content published is available for anyone, anywhere to read, offering truly global dissemination. This includes those in developing countries and others who may not otherwise have access to the content, fulfilling one of the IHS's primary objectives to advance headache science, education, and management, and promote headache awareness worldwide.

** The article processing charge (APC) is payable when a manuscript is accepted after peer review, before it is published. The APC is subject to taxes where applicable*

The journal publishes international content encompassing a wide variety of article types on:

- Original research (basic science and articles with a clinical emphasis)
- Randomized Controlled Trials (RCTS) with negative outcomes
- Confirmatory case studies
- Feasibility and pilot trials which may stimulate therapeutic innovation
- Reports providing regional relevance which validate and add to existing studies
- Registered reports
- Qualitative and quantitative studies
- Scientifically rigorous pathophysiological and pharmacological studies
- Review articles (narrative reviews and systematic reviews)
- Educational pieces on technical reports and best practice
- Current topics and opinion pieces (such as clinical perspectives, emerging observations with translational potential not yet realized and brief communications)

All articles will be fully peer-reviewed, published rapidly online within days of acceptance and made available on an Open Access basis.



14 - 17
September
2023
Seoul



RISING SUN OVER HEADACHES

- First in-person International Headache Congress since 2019
- First International Headache Congress in Asia since 2005
- Outstanding scientific programme
- A wide range of opportunities to present your work
- Registration available for in-person or online attendance

KEY DATES

Abstract submission
deadline
10 May 2023

Late breaking abstract
submission opens
31 May 2023

Late breaking abstract
submissions closes
15 June 2023

Early bird registration
deadline
28 June 2023

Towards a global access
to headache science,
technology & healing



www.ihc2023.org



International
Headache Society

To advance headache science, education and management and promote headache awareness worldwide

Join the IHS

Members receive discounted registration fees to IHC 2023

Discounted APC fees for Cephalalgia accepted manuscripts

Access the IHS website online learning centre, including the IHS Learning Institute – online CME-accredited course

**Membership fee: £85
(US \$140; €105)**

To learn more about our different membership categories and related benefits please visit us at

www.ihs-headache.org