

The International  
Headache Congress

# IHS and EHF

joint congress 2021



Headache science to optimise patient care



# VIRTUAL LIVE

## 8-12 SEPTEMBER 2021

© Alex Tv | #1417684751 | netsign33 | #1049563151 - shutterstock.com

**08:00–20:15 ePoster self-study**

Room ePoster self-study

**08:30–10:00 Teaching Course 1 - Paediatric & adolescent headache**

Room Room 2

Chair Aynur Özge (Mersin/TR)

**08:30 Introduction**

Aynur Özge (Mersin/TR)

**08:40 Impact of hormones in adolescence: Do they change the brain?2**

IL01 Marta Torres-Ferrus (Barcelona/ES)

**09:00 Emergency headache care in children**

IL02 Amy Gelfand (San Francisco, CA/US)

**09:20 Practice guideline update**

IL03 Andrew Hershey (Cincinnati, OH/US)

**09:40 Q&A**

**08:30–10:00 Teaching Course 2 - Headache research update & a look into the future**

Room Room 3

Chair Marta Vila-Pueyo (Denmark Hill/GB)

**08:30 Introduction**

Marta Vila-Pueyo (Denmark Hill/GB)

**08:40 Behavior animal models in headache research**

IL04 Hayrunnisa Bolay (Ankara/TR)

**09:00 Structural and Functional Imaging in Headache: An Update on Research Findings**

IL06 Catherine Chong (Phoenix, AZ/US)

**09:20 Q&A**

**08:30–10:00 Teaching Course 9 - Clinical cases on secondary headaches: Real world perspectives**

Room Room 4

Chair Charles Siow (Singapore/SG)

**08:30 Introduction**

Charles Siow (Singapore/SG)

**08:40 Red flags and most common secondary headaches**

IL07 Byung-Kun Kim (Seoul/KR)

**09:00 Clinical diagnostics and technical investigations**

IL08 Bronwyn Jenkins (Sydney/AU)

**09:20 High and low pressure headaches, vascular headaches**

IL09 Shuu-Jiun Wang (Taipei City/TW)

**09:40 Q&A**

**10:30–12:00 Teaching Course 5 - Advance practice providers/nurses teaching course**

Room Room 2  
Chair Annette Vangaa Rasmussen (Glostrup/DK)

10:30 **Introduction**  
Annette Vangaa Rasmussen (Glostrup/DK)

10:40 **The role of the nurse in headache care**  
IL013 Susie Lagrata (Copenhagen/DK)

11:00 **Headache education for patients: Tips & tricks**  
IL014 Carol Barch (Stanford, CA/US)

11:20 **Advanced treatments for headache: Anti-CGRP MABs, OnabotulinumtoxinA, emergency room**  
IL015 Andreas Gantenbein (Bad Zurzach/CH)

11:40 **Q&A**

**10:30–12:00 Teaching Course 6 - Nonpharmacologic headache treatment: Case-based**

Room Room 3  
Chair Dawn C. Buse (Bronx, NY/US)

10:30 **Introduction**  
Dawn C. Buse (Bronx, NY/US)

10:40 **Lifestyle management (diet, vitamins and supplements, exercise, trigger avoidance)**  
IL016 Mansoureh Togha (Tehran/IR)

11:00 **Biobehavioral therapies (cognitive behavioral therapy, biofeedback, relaxation therapies, mindfulness, established and novel methods of delivery)**  
IL017 Rebecca Erwin Wells (Winston Salem, NC/US)

11:20 **Neuromodulation**  
IL018 Jose Miguel Lainez (Valencia/ES)

11:40 **Q&A**

**10:30–12:00 Teaching Course 7 - Preclinical science primer for the clinician**

Room Room 4  
Chair Ángel L. Guerrero Peral (Valladolid/ES)

10:30 **Introduction**  
Ángel L. Guerrero Peral (Valladolid/ES)

10:40 **Update on genetics and possible clinical impact**  
IL019 Arn van den Maagdenberg (Leiden/NL)

11:00 **Mapping the migraine brain: Where is it taking us?**  
IL020 Laura Fischer-Schulte (Hamburg/DE)

11:20 **Neurophysiological tests in migraine: What can we learn?**  
IL021 Delphine Magis (Vervier/BE)

11:40 **Q&A**

**10:30–12:00 Teaching Course 8 - Publishing and statistical issues in headache**

Room Room 5  
Chair Elizabeth Loder (Boston, MA/US)

10:30 **Introduction**  
Elizabeth Loder (Boston, MA/US)

10:40 **Editors perspective: How to properly select papers**  
IL022 Rebecca Burch (Boston, MA/US)

11:00 **Endpoints, safety, placebo: How not to misuse data**  
IL023 Dana Turner (Boston, MA/US)

11:20 **How can we improve the impact that headache has?**  
IL024 Julio Pascual (Santander/ES)

11:40 **Q&A**

**12:40–13:35 Opening Ceremony**

Room Room 1

12:40 **Welcome and introduction from meeting chairs**  
Messoud Ashina (Copenhagen/DK), Zaza Katsarava (Unna/DE)

12:50 **IHS Special Recognition Awards**  
Messoud Ashina (Copenhagen/DK)

12:55 **IHS Remembrance Awards**  
Stefan Evers (Münster/DE)

13:00 **Artificial intelligence**  
Boris Nikolai Konrad (Berlin/DE)

**13:35–15:10 Presidential Symposium**

Room Room 1  
Chair Messoud Ashina (Copenhagen/DK), Zaza Katsarava (Unna/DE)

13:35 **Introduction**  
Messoud Ashina (Copenhagen/DK), Zaza Katsarava (Unna/DE)

**15:30–16:30 Poster Session 1**

Room ePoster | Networking  
Chair Chia-Chun Chiang (Rochester, MN/US), Wan Aliaa Wan Sulaiman (Seri Kembangan/MY)

15:30 **Clinical profile of chronic cluster headache (CCH) in a regional headache center in Japan**  
P01 Shoji Kikui, Junichi Miyahara, Hanako Sugiyama, Mutsuo Kohashi, Kuniko Ota, Daisuke Danno, Yoshihiro Kashiwaya, Takao Takeshima (Osaka/JP)

15:33 **Clinical characteristics and burden of a large series with cluster headache from Turkey**  
P02 Pınar Yalınay Dikmen (Istanbul/TR), CAGLA ARI (Siirt/TR), Erdi Sahin, Mustafa Ertaş, Fusun Mayda Domac, Elif Ilgaz Aydinlar, Aysenur Sahin (Istanbul/TR), Aynur Özge, Hilal Ozguner (Mersin/TR), Omer Karadaş, Javid Shafiyev, Doga Vuralli (Ankara/TR), Emel Oguz Akarsu, Necdet Karli, Mehmet Zarifoglu (Bursa/TR), Hayrunnisa Bolay (Ankara/TR), Esme Ekizoglu, Elif Kocasoy Orhan, Betül Baykan (Istanbul/TR)

15:36 **Sphenopalatine Ganglion Volume in Cluster Headache: From Symptoms Laterality toward Treatment Prediction**  
P03 Jr-Wei Wu, Shu-Ting Chen, Yen-Feng Wang, Kuan-Lin Lai, Shuu-Jiun Wang (Taipei City/TW)



- 15:39  
P04 **Effect of Caffeine and Caffeine Cessation on Cerebrovascular Reactivity in Patients with Migraine**  
Young-Eun Gil (Seoul/KR), Soohyun Cho (Uijeongbu/KR), Chin-Sang Chung, Mi-Ji Lee (Seoul/KR)
- 15:42  
P05 **Patient-physician interactive data sharing enhances patient engagement in digital migraine applications**  
Tim Kelderman (Wilrijk/BE), Vincent Keereman (Ghent/BE), Michel Vandenheede (Liège/BE), Olivia Langa (Brussels/BE), Peter Dedeken (Lier/BE), Jonathan Schreiber, Jan Versijpt (Brussels/BE)
- 15:45  
P06 **Body Mass Index and Migraine Characteristics and Comorbidities in a Large Academic Headache Center**  
Daniel Krashin, Mason Dyess, Mui Chan-Goh, Marcel Bigal, Ami Cuneo (Seattle, WA/US), Silvie Belaskova (Brno/CZ), Natalia Murinova (Seattle, WA/US)
- 15:48  
P07 **Increased visual sensitivity in cluster headache, as quantified by the Leiden Visual Sensitivity Scale (L-VISS): a cross-sectional study**  
Roemer Brandt, Victor Cnossen, Patty Doesborg, Ilse de Co, Thijs Perenboom (Leiden/NL), Johannes A. Carpay (Hilversum/NL), Roy Meilof, Michel Ferrari, Gisela M. Terwindt, Rolf Fronczek (Leiden/NL)
- 15:51  
P08 **Insights into real-world treatment of Cluster Headache through a large Italian database: prevalence, prescription patterns and costs**  
Valentina Favoni (Bologna/IT), Piccinni Carlo, Giulia Ronconi, Letizia Dondi, Silvia Calabria, Antonella Pedrini, Aldo Pietro Maggioni (Casalecchio di Reno (Bologna)/IT), Immacolata Esposito, Alice Addesi (Rome/IT), Giulia Pierangeli, Pietro Cortelli, Sabina Cevoli (Bologna/IT), Nello Martini (Casalecchio di Reno (Bologna)/IT)
- 15:54  
P09 **Sleep Disorders in Pediatric Migraine: a questionnaire-based study**  
Alessandra Voci, Michela Ada Noris Ferilli, Laura Papetti, Fabiana Ursitti, Giorgia Sforza, Samuela Tarantino, Federico Vigeveno (Rome/IT), Massimiliano Valeriani (Aalborg/DK, Rome/IT), Romina Moavero (Rome/IT)
- 15:57  
P010 **Characteristics of pre-cluster symptoms in cluster headache**  
Soohyun Cho (Uijeongbu/KR), Soo-Jin Cho (Hwaseong/KR), Mi-Ji Lee (Seoul/KR), Jeong Wook Park (Uijeongbu/KR), Min Kyung Chu, Heui-Soo Moon, Pil-Wook Chung (Seoul/KR), Jong-Hee Sohn (Chuncheon/KR), Byung-Kun Kim (Seongnam, Seoul/KR), Daeyoung Kim, Jae-Moon Kim (Daejeon/KR), Jae Myun Chung, Kyungmi Oh, Jin-Young Ahn, Chin-Sang Chung (Seoul/KR)
- 16:00  
P011 **Treatment pattern and response of cluster headache in Korea**  
Mi-Ji Lee (Seoul/KR), Soo-Jin Cho (Hwaseong/KR), Jeong Wook Park (Uijeongbu/KR), Min Kyung Chu, Heui-Soo Moon, Pil-Wook Chung, Jae Myun Chung (Seoul/KR), Jong-Hee Sohn (Chuncheon/KR), Byung-Kun Kim (Seongnam, Seoul/KR), Soo-Kyoung Kim (Jinju/KR), Tae-Jin Song (Seoul/KR), Yun-Ju Choi (Jeonju/KR), Kwang-Yeol Park, Kyungmi Oh, Jin-Young Ahn, Kwang-Soo Lee, Chin-Sang Chung (Seoul/KR)
- 16:03  
P012 **The Gut, the Brain and Migraine: When Pills Dont Work**  
Sheena Aurora, Stephen Shrewsbury (Seattle, WA/US), Linda Nguyen (Redwood City, CA/US), Nada Hindiye (Stanford, CA/US)
- 16:06  
P013 **Sleep assessment in patients with Cluster headache – self reported vs observed data**  
Caroline Ran, Carmen Fourier, Felicia Jennysdotter Olofsgård, Catalina Wirth, Anna Steinberg, Christina Sjöstrand, Elisabet Waldenlind, Anna Dahlgren, Andrea Carmine Belin (Stockholm/SE)
- 16:09  
P014 **Prevalence of pre-cluster symptoms in episodic cluster headache: Is it possible to predict an upcoming bout?**  
Adam Sebastian Pedersen, Agneta Snoer, Mads Barloese, Anja Sofie Petersen, Rigmor Højland Jensen (Glostrup/DK)
- 16:12  
P015 **Clock gene expression amongst a population of cluster headache patients**  
Renato Oliveira, Ana Neves-Costa, Dora Pedroso, Adré B. Barros, Luís Fiipe Moita, Raquel Gil-Gouveia (Lisbon/PT)
- 16:15  
P016 **Evaluating the real-world burden of migraine using Migraine Buddy**  
Peter J. Goadsby (London/GB), Caroline Amand, Luminita Constantin, Simon Hitier (Gentilly/FR)

- 16:18 **Add on Treatment with Galcanezumab Improved Refractory Cluster Headache in 5 out of 6 Tested Cases**  
P017 Georgios Karagiorgis, Elina Kasioti, Euthymia Mitropoulou, Sofia Tsanoula, Theodoros Mavridis, Dimos Mitsikostas (Athens/GR)
- 16:21 **Cluster Headache Impact Questionnaire (CHIQ) – A tool for assessing disability in cluster headache patients**  
P018 Katharina Kamm, Andreas Straube, Ruth Ruscheweyh (Munich/DE)
- 16:24 **Telencephalic Cortical Thickness in Chronic Cluster Headache**  
P019 Luca Giani, Greta Demichelis, Chiara Pinardi, Jean Paul Medina, Ruben Gianeri, Maria Grazia Bruzzone (Milano/IT), Benjamin Becker (Chengdu/CN), Alberto Proietti Cecchini, Luisa Chiapparini (Milano/IT), Stefania Ferraro (Milano/IT, Chengdu/CN), Anna Nigri, Massimo Leone (Milano/IT)
- 16:27 **Dopaminergic System Abnormalities in Chronic Cluster Headache Patients**  
P020 Luca Giani (Milano/IT), Stefania Ferraro (Chengdu/CN, Milano/IT), Anna Nigri, Maria Grazia Bruzzone, Chiara Pinardi, Greta Demichelis, Luisa Chiapparini, Alberto Proietti Cecchini, Massimo Leone (Milano/IT)
- 16:30–17:00 **IHS Annual General Meeting**  
Room Room 2
- 17:00–18:30 **Industry Satellite Symposium - Not intended for UK & DK HCP's**  
Room Room 1
- 18:45–20:15 **Teaching Course 3 - Clinical cases on secondary headaches: Real world perspectives**  
Room Room 4  
Chair Fayyaz Ahmed (Hull/GB)
- 18:45 **Introduction**  
Fayyaz Ahmed (Hull/GB)
- 18:55 **Red flags and most common secondary headaches**  
IL025 Karina Velez (Mexico City/MX)
- 19:15 **Clinical diagnostics and technical investigations**  
IL026 Sait Ashina (Brookline, MA/US)
- 19:35 **High and low pressure headaches, vascular headaches**  
IL027 Yared Zenebe Zewde (Addis Ababa/ET)
- 19:55 **Q&A**
- 18:45–20:15 **Teaching Course 4 - Ethical issues in headache medicine**  
Room Room 5  
Chair Allan Purdy (Halifax/CA)
- 18:45 **Introduction**  
Allan Purdy (Halifax/CA)
- 18:55 **Professional ethics for headache medicine practitioners**  
IL010 Morris Levin (San Francisco, CA/US)
- 19:15 **Research and publication ethics in headache medicine**  
IL011 Thomas Ward (Hanover, NH/US)
- 19:35 **Ethical issues involving diversity, equity and inclusion in headache**  
IL012 Cynthia Armand (Bronx, NY/US)
- 19:55 **Q&A**

18:45–19:45 **Poster Session 2**

Room ePoster | Networking

Chair Alejandro Labastida-Ramirez (London/GB), Lily Kokoti (Copenhagen/DK)

18:45 **Co-occurring neck-pain in patients with episodic migraine and analgesic intake**P021 Olga Dubenko, Anna Chernenko (Kharkiv/UA)18:48 **Differences in sensory nucleus of the trigeminal nerve, dorso-lateral pons, and somatosensory cortex between migraine patients and healthy controls. An MRI post- processing study.**P022 Noemí Morollón, Robert Belvis (Barcelona/ES), Gracián Garcia (Valencia/ES), Natalia Mas, Rafael Ramos, Jaime Kulisevsky (Barcelona/ES)18:51 **Nasopharyngeal Swab may Trigger Migraine by Peripheral Stimulation of Trigeminal Nerve**P023 Jorge Madera Fernández, Eloy Manuel Rodríguez Rodríguez, Vicente González-Quintanilla, Sara Pérez-Pereda, Julio Pascual (Santander/ES)18:54 **Impact of COVID-19 lockdown in Argentinean patients with migraine**P024 María Vanesa Nagel, Maria Teresa Goicochea, Lucas Bonamico, Natalia Larripa, Teresa Gutierrez, Marina Olivier, Mariela Grandinetti, Daniela Calvo (Buenos Aires/AR)18:57 **Hormonal changes as an aetiological factor in trigeminal neuralgia in women**P025 Maryam Noory (Glostrup, Copenhagen/DK), Anne Sofie Schott Andersen, Navid Noory, Tone Bruvik Heinskou, Lars Bendtsen (Glostrup/DK), David Møbjerg Kristensen (Glostrup/DK, Rennes/FR), Connor Stanley James Westgate, Stine Maarbjerg (Glostrup/DK)19:00 **The neurological manifestations of COVID-19: a retrospective single-center clinical study in the Republic of Dagestan, Russia**P027 Zukhra Gadzhieva, Zaira Khamidova, Teyli Magomedova, Zaira Kaplanova (Makhachkala/RU)19:03 **Genome-wide Analyses Identify the Genetic Landscape and Polygenic Risk Model of Reversible Cerebral Vasoconstriction Syndrome**P028 Shih-Pin Chen, Yen-Feng Wang, Chia-Lin Hsu, Jong-Ling Fuh, Yu-Hsiang Ling, Li-Ling Pan, Cathy Shen-Jang Fann, Shuu-Jiun Wang (Taipei City/TW)19:06 **Impact of Lockdown during Covid-19 Pandemic in India on the Disease Activity and Quality of Life in migraine patients: A Web-Based Survey**P029 Debashish Chowdhury, Debabrata Datta, Ashish Duggal, Anand Krishnan (Delhi/IN)19:09 **Hypermethylation of exon 1 of MTDH/AEG1 is associated with chronic migraine. A case- control study with GWAS-discovered migraine genes.**P030 Sara Pérez-Pereda, Maria Toriello, Gabriel Garate, Vicente González-Quintanilla (Santander/ES), Agustin Oterino (Oviedo/ES)19:12 **White matter microstructural alterations in patients with persistent headache after COVID- 19 infection: an exploratory study**P031 Álvaro Planchuelo-Gómez (Valladolid/ES), David García-Azorín (Salamanca, Valladolid/ES), Ángel L. Guerrero Peral (Valladolid, Salamanca/ES), Santiago Aja-Fernández, Margarita Rodríguez, Raúl Moro, Rodrigo de Luis-García (Valladolid/ES)19:15 **Evaluation of Headache Caused by the Use of Protective Equipment in Hospital Personnel during COVID-19 Pandemic**P032 Elham Jafari, Mansoureh Togha, Hossein Kazemizadeh, Samaneh Haghighi, Somayeh Nasergivehchi, Mohammad Saatchi, Shadi Ariyanfar (Tehran/IR)

- 19:18  
P033 **Headache during the COVID- 19 first wave: a survey on admissions' frequency, diagnosis and management in Emergency Department.**  
Laura D'Acunto, Fulvio Pasquin, Alex Buoite Stella, Sasha Olivo, Antonio Granato, Franco Cominotto, Paolo Manganotti (Trieste/IT)
- 19:21  
P034 **Clinical characteristics of headache after vaccination against COVID-19 (Coronavirus SARS- CoV-2) with the BNT162b2 mRNA vaccine: a prospective multicentre observational cohort study**  
Carl Göbel (Kiel, Lübeck/DE), Axel Heinze (Kiel/DE), Sarah Karstedt (Lübeck, Kiel/DE), Mascha Morscheck, Lilian Tashiro (Kiel/DE), Anna Cirkel (Lübeck, Kiel/DE), Qutyaba Hamid, Rabi Halwani (Sharjah/AE), Mohamad-Hani Temsah (Riyadh/SA), Malte Ziemann, Siegfried Görg, Thomas Münte (Lübeck/DE), Hartmut Göbel (Kiel/DE)
- 19:24  
P035 **Resting-state functional alterations in patients with persistent headache after COVID-19 infection: an exploratory study**  
Álvaro Planchuelo-Gómez (Valladolid/ES), David García-Azorín (Salamanca, Valladolid/ES), Ángel L. Guerrero Peral (Valladolid, Salamanca/ES), Santiago Aja-Fernández, Margarita Rodríguez, Raúl Moro, Rodrigo de Luis-García (Valladolid/ES)
- 19:27  
P036 **Facemask headache: a new nosographic entity among healthcare professionals in COVID-19 era**  
Laura Rapisarda, Francesco Fortunato, Antonio De Martino, Oreste Marsico, Giulio Demonte, Antonio Augimeri, Angelo Labate, Antonio Gambardella, Michele Trimboli (Catanzaro/IT)
- 19:30  
P038 **A novel ATP1A2 gene variant associated with sporadic hemiplegic migraine**  
Michele Trimboli (Catanzaro/IT), Maria Tagliente, Sergio Manieri, Marilena Di Giacomo, Angela Cervellino (Potenza/IT), Enrico Ferrante (Santorso/IT)
- 19:33  
P039 **Clinical predictors of persistent post-COVID-19 headache**  
David García-Azorín (Valladolid/ES), Alicia González Martínez (Madrid/ES), Álvaro Sierra Mencía, Javier Trigo López, Ana Alberdi, María Blanco, Ismael Calcerrada, Ana Cornejo, Miguel Cubero, Ana Gil, Cristina García, Ana Guiomar Lozano, Cristina Martínez Badillo, Carol Montilla, Marta Mora, Gabriela Nuñez, Marina Paniagua, Carolina Perez, María Rojas, Marta Ruiz, Leticia Sierra, Luisa Hurtado, Ángel L. Guerrero Peral (Valladolid/ES)
- 19:36  
P040 **Persistence of headache post-COVID-19: A multicentric prospective study of 9-months follow-up**  
David García-Azorín (Valladolid/ES), Almudena Layos-Romero (Albacete/ES), Jesús Porta-Etessam, Javier A. Membrilla (Madrid/ES), Edoardo Caronna (Barcelona/ES), Alicia González Martínez (Madrid/ES), Álvaro Sierra Mencía (Valladolid/ES), Tomás Segura (Albacete/ES), Nuria González García, Javier Díaz de Terán Velasco (Madrid/ES), Víctor-José Gallardo López (Barcelona/ES), Ana Beatriz Gago Veiga (Madrid/ES), Alejandro Ballvé (Barcelona/ES), Javier Trigo López (Valladolid/ES), María Sastre-Real (Madrid/ES), Arnau Llauredó (Barcelona/ES), Ana Cornejo (Valladolid/ES), Iñigo de Lorenzo (Madrid/ES), Ángel L. Guerrero Peral (Valladolid/ES), Patricia Pozo-Rosich (Barcelona/ES)
- 19:39  
P041 **Clinical characteristics of headache after vaccination against COVID-19 (Coronavirus SARS-CoV-2) with the COVID-19 Vaccine AstraZeneca: a prospective multicentre observational cohort study**  
Carl Göbel (Kiel, Lübeck/DE), Axel Heinze (Kiel/DE), Sarah Karstedt (Lübeck, Kiel/DE), Mascha Morscheck, Lilian Tashiro (Kiel/DE), Anna Cirkel (Kiel, Lübeck/DE), Qutyaba Hamid, Rabi Halwani (Sharjah/AE), Mohamad-Hani Temsah (Riyadh/SA), Malte Ziemann, Siegfried Görg, Thomas Münte (Lübeck/DE)
- 19:42  
P042 **Impact of personal protective equipment use in migraine patients during the COVID-19 pandemic**  
Renato Oliveira, Madalena Plácido, Liliana Pereira, Sara Machado, Elsa Parreira, Raquel Gil-Gouveia (Lisbon/PT)



**08:15–09:00 Industry Satellite Symposium**

Room Room 1  
Chair Messoud Ashina (Copenhagen/DK)

08:15 **CGRP-targeted mAbs in migraine prevention: Global real-world experience**  
Patricia Pozo-Rosich (Barcelona/ES)

08:16 **CGRP-targeted mAbs in migraine management: Talking long term**  
Messoud Ashina (Copenhagen/DK)

08:17 **CGRP-targeted mAbs in migraine prevention: Can we break the cycle?**  
Uwe Reuter (Berlin/DE)

08:18 **The role of CGRP-targeted mAbs in migraine management: Your questions answered**  
Messoud Ashina (Copenhagen/DK), Patricia Pozo-Rosich (Barcelona/ES), Uwe Reuter (Berlin/DE)

**09:15–10:15 Plenary Session 1 - Real world and open label experience with new therapies: What we have learned**

Room Room 1  
Chair Uwe Reuter (Berlin/DE)

09:15 **New therapies: Why is real-world experience important?**  
IL028 Uwe Reuter (Berlin/DE)

09:25 **Ditans and Gepants: new drugs, new hope?**  
IL029 Christian Lampl (Linz/AT)

09:45 **CGRP mAbs**  
IL030 Jessica Ailani (Washington, DC/US)

10:05 **Q&A**

**10:15–11:00 IHS Special Lecture**

Room Room 1  
Chair Jes Olesen, Messoud Ashina (Copenhagen/DK), Peter J. Goadsby (London/GB)

10:15 **Introduction**  
Peter J. Goadsby (London/GB)

10:20 **Modelling migraine mechanisms**  
IL031 Jes Olesen (Copenhagen/DK)

10:50 **Recognition Ceremony**  
Messoud Ashina (Copenhagen/DK)

**11:15–12:45 International Forum for Headache Nurses**

Room Room 2  
Chair Jennifer Trouerbach-Kraan (Leiden/NL)

11:15 **Welcome and introduction**  
Annette Vangaa Rasmussen (Glostrup/DK)

11:20 **Introducing today's program and speakers**  
Jennifer Trouerbach-Kraan (Leiden/NL)

11:25 **Training for nurses caring for people with headache**  
IL032 Maureen Moriarty (Virginia/US)

**11:50 How does the patient's perception of illness evolve during treatment with CGRP antibodies?**

IL033 Malene Kjærgaard Danoe (Glostrup/DK)

**12:15 Medication Overuse Headache, introduction to a detox app**

IL034 Syta Vissers (Haarlem/NL)

**12:40 Closing remarks**

Jennifer Trouerbach-Kraan (Leiden/NL)

**12:45–13:45 Oral Abstract Presentations 1**

Room Room 1

Chair Jelena M. Pavlovic (Bronx, NY/US), Marco Lisicki (Córdoba/AR)

**12:45 Estimating the Probability of Reported Versus Theoretical Drug-Drug Interactions in Headaches Medicine**

AL01 Victor Kaytser, Ian Hakkinen, Pengfei Zhang (New Brunswick, NJ/US)

**12:55 An AI-enabled ECG Algorithm Predicts Higher Subclinical Atrial Fibrillation Risk in Patients with Migraine with Aura Compared to Migraine without Aura**

AL02 Nikita Chhabra, Chieh-Ju Chao, Nan Zhang, Elisabeth Lim (Scottsdale, AZ/US), Han Wang (Mankato, MN/US), Zachi Attia, Paul Friedman (Rochester, MN/US), Peter Noseworthy (Scottsdale, AZ/US), Chia-Chun Chiang (Rochester, MN/US)

**13:05 Gene networks reveal functional distinct mechanisms segregating in families with clustering of migraine**

AL03 Andreas Rasmussen, Lisette J. A. Kogelman, David Møbjerg Kristensen, Mona Ameri Chalmer, Jes Olesen (Glostrup/DK), Thomas Hansen (Glostrup, Copenhagen/DK)

**13:15 Genome-wide analysis of 102,084 migraine cases identifies 123 risk loci and subtype- specific risk alleles**

AL04 Heidi Hautakangas (Helsinki/FI), Bendik Slagsvold Winsvold (Trondheim, Oslo/NO), Sanni E Ruotsalainen (Helsinki/FI), Gyda Bjornsdottir (Reykjavik/IS), Aster V. E. Harder (Leiden/NL), Lisette J. A. Kogelman (Copenhagen/DK), Laurent F Thomas (Trondheim/NO), Raymond Noordam (Leiden/NL), Hreinn Stefánsson, Kari Stefansson (Reykjavik/IS), Arn van den Maagdenberg (Leiden/NL), Thomas Hansen (Copenhagen/DK), Samuli Ripatti (Helsinki/FI, Cambridge, MA/US), John-Anker Zwart (Oslo, Trondheim/NO), Aarno Palotie (Cambridge, MA, Boston, MA/US, Helsinki/FI), Matti Pirinen (Helsinki/FI)

**13:25 Dry eye disease in migraine: A case control study**

AL05 Bithi Chowdhury, Pradeep Dubey, Debashish Chowdhury (Delhi/IN)

**13:35 Cortical morphological changes in cluster headache between bouts: voxel- and surface-based analyses**

AL06 Kuan-Lin Lai, Yi-Ting Hsiao, Wun-Kong Chan, Shuu-Jiun Wang (Taipei City/TW)

**12:45–13:45 Oral Abstract Presentations 2**

Room Room 2

Chair Kirill Skorobogatikh (Moscow/RU), María-Luz Cuadrado (Madrid/ES)

**12:45 I stay at home with headache. A survey to investigate the effects of lockdown on headache in Italian children**

AL07 Laura Papetti, Licia Grazi, Vincenzo Guidetti (Rome/IT), Vittorio Scirucchio (Palermo, Rome/IT), Cristiano Termine (Varese/IT), Irene Toldo (Padova/IT), Elisabetta Tozzi (L'Aquila/IT), Paola Verdecchia, Samuela Tarantino, Romina Moavero, Fabiana Ursitti, Michela Ada Noris Ferilli, Giorgia Sforza, Massimiliano Valeriani (Rome/IT)

**12:55 Patient Experience of Telemedicine for Headache Care during the COVID-19 Pandemic: an American Migraine Foundation Survey Study**

AL08 Chia-Chun Chiang (Rochester, MN/US), Rashmi Halker Singh (Scottsdale, AZ/US), Nim Lalvani (New York, NY/US), Ken Stein (Hempstead, NY/US), Deborah Lorenz (Scottsdale, AZ/US), Christine Lay (Toronto/CA), David W. Dodick (Scottsdale, AZ/US), Lawrence Newman (New York, NY/US)

- 13:05 **Cerebral venous thrombosis (CVT) associated with COVID-19 infection: A multi-center study**  
AL09 Sajid Hameed Shaikh (Karachi/PK)
- 13:15 **The characteristics of COVID-19 vaccine-related headache**  
AL010 Esme Ekizoglu, Haşim Gezegen, Pınar Yalınay Dikmen, Elif Kocasoy Orhan, Mustafa Ertaş, Betül Baykan (Istanbul/TR)
- 13:25 **Gray matter cortical changes in patients with persistent headache after COVID-19 infection: an exploratory study**  
AL011 Álvaro Planchuelo-Gómez (Valladolid/ES), David García-Azorín, Ángel L. Guerrero Peral (Valladolid, Salamanca/ES), Santiago Aja-Fernández, Margarita Rodríguez, Raúl Moro, Rodrigo de Luis-García (Valladolid/ES)
- 13:35 **Comparison of quantitative headache parameters of headache after vaccination against COVID-19 (Coronavirus SARS-CoV-2) with AZD1222, BNT162b2, mRNA-1273 and BBIBP-CorV vaccines**  
AL012 Carl Göbel (Kiel, Lübeck/DE), Axel Heinze (Kiel/DE), Sarah Karstedt (Kiel, Lübeck/DE), Mascha Morscheck, Lilian Tashiro (Kiel/DE), Anna Cirkel (Lübeck, Kiel/DE), Qutyaba Hamid, Rabih Halwani (Sharjah/AE), Mohamad-Hani Temsah (Riyadh/SA), Malte Ziemann, Siegfried Görg, Thomas Münte (Lübeck/DE), Hartmut Göbel (Kiel/DE)
- 13:45–14:00 **IHS Honorary Membership**  
Room Room 2  
Vorsitz Messoud Ashina (Copenhagen/DK)
- 13:45 **IHS Honorary Membership**  
Pramod Saxena (EA Krimpen a/d IJssel/NL), Patrick Humphrey (London/GB)
- 14:00–14:45 **Greppi Award Lecture**  
Room Room 1  
Chair Paolo Calabresi (Rome/IT)
- 14:00 **Introduction**  
Paolo Calabresi (Rome/IT)
- 14:05 **Phenome-wide analysis highlights putative causal relationships between migraine and other complex traits**  
IL035 Luis M. García Marín (Herston/AU)
- 14:45–15:15 **Recognizing Excellence in Migraine Research**  
Room Room 2  
Chair Alan Rapoport (Los Angeles/US)
- 14:45 **Discussion**  
Lars Edvinsson (Lund/SE), Peter J. Goadsby (London/GB), Michael Moskowitz (Boston, MA/US), Jes Olesen (Copenhagen/DK)
- 15:15–16:15 **Plenary Session 2 - Debate: Is precision medicine possible in migraine?**  
Room Room 1  
Chair Fumihiko Sakai (Saitama/JP)
- 15:15 **Introduction**  
Fumihiko Sakai (Saitama/JP)
- 15:20 **PRO**  
IL036 Cristina Tassorelli (Pavia/IT)
- 15:40 **CON**  
IL037 Hans-Christoph Diener (Essen/DE)
- 16:00 **Q&A**

**16:15–17:35 Scientific Session 2 - “We are united against pain and headache”: Joint session of IHS, IASP, EHF and EFIC**

Room Room 2  
Chair Christian Lampl (Linz/AT)

**16:15 MRI findings, central plasticity and oro-facial pain**

IL038 Arne May (Hamburg/DE)

**16:35 Orofacial pain – Sharing diagnostic language**

IL039 Lene Baad-Hansen (Aarhus/DK)

**16:55 Trigeminal neuralgia - Facts and fictio**

IL040 Lars Bendtsen (Glostrup/DK)

**17:15 The role of opioids in the management of orofacial pain: An update**

IL041 Bart Morlion (Leuven/BE)

**16:30–17:30 Scientific Session 1 - Migraine and the vascular system**

Room Room 1  
Chair Anne Ducros (Montpellier/FR)

**16:30 Vascular contributions to migraine**

IL042 Anne Ducros (Montpellier/FR)

**16:35 Genetic evidence for vascular dysfunction in migraine**

IL043 Daniel Chasman (Boston, MA/US)

**16:55 Cardiovascular & cerebrovascular risk in migraine**

IL044 Tobias Kurth (Berlin/DE)

**17:15 Q&A**

**16:30–17:30 Scientific Session 3 - Cortical Spreading Depolarization and Migraine Aura**

Room Room 3  
Chair Andrew Charles (Los Angeles, CA/US)

**16:30 Non-canonical glutamate signaling in migraine aura**

IL045 KC Brennan (Salt Lake City, UT/US)

**16:45 Meningeal responses to migraine aura**

IL046 Aaron Schain (Boston, MA/US)

**17:00 Linking spreading depolarization with migraine behavior**

IL047 Andrea Harriott (Boston, MA/US)

**17:15 Translating pre-clinical CSD discoveries into the clinic**

IL048 Andrew Charles (Los Angeles, CA/US)

**17:45–19:15 Industry Satellite Symposium**

Room Room 1  
Chair Simona Sacco (L'Aquila/IT)

**17:45 Welcome and introduction**

Simona Sacco (L'Aquila/IT)

**17:50 Understanding the Who and the When for CGRP mAbs: targeting severity and improving function**

Zaza Katsarava (Unna/DE)



09 September 2021



- 18:10 **Beyond headache: a focus on associated symptoms**  
Deborah Friedman (Dallas, TX/US)
- 18:25 **Panel discussion: How have practical learnings with CGRP mAbs changed treatment approaches for best practice?**  
Simona Sacco (L'Aquila/IT), Zaza Katsarava (Unna/DE), Deborah Friedman (Dallas, TX/US)
- 18:45 **How does the science translate to the real world?**
- 19:00 **Audience questions and closing remarks**  
Simona Sacco (L'Aquila/IT)
- 19:15–20:00 **Industry Satellite Symposium**  
Room 2

## 07:30–08:30 Industry Satellite Symposium

Room Room 1

## 08:45–09:45 Oral Abstract Presentations 3

Room Room 1

Chair Ruth Ruscheweyh (Munich/DE), Erling Tronvik

### 08:45 AL013 Heat Pain Threshold and Mechanical Punctate Pain Threshold Predict Treatment Outcomes of Patients with Chronic Migraine

Li-Ling Pan, Kuan-Lin Lai, Yen-Feng Wang, Shih-Pin Chen, Wei-Ta Chen, Shuu-Jiun Wang (Taipei City/TW)

### 08:55 AL014 Migraine-Related Absenteeism is Associated with Total Healthcare and Pharmaceutical Costs – A US-Based Real World Longitudinal Analysis

Linda Harris, Gilbert L'Italien (New Haven, CT/US), Anil Kumar, Prafullakumar Seelam (Bangalore/IN), Chris LaVallee (Boston, MA/US), Robert Croop, Vladimir Coric (New Haven, CT/US)

### 09:05 AL015 Association between suicidal risks and medication-overuse headache in chronic migraine: AL015 a cross-sectional study

Chia-Chun Yu, Yen-Feng Wang, Ai Seon Kuan, Shih-Pin Chen, Shuu-Jiun Wang (Taipei City/TW)

### 09:15 AL016 Migraine is not Associated with Incident Stroke: The Rotterdam Study

Cevdet Acarsoy, M. Kamran Ikram, Daniel Bos (Rotterdam/NL)

### 09:25 AL017 Physical inactivity and headache disorders in the ELSA-Brasil cohort: A cross-sectional analysis.

Arão Oliveira, Juliane Mercante, Mario Peres (São Paulo/BR), Maria Del Carmen Molina (Ouro Preto, Vitória/BR), Paulo Lotufo, Isabela Benseñor, Alessandra Goulart (São Paulo/BR)

### 09:35 AL018 Direct Costs for Headache Disorders. Data from a Brazilian Health Maintenance Organization

Mario Peres (São Paulo/BR), Jair Brito, Rodolfo Pires, Arão Oliveira (São Paulo/BR)

## 08:45–09:45 Oral Abstract Presentations 4

Room Room 2

Chair Gretchen Tietjen (Toledo, OH/US), Amaal Starling

### 08:45 AL019 Is behaviour of neck pain related to cervical musculoskeletal dysfunction (CMD) or hypersensitivity in migraine?

Zhiqi Liang, Lucy Thomas, Gwendolen Jull (St Lucia/AU), Hossein Zareie (Herston/AU), Julia Treleaven (St Lucia/AU)

### 08:55 AL020 Genome Wide Association Study Identifies Four Risk Loci for Cluster Headache

Carmen Fourier (Stockholm/SE), Emer O'Connor (London/GB), Caroline Ran (Stockholm/SE), Prasanth Sivakumar (London/GB), Franziska Liesecke (Stockholm/SE), Laura Southgate, Janice Yip (London/GB), Nicola Griffin (Bath/GB), Nicholas Silver (Liverpool/GB), Fayyaz Ahmed (Hull/GB), Isabel Hostettler (London/GB), Brendan Davies (Stoke-on-Trent/GB), M Zameel Cader (Oxford/GB), Benjamin Simpson, Roisin Sullivan, Stephanie Efthymiou, Lou Grangeon, Susie Lagrata, Daisuke Danno, Richard Trembath, Nicholas Wood (London/GB), Ingrid Kockum, Anna Steinberg, Christina Sjöstrand, Elisabet Waldenlind (Stockholm/SE), Jana Vandrocova, Henry Houlden, Manjit Matharu (London/GB), Andrea Carmine Belin (Stockholm/SE)

### 09:05 AL021 Sex differences in the migraine attack burden and the genetics of migraine

Mona Ameri Chalmer, Ida Callesen, Lisette J. A. Kogelman (Glostrup/DK), - Danish Blood Donor Study, - Danish Blood Donor Study Genomic Consortium (Copenhagen/DK), Jes Olesen, Thomas Hansen (Glostrup/DK)

### 09:15 AL022 Primary Headache Disorders and Acute Medications Associated With Medication Overuse Headache: Analysis of US Claims Data

Andrew H. Ahn, Kenneth J. Shulman, Ravi G. Iyer, Alexander Rubin, Lynda J. Krasenbaum, Shoshana Reshef, Sangtaeck Lim (West Chester, PA/US)

09:25 **Sex differences in the pharmacological role of TRPM3 channels and NMDA receptors in human isolated coronary arteries**  
AL023

Eduardo Rivera-Mancilla, Tessa de Vries (Rotterdam/NL), Antoon van den Bogaerdt (Beverwijk/NL), A.H. Jan Danser (Rotterdam/NL), Carlos M. Villalón (Mexico City/MX), Antoinette Maassen van den Brink (Rotterdam/NL)

09:35 **Response to onabotulinumtoxinA in men and women - Results from a multicenter retrospective study**  
AL024

Raffaele Ornello (L'Aquila/IT), Fayyaz Ahmed (Hull/GB), Andrea Negro (Rome/IT), Anna Maria Miscio, Antonio Santoro (San Giovanni Rotondo/IT), Alicia Alpuente (Barcelona/ES), Antonio Russo, Marcello Silvestro (Naples/IT), Sabina Cevoli (Bologna/IT), Nicoletta Brunelli, Fabrizio Vernieri (Rome/IT), Licia Grazzi (Milan/IT), Carlo Baraldi, Simona Guerzoni (Modena/IT), Anna P. Andreou, Giorgio Lambru (London/GB), Katharina Kamm, Ruth Ruscheweyh (Munich/DE), Marco Russo (Reggio Emilia/IT), Paola Torelli (Parma/IT), Elena Fiatova, Nina Latysheva (Moscow/RU), Anna Gryglas-Dworak (Wroclaw/PL), Marcin Straburzyński (Warsaw/PL), Calogera Butera, Bruno Colombo, Massimo Filippi (Milan/IT), Patricia Pozo-Rosich (Barcelona/ES), Paolo Martelletti (Rome/IT), Simona Sacco (L'Aquila/IT)

#### 08:45–09:45 **Oral Abstract Presentations 7**

Room Room 3

Chair Hayrunnisa Bolay (Ankara/TR), Henrik Schytz (Glostrup/DK)

08:45 **Opening of BKCa Channels Causes Migraine Attacks: A New Downstream Target for the Treatment of Migraine.**  
AL025

Mohammad Al-Mahdi Al-Karagholi, Hashmat Ghanizada, Cherie Amalie Nielsen, Camilla Skandarioon (København S/DK), Josefin Snellman, Cristina Lopez-Lopez (Basel/CH), Jakob Møller Hansen, Messoud Ashina (København S/DK)

08:55 **Alterations of resting-state periaqueductal gray matter connectivity in tension-type headache**  
AL026

Kinga Gecse, Dóra Dobos, Dániel Baksa (Budapest/HU), Csaba Sándor Aranyi, Miklós Emri (Debrecen/HU), Gyöngyi Kökönyei, György Bagdy, Gabriella Juhász (Budapest/HU)

09:05 **Hypersensitivity to Calcitonin Gene-Related Peptide in Post-Traumatic Headache.**  
AL027

Håkan Ashina, Afrim Iljazi, Haidar Al-Khazali, Casper E. Christensen, Faisal Mohammad Amin, Messoud Ashina, Henrik Schytz (Copenhagen/DK)

09:15 **Exploring the Role of the Pons and Hypothalamus in Migraine Progression**  
AL028

Roberta Messina, Maria Assunta Rocca, Paola Valsasina, Paolo Misci, Bruno Colombo, Ilaria Cetta, Massimo Filippi (Milan/IT)

09:25 **Stability of functional MRI-based migraine diagnosis: an internal validation study**  
AL029

Bo-yong Park (Incheon/KR), Soohyun Cho (Uijeongbu/KR), Chin-Sang Chung, Mi-Ji Lee (Seoul/KR)

09:35 **T2\* Contrast Changes in Post-traumatic Headache**  
AL030

Simona Nikolova, Todd J. Schwedt, Catherine Chong, Gina Dumkrieger, Theresa Wu, Visar Berisha (Phoenix, AZ/US), Jing Li (Atlanta, GA/US), Katherine Ross (Phoenix, AZ/US)

#### 09:45–10:15 **Poster Session 3**

Room ePoster | Networking

Chair Gregor Brössner (Innsbruck/AT), Vera Osipova (Moscow/RU)

09:45 **Classification of migraine subtypes and its characteristics by latent class analysis: a population-based study**  
P043

Wonwoo Lee, Min Kyung Chu, In Kyung Min (Seoul/KR)

09:48 **Pediatric headaches in Benin a sub-Saharan African country : Epidemiology and Burden.**  
P044

Mendinatou Agbetou, Willy Tchuenga Fokom, Nelly Dovoedo, Thierry Adoukonou (Parakou/BJ)

09:51 **Atypical auras in pediatric migraine: Clinical series and pathophysiological correlations.**  
P045

Giovanna Martina Nocera, Vincenzo Raieli (Palermo/IT)

- 09:54 **Recurrent headache in Internet-addicted Central Siberia urban adolescents: a school-based study**  
P046 Sergey Tereshchenko, Lidia Evert, Nina Gorbacheva, Margarita Shubina (Kranoyarsk/RU)
- 09:57 **Dairy intake and odds of paediatric migraine: A case control study**  
P047 Shadi Ariyanfar, Soodeh Razeghi Jahromi, Nasim Rezaeimanesh, Mansoureh Togha (Tehran/IR), Zeinab Ghorbani (Guilan, Tehran/IR)
- 10:00 **Multi-omics to predict changes during cold pressor test during interictal phase**  
P048 Lisette J. A. Kogelman (Glostrup/DK), Madeleine Ernst, Gianluca Mazzoni, Julie Courraud, Li Peng Lundgren, Susan Svane Laursen, Arieh Cohen (Copenhagen/DK), Jes Olesen, Thomas Hansen (Glostrup/DK)
- 10:03 **Combined Oral Contraceptive was associated to protection for severe allodynia**  
P049 Aline Vitali da Silva, Lara Hessmann Gonzalez, Renata Schmidt Alves Ferreira Galvão, Isabella Gaspar Vuolo, Regina Célia Poli Frederico, Valéria Aparecida Bello, Silvia Helena dos Santos Gajardoni Farges (Londrina/BR)
- 10:06 **Family-based exome sequencing disclose associated genes in primary headaches**  
P050 Andreia Dias, José Pereira Monteiro, Jorge Sequeiros (Porto/PT), Maria Paço, Teresa Pinho (Gandra/PT), Alda Sousa, Carolina Lemos, Miguel Alves-Ferreira (Porto/PT)
- 10:09 **Diagnosis and Classification of Headache Associated with Sexual Activity Using a Composite Algorithm**  
P051 Po-Tso Lin, Yen-Feng Wang, Jong-Ling Fuh, Jiing-Feng Lin, Yu-Hsiang Ling, Shih-Pin Chen, Shuu-Jiun Wang (Taipei City/TW)
- 10:12 **Physical Activity and Migraine According to Aura Symptoms in the ELSA-Brasil cohort: A cross-sectional study.**  
P052 Arão Oliveira, Mario Peres, Juliane Mercante (São Paulo/BR), Maria Del Carmen Molina (Vitória, Ouro Preto/BR), Paulo Lotufo, Isabela Benseñor, Alessandra Goulart (São Paulo/BR)
- 10:15–11:15 **Plenary Session 3 - Medication overuse headache**  
Room Room 1  
Chair Lars Bendtsen (Glostrup/DK)
- 10:15 **Introduction**  
Lars Bendtsen (Glostrup/DK)
- 10:20 **Clinical presentation of MOH around the world**  
IL049 Maria Teresa Goicochea (Buenos Aires/AR)
- 10:40 **Treatment of MOH**  
IL050 David W. Dodick (Phoenix, AZ/US)
- 11:00 **Q&A**
- 10:15–11:15 **8th Headache Science Excellence Tournament**  
Room Room 2
- 10:15–11:15 **EHF Annual General Assembly**  
Room Room 3
- 11:30–12:30 **IHS Fellowships Lectures**  
Room Room 1  
Chair Hans-Christoph Diener (Essen/DE), Shuu-Jiun Wang (Taipei City/TW)
- 11:30 **The link between migraine aura and cerebrovascular endothelial dysfunction**  
IL051 Inge Loonen (Leiden/NL)



11:50 **The search for disease mechanisms and drug targets in idiopathic intracranial hypertension**

IL052 Connor Stanley James Westgate (Copenhagen/DK)

12:10 **Optogenetic spreading depolarizations induce a prolonged neuroinflammatory response and trigeminal pain behaviour in familial hemiplegic migraine type 1 mice**

IL053 Anisa Dehghani (Leiden/NL)

11:30–12:30 **Scientific Session 4 - Post-traumatic headache**

Room Room 2

Chair Alan Finkel (Acton, MA/US)

11:30 **Introduction**

Alan Finkel (Acton, MA/US)

11:35 **Pre-clinical models**

IL054 Trent Anderson (Phoenix, AZ/US)

11:50 **Post-Traumatic Headache: Sensory Testing and Imaging**

IL055 Todd J. Schwedt (Phoenix, AZ/US)

12:05 **Treatment**

IL056 Henrik Schytz (Glostrup/DK)

12:20 **Q&A**

11:30–12:30 **Scientific Session 5 - The omics and migraine**

Room Room 3

Chair Dale Nyholt (Brisbane/AU)

11:30 **Introduction to the omics in migraine**

Dale Nyholt (Brisbane/AU)

11:40 **Genomics, epigenomics & pharmacogenomics**

IL057 Lynn Griffiths (Brisbane/AU)

12:00 **Proteomics and metabolomics**

IL058 Gisela M. Terwindt (Leiden/NL)

12:20 **Q&A**

12:45–13:45 **Scientific Session 6 - Brain localisation of migraine symptoms**

Room Room 1

Chair Mi-Ji Lee (Seoul/KR)

12:45 **Localizing migraine symptoms in the brain**

Mi-Ji Lee (Seoul/KR)

12:50 **Brainstem**

IL059 Phil Holland (London/GB)

13:05 **Thalamus & hypothalamus**

IL060 Andrew Russo (Iowa City IA/US)

13:20 **Cortex**

IL061 Anders Hougaard (Glostrup/DK)

13:35 **Q&A**

## 12:45–13:45 **Scientific Session 7 - Gender & hormones: Do they impact headache care?**

Room Room 2  
Chair Anna Ambrosini (Pozzilli/IT)

12:45 **IHS women's survey**  
Anna Ambrosini (Pozzilli/IT)

12:55 **Results IHS women's survey**  
IL062 Irene de Boer (Leiden/NL)

13:05 **Prolactin: A female-selective mechanism promoting migraine**  
IL063 Frank Porreca (Tucson, AZ/US)

13:20 **What animal models have taught us about the impact of hormones in migraine**  
IL064 Greg Dussor (Dallas, TX/US)

13:35 **Q&A**

## 12:45–13:45 **Scientific Session 8 - Debate:**

**Does the brain cycle differently in people with migraine vs. people without migraine?**

Room Room 3  
Chair Raquel Gil-Gouveia (Lisbon/PT)

12:45 **Introduction**  
Raquel Gil-Gouveia (Lisbon/PT)

12:55 **PRO**  
IL065 Peter J. Goadsby (London/GB)

13:15 **CON**  
IL066 Rami Burstein (Boston, MA/US)

13:35 **Q&A**

## 13:45–14:05 **Industry Meet the Expert**

Room Room 1

## 14:00–15:00 **Poster Session 4**

Room ePoster | Networking  
Chair Juliana VanderPluym (Phoenix, AZ/US), Natalia Hernández-Beltrán (Bogotá/CO)

14:00 **Characterization of erenumab and rimegepant affinity towards calcitonin gene-related peptide and amylin-1 receptors: Possible explanation for constipation by erenumab.**  
P053 Sanne Hage La Cour, Kiki Juhler, Lisette J. A. Kogelman, Jes Olesen (Glostrup/DK), Dan Klærke (Frederiksberg C/DK), David Møbjerg Kristensen (Glostrup, Copenhagen/DK), [Inger Jansen-Olesen](#) (Glostrup/DK)

14:03 **Presentation of migraine in the media – Perception of patients and healthcare workers**  
P054 Bianca Raffaelli, Pia Kull, Jasper Mecklenburg, Lucas Hendrik Overeem, Elisabeth Storch, Maria Terhart, Lars Neeb, Uwe Reuter (Berlin/DE)

14:06 **Trigeminal, cervical, and widespread sensitization in the 4 phases of the migraine cycle**  
P055 Matteo Castaldo, [Stefano Di Antonio](#) (Aalborg/DK), Marta Ponzano, Francesca Bovis (Genova/IT), Paola Torelli (Parma/IT), Cinzia Finocchi (Genova/IT), Lars Arendt-Nielsen (Aalborg/DK)

14:09 **Effects of endogenous PEA in the modulation of migraine pain**  
P056 Rosaria Greco, [Miriam Francavilla](#), Chiara Demartini, Anna Maria Zanaboni, Cristina Tassorelli (Pavia/IT)

- 14:12  
P057 **Investigation of KATP channel opening and inhibition in different in vivo rodent models of migraine**  
Sarah Louise T. Christenen, Gordon Munro, Steffen Petersen, Anmool Shabir, Inger Jansen-Olesen, David Møbjerg Kristensen, Jes Olesen (Glostrup/DK)
- 14:15  
P058 **Profiling PACAP-responsive receptor pharmacology and agonist-dependent antagonism**  
Zoe Tasma (Auckland/NZ), Debbie Hay (Auckland, Dunedin/NZ), Christopher Walker (Auckland/NZ)
- 14:21  
P060 **Intracellular pathways of calcitonin gene-related peptide-induced relaxation of human coronary arteries**  
Tessa de Vries, Sienieke Labrujere (Rotterdam/NL), Antoon van den Bogaardt (Beverwijk/NL), A.H. Jan Danser, Antoinette Maassen van den Brink (Rotterdam/NL)
- 14:24  
P061 **The impact of glucose on mitochondrial function in a brain slice model of cortical spreading depression.**  
Olivia Grech, Daniel Fulton, Zerin Alimajstorovic, Silke Heising, David Cartwright, Benjamin R. Wakerley, Susan P. Mollan, Alexandra J. Sinclair, Gareth G Lavery (Birmingham/GB)
- 14:27  
P062 **Histone deacetylases and key epigenetic players in the pathogenesis on medication overuse headache**  
Daniela Buonvicino, Alberto Chiarugi, Matteo Urru (Firenze/IT)
- 14:30  
P063 **Evaluation of the burden of migraine on the partner's lifestyle: a multicenter study.**  
Eva M. Fernández Bermejo (Madrid/ES), Álvaro Planchuelo-Gómez (Valladolid/ES), Sonia Quintas, Alicia González Martínez (Madrid/ES), David García-Azorín (Salamanca, Valladolid/ES), Álvaro Sierra Mencía (Valladolid/ES), Ángel L. Guerrero Peral (Valladolid, Salamanca/ES), Sonia Santos-Lasaosa, María Pilar Navarro-Pérez (Zaragoza/ES), Nuria González García, Javier Díaz de Terán Velasco, Ana Beatriz Gago Veiga (Madrid/ES)
- 14:33  
P064 **Opioid use for acute headache treatment in a Brazilian Emergency Department**  
Gabriel Taricani Kubota, Márcio Nattan Portes Souza, Marcelo Calderaro, Ana Paula de Sousa Oliveira, Gustavo Kuster, Mauricio Rodrigues Jordao (São Paulo/BR)
- 14:36  
P065 **Association of daytime sleepiness with recurrent headache in Russian urban adolescents: a school-based study**  
Sergey Tereshchenko, Margarita Shubina, Nina Gorbacheva, Ivan Novitskii (Kranoyarsk/RU)
- 14:39  
P066 **Interactions of the neuropeptide galanin with cortical spreading depolarization and cortical neuronal excitability**  
Fatima Gimeno-Ferrer, Annett Eitner, Reinhard Bauer (Jena/DE), Alfred Lehmenkühler (Düsseldorf/DE), Hans-Georg Schaible, Frank Richter (Jena/DE)
- 14:45  
P069 **Headache Disability, Lifestyle Factors, Health Perception, and Mental Disorder Symptoms in the 2013 National Health Survey in Brazil: A cross-sectional analysis**  
Arão Oliveira, Juliane Mercante, Alessandra Goulart, Isabela Benseñor, Mario Peres (São Paulo/BR)
- 14:48  
P070 **Headache patient analysis in LLC Vidzemes Hospital, Latvia, emergency room**  
Marta Silina, Ligita Smeltere (Rīga/LV)
- 14:51  
P072 **Intoxication profiles in a Dutch migraine cohort**  
Thomas van den Hoek, Iris Verhagen, Irene de Boer, Gisela M. Terwindt (Leiden/NL)
- 14:54  
P073 **Salivary CGRP can help monitor the different migraine phases: CGRP (in)dependent attacks**  
Alicia Alpuente, Víctor-José Gallardo López, Laila Asskour, Edoardo Caronna, Marta Torres-Ferrus, Patricia Pozo-Rosich (Barcelona/ES)
- 14:57  
P074 **Micro-array analysis of the hypothalamus in an animal migraine model.**  
Ramla Abuukar Abdullahi, Tatiane Takahashi, David Chambers, Gareth Williams, Bright Okine, Giorgio Lambru, Anna P. Andreou, Ramla Abdullahi (London/GB)

**14:15–15:15 Open Meeting of IHS Juniors Group**

Room Room 1

Chair Anders Hougaard (Glostrup/DK), Francesca Puledra (London/GB)

**15:15–16:45 Oral Abstract Presentations 5**

Room Room 2

Chair Mattias Linde (Trondheim/NO), William Renthall (Boston, MA/US)

**15:15 AL031 Part I: The impact of diet-induced obesity on intracranial pressure in a rodent model of non-traumatic intracranial hypertension**

Ida Israelsen, Connor James Westgate, Rigmor Højland Jensen, Sajedeh Eftekhari (Copenhagen/DK)

**15:25 AL032 Part III: Neuroretinal changes in a rodent model of diet-induced obesity with raised intracranial pressure.**

Snorre Hagen (Copenhagen, Glostrup/DK), Connor Stanley James Westgate (Glostrup/DK), Ida Israelsen (Copenhagen, Glostrup/DK), Steffen Hamann, Rigmor Højland Jensen (Glostrup, Copenhagen/DK), Sajedeh Eftekhari (Glostrup/DK)

**15:35 AL033 Amylin analog pramlintide induces migraine-like attacks in patients**

Hashmat Ghanizada (Taastrup/DK)

**15:45 AL034 New daily persistent headache: clinical characteristics and treatment responses in 366 patients**

Sanjay Cheema (London/GB), Anker Stubberud (London/GB, Trondheim/NO), Khadija Rantell, Parashkev Nachev (London/GB), Erling Tronvik (Trondheim/NO), Manjit Matharu (London/GB)

**15:55 AL035 Using Optical Coherence Tomography as a Surrogate of Measurements of Intracranial Pressure in Idiopathic Intracranial Hypertension**

Susan P. Mollan, Vivek Vijay, James Mitchell, Edward Bilton, Zerin Alimajstorovic, Keira Markey, Anthony Fong, Jessica Walker, Hannah Lyons, Andreas Yiangou, Georgios Tsermoulas, Kristian Brock, Alexandra J. Sinclair (Birmingham/GB)

**16:05 AL036 CGRP and the AMY1 receptor: Identifying Targets for Migraine**

Tayla Rees, Simon O'Carroll (Auckland/NZ), Christelle Le Foll, Thomas Lutz (Zurich/CH), Christopher Walker (Auckland/NZ), Debbie Hay (Auckland, North Dunedin/NZ)

**16:15 AL037 The Effects of P2X7 Antagonism on Neuroinflammation Following Optogenetically-Triggered Cortical Spreading Depression**

Burak Uzay, Buket Donmez-Demir, Sinem Yilmaz-Ozcan, Emine Eren-Kocak, Muge Yemisci, Turgay Dalkara, Hulya Karatas (Ankara/TR)

**16:25 AL039 Insights into the natural history of spontaneous intracranial hypotension from infusion testing**

Jürgen Beck, Christian Fung, Debora Cipriani (Freiburg/DE), Tomas Dobrocky, Andreas Raabe, Eike Immo Piechowiak, Levin Häni (Bern/CH)

**16:35 AL040 IIH Pressure Med: A randomised, sequential, trial of the effect on intracranial pressure of five drugs commonly used in Idiopathic Intracranial Hypertension**

James Mitchell, Susan P. Mollan, Jessica Walker, Hannah Lyons, Andreas Yiangou, Zerin Alimajstorovic, Olivia Grech, Benjamin R. Wakerley, Georgios Tsermoulas, Kristian Brock, Alexandra J. Sinclair (Birmingham/GB)



**15:15–16:45 Oral Abstract Presentations 6**

Room Room 3  
Chair Christine Lay, Claire Sandoe (Toronto/CA)

15:15 **Characterizing Preventive Treatment Gaps in Migraine: Results from the CaMEO Study**  
AL041 Stephanie J. Nahas (Philadelphia, PA/US), Dawn C. Buse (Bronx, NY/US), Susan Hutchinson (Irvine, CA/US), Michael L. Reed, Kristina M. Fanning (Chapel Hill, NC/US), Brett Dabruzzo (Madison, NJ/US), Richard B. Lipton (Bronx, NY/US)

15:25 **Treatment with calcitonin gene-related peptide antibodies modifies brainstem excitability and habituation to nociceptive trigeminal stimulation in migraineurs**  
AL042 Anne Thiele, Lara Klehr, Sebastian Strauß, Anselm Angermaier (Greifswald/DE), Martin Kronenbuerger (Bielefeld/DE), Robert Fleischmann (Greifswald/DE)

15:35 **Long-term Fremanezumab Treatment Over 6 to 12 Months Shows No Effect on Blood Pressure in Migraine Patients**  
AL043 Steffen Nägel (Halle/DE), Joshua M. Cohen, Yoel Kessler, Verena Ramirez Campos, Xiaoping Ning, Steve Barash (West Chester, PA/US), Stephanie J. Nahas (Philadelphia, PA/US)

15:45 **Erenumab vs Galcanezumab in a Very Difficult-To-Treat Migraine Population. Efficacy and Safety**  
AL044 Diaz Insa Samuel, Candela Nieves Castellanos, LOSADA LOPEZ Mireya, Perez Garcia Julia, NAVARRO MUÑOZ María José (Valencia/ES)

15:55 **Long term (48-weeks) effectiveness, safety and tolerability of erenumab in the prevention of high-frequency episodic and chronic migraine in real-world: the EARLY 2 study.**  
AL045 Cinzia Aurilia (Rome/IT), Sabina Cevoli (Bologna/IT), Gabriella Egeo, Luisa Fofi (Rome/IT), Roberta Messina (Milan/IT), Antonio Salerno (Rome/IT), Paola Torelli (Parma/IT), Maria Albanese, Antonio Carnevale (Rome/IT), Francesco Bono (Catanzaro/IT), Domenico D'Amico, Massimo Filippi (Milan/IT), Claudia Altamura, Fabrizio Vernieri (Rome/IT), Bruno Colombo, Fabio Frediani (Milan/IT), Bruno Mercuri (Rome/IT), Florindo D'Onofrio (Avellino/IT), Licia Grazi (Milan/IT), Marco Aguggia (Asti/IT), Valentina Favoni (Bologna/IT), Cinzia Finocchi (Genova/IT), Paola Di Fiore (Milan/IT), Carmelina Maria Costa, Nicoletta Brunelli, Adriana Fallacara (Rome/IT), Davide Bertuzzo (Asti/IT), Maurizio Zucco, Laura Di Clemente (Rome/IT), Michele Trimboli (Potenza/IT), Angelo Pascarella, Lucia Manzo (Catanzaro/IT), Piero Barbanti (Rome/IT)

16:05 **Chronic Migraine with Medication Overuse Headache: is detoxification still necessary in the era of new prophylaxes?**  
AL046 Davide Mascarella, Eleonora Matteo, Gian Maria Asioli, Umberto Pensato, Valentina Favoni, Giorgia Andriani, Giulia Pierangeli, Sabina Cevoli, Pietro Cortelli (Bologna/IT)

16:15 **Effectiveness of prophylactic and acute migraine treatment in rare migraine syndromes**  
AL047 Irene de Boer, Yelda Su, Annelise Wilms, Joanne Simons, Nadine Pelzer, Gisela M. Terwindt (Leiden/NL)

**16:45–17:15 Poster Session 5**

Room ePoster | Networking  
Chair Christoph Schankin (Bern/CH), Hadas Nahman-Averbuch (St. Louis, MO/US)

16:45 **The Influence of Calcitonin Gene-Related Peptide on Cerebral Hemodynamics and Calcitonin Gene-Related Peptide-Induced Headache on Migraine with Aura**  
P075 Marjan Zaletel, Darja Visočnik, Matija Zupan, Bojana Žvan (Ljubljana/SI)

16:48 **The effect of KATP channel blocker glibenclamide on CGRP-induced headache and hemodynamic in healthy volunteers**  
P076 Hande Coskun (Glostrup/DK), Fatima Azzahra Elbahi (Glostrup, Copenhagen/DK), Mohammad Al-Mahdi Al-Karaghali, Hashmat Ghanizada (Glostrup/DK), Majid Sheykhzade (Copenhagen/DK), Messoud Ashina (Glostrup/DK)

- 16:51 **Diffusion tensor imaging and neurite orientation and dispersion imaging in patients with migraine**  
P077 Yasushi Shibata, Sumire Ishiyama (Mito, Ibaraki/JP)
- 16:54 **Effect of adrenomedullin on migraine-like attacks in patients with migraine: A randomized crossover study**  
P078 Hashmat Ghanizada (Taastrup/DK)
- 16:57 **Vasoactive intestinal polypeptide (VIP) induces migraine attacks: A randomized clinical trial**  
P079 Lanfranco Pellesi, Mohammad Al-Mahdi Al-Karagholi (Copenhagen/DK), Roberto De Icco (Pavia/IT), Hande Coskun, Fatima Azzahra Elbahi (Copenhagen/DK), Cristina Lopez-Lopez, Josefin Snellman (Basel/CH), Jens Hannibal, Faisal Mohammad Amin, Messoud Ashina (Copenhagen/DK)
- 17:00 **Opening of ATP sensitive potassium channels causes migraine attacks with aura**  
P080 Mohammad Al-Mahdi Al-Karagholi, Hashmat Ghanizada, Cherie Amalie Nielsen, Anders Hougaard, Messoud Ashina (København S/DK)
- 17:03 **Resting-state Occipital Alpha Power is associated with Treatment Outcome in Patients with Chronic Migraine**  
P081 Fu-Jung Hsiao, Li-Ling Pan, Wei-Ta Chen, Shuu-Jiun Wang (Taipei City/TW)
- 17:06 **Cortical abnormalities in pediatric patients with migraine without aura: analysis of gyrification morphology and cortical thickness**  
P082 Giorgia Sforza, Laura Papetti, Alessia Guarnera, Romina Moavero, Fabiana Ursitti, Michela Ada Noris Ferilli, Samuela Tarantino, Antonio Napolitano, Daniela Longo (Rome/IT), Massimiliano Valeriani (Aalborg/DK, Rome/IT)
- 17:09 **Neural signatures associated with treatment response in chronic migraine**  
P083 Hung-Yu Liu, Kun-Hsien Chou, Pei-Lin Lee, Yen-Feng Wang, Shih-Pin Chen, Kuan-Lin Lai, Li-Ling Pan, Wei-Ta Chen, Shuu-Jiun Wang (Taipei City/TW)
- 17:12 **Investigation of cortical thickness and volume during spontaneous attacks of migraine without aura: a 3-Tesla MRI study**  
P084 Faisal Mohammad Amin (Glostrup/DK), Roberto De Icco (Pavia/IT), Mohammad Al-Mahdi Al-Karagholi (Glostrup/DK), Jayachandra Raghava (Copenhagen/DK), Frauke Wolfram (Herlev/DK), Henrik B W Larsson (Copenhagen/DK), Messoud Ashina (Glostrup/DK)
- 17:15–18:15 **Plenary Session 4 - Idiopathic intracranial hypertension**  
Room Room 1  
Chair Kathleen B. Digre (Salt Lake City, UT/US)
- 17:15 **Introduction**  
Kathleen B. Digre (Salt Lake City, UT/US)
- 17:20 **Mechanistic insights in IIH**  
IL067 Alexandra J. Sinclair (Edgbaston, Birmingham/GB)
- 17:35 **Therapeutic weight loss in IIH. Results from the IIH:WT trial**  
IL068 Susan P. Mollan (Birmingham/GB)
- 17:50 **IHS & EHF consensus guidelines on IIH**  
IL069 Rigmor Højland Jensen (Glostrup/DK)
- 18:05 **Q&A**
- 17:30–18:00 **Industry Meet the Expert**  
Room Room 2
- 18:30–20:00 **Industry Satellite Symposium**  
Room Room 1

**08:30–10:30 Oral Abstract Presentations of Industry Sponsored Clinical Trials**

Room Room 1

Chair Andreas Gantenbein (Bad Zurzach/CH), Koen Paemeleire (Ghent/BE)

**08:30 AL048 Impact of Baseline Characteristics on the Efficacy and Safety of Eptinezumab in Patients with Migraine: Subgroup Analyses of PROMISE-1 and PROMISE-2**

Vincent Martin (Cincinnati, OH/US), A. Jim Nagy (Las Vegas, NV/US), Marina Janelidze, Gvantsa Giorgadze (Tbilisi/GE), Joe Hirman (Woodinville, WA/US), Roger Cady (San Diego, CA/US), Lahar Mehta (Bothell, WA/US), Dawn C. Buse (Chapel Hill, NC, Bronx, NY/US)

**08:40 AL049 Consistent efficacy and safety of erenumab over time in patients with episodic migraine who completed a 5-year, open-label extension study**

Messoud Ashina (Copenhagen/DK), Peter J. Goadsby (London/GB, Los Angeles, CA/US), Uwe Reuter (Berlin/DE), Stephen D. Silberstein (Philadelphia, PA/US), David W. Dodick (Scottsdale, AZ/US), Feng Zhang, Fei Xui, Sunfa Cheng, Denise E Chou, Gabriel Paiva da Silva Lima (Thousand Oaks, CA/US)

**08:50 AL050 Real-world healthcare costs and resource utilization (HRU) among patients treated with erenumab in the United States: A retrospective claims database study**

Stewart J. Tepper (Dartmouth, NH/US), Todd J. Schwedt (Phoenix, AZ/US), Pamela Vo (Basel/CH), Parth Joshi (Hyderabad/IN), Mrudula Glassberg, Ahmad Abdrabbah (East Hanover, NJ/US), Matias Ferraris (Basel/CH), Santosh Tiwari (Hyderabad/IN), Jeffrey Thompson (New York, NY/US)

**09:00 AL051 Efficacy of Fremanezumab in Migraine Patients With Pain or Psychiatric Comorbidities and Documented Inadequate Response to 2-4 Prior Migraine Preventive Medication Classes**

Egilius L.H. Spierings (Waltham, MA/US), Xiaoping Ning, Joshua M. Cohen, Verena Ramirez Campos, Steve Barash (West Chester, PA/US)

**09:10 AL052 Changes in the Number of Non-headache Days and Functioning on Those Days with Fremanezumab Treatment in Patients With Migraine: A Pooled Analysis**

Juliana VanderPluym (Phoenix, AZ/US), Joshua M. Cohen, Xiaoping Ning, Verena Ramirez Campos, Lindsay Janka (West Chester, PA/US), Dawn C. Buse (Bronx, NY/US)

**09:20 AL053 Onset of Migraine Preventive Effects with Rimegepant in a Phase 2/3, Randomized, Double-Blind, Placebo-Controlled Trial**

Richard B. Lipton (Bronx, NY/US), David Kudrow (Santa Monica, CA/US), Timothy Smith (St Louis, MO/US), Robert Croop, Christopher M. Jensen, Lisa Kamen, Alexandra Thiry, Vladimir Coric (New Haven, CT/US), Peter J. Goadsby (Los Angeles, CA/US, London/DE)

**09:30 AL054 A Phase 2/3, Randomized, Double-blind, Placebo-controlled Study to Evaluate the Efficacy and Safety of Rimegepant for the Preventive Treatment of Migraine**

Robert Croop (New Haven, CT/US), Richard B. Lipton (Bronx, NY/US), David Kudrow (Santa Monica, CA/US), David A. Stock, Lisa Kamen, Charles M. Conway, Elyse G. Stock, Vladimir Coric (New Haven, CT/US), Peter J. Goadsby (London/DE, Los Angeles, CA/US)

**09:40 AL055 Efficacy and Safety of AXS-07 (MOSEIC Meloxicam-Rizatriptan) for the Acute Treatment of Migraine: Results from the MOMENTUM Phase 3, Randomized, Double-blind, Active- and Placebo-controlled Trial.**

Cedric O'Gorman, Amanda Jones (New York, NY/US), Stewart J. Tepper (Hanover, NH/US), Cheryl Askew, Richard B. Lipton, Herriot Tabuteau (New York, NY/US)

**10:00 AL058 Erenumab versus topiramate for the prevention of migraine: Results of a post-hoc efficacy analysis**

Marc Ehrlich, Monika Maier-Peuschel, Christian Sieder, Christian Hentschke (Nürnberg/DE), Uwe Reuter (Berlin/DE)

**10:10 AL059 A Phase 3 randomized, double-blind, sham-controlled Trial of e-TNS for the Acute treatment of Migraine (TEAM)**

Deena Kuruvilla (Westport, CT/US), Amaal Starling (Phoenix, AZ/US), Stewart J. Tepper (Lebanon, NH/US), Joseph Mann (Rochester, MN/US), Gregory Panza, Michael Johnson (Seraing/BE)

10:20 **Ubrogapant users' experience - Patients on Ubrogapant, characteristics and outcomes (UNIVERSE STUDY)**  
 AL060 Anand R. Shewale (North Chicago, IL/US), Weijie Poh (Singapore/SG), Michael L. Reed (Chapel Hill, NC/US), Shivaji Manthana (North Chicago, IL/US), Francois Cadiou (Singapore/SG), Kate Burslem (North Chicago, IL/US), Richard B. Lipton (Bronx, NY/US)

09:00–10:30 **German General Practitioners Track - Kopfschmerztag**

Room Room 3

09:00 **Schnell und sicher zur Kopfschmerzdiagnose: Auf die richtigen Fragen kommt es an!**  
 IL070 Ruth Ruscheweyh (Munich/DE)

09:30 **Kopfschmerzen bei Kindern und Jugendlichen: Die Rolle des Hausarztes**  
 IL071 Gudrun Goßrau (Dresden/DE)

10:00 **Akuttherapie der Migräne mehr als die LL: Tipps vom Experten**  
 IL072 Tim Patrick Jürgens (Rostock/DE)

10:30–12:00 **Poster Session 6**

Room ePoster | Networking

Chair Alicia Alpuente (Barcelona/ES), Min Kyung Chu (Seoul/KR)

10:30 **Results of occipital nerve stimulation for refractory chronic cluster headache in a third-level hospital**  
 P085 Javier A. Membrilla, Iñigo de Lorenzo, Javier Roa, Manuel Lara-Lara, José Paz-Solís, Alfonso Gil-Martínez, Exuperio Díez-Tejedor, Javier Díaz-de-Terán (Madrid/ES)

10:33 **Nocebo Response in Human Models of Migraine: A Systematic Review and Meta-Analysis of Randomized, Double-Blind, Placebo-Controlled, 2-Way Crossover Trials in Migraine without Aura and Healthy Volunteers.**  
 P086 Hashmat Ghanizada (Taastrup/DK)

10:36 **Evaluating the Utility of Patient-Identified Most Bothersome Symptom for Migraine Research**  
 P087 Richard B. Lipton (Bronx, NY/US), Peter J. Goadsby (Los Angeles, CA/US), David W. Dodick (Phoenix, AZ/US), James S McGinley, Carrie R. Houts, R.J. Wirth (Chapel Hill, NC/US), Steve Kymes (Deerfield, IL/US), Anders Ettrup, Ole Østerberg (Copenhagen/DK), Roger Cady (San Diego, CA/US), Messoud Ashina (Copenhagen/DK), Dawn C. Buse (Chapel Hill, NC, Bronx, NY/US)

10:39 **Optimal Acute Treatment Is Associated with Productivity Gains in People with Migraine: Results from the Chronic Migraine Epidemiology and Outcomes (CaMEO) Study**  
 P088 Dawn C. Buse (Bronx, NY/US), Stephanie J. Nahas (Philadelphia, PA/US), Walter Stewart (Oakland, CA/US), Cynthia E. Armand (Bronx, NY/US), Michael L. Reed, Kristina M. Fanning (Chapel Hill, NC/US), Aubrey Manack Adams (Irvine, CA/US), Richard B. Lipton (Bronx, NY/US)

10:42 **Long-term Safety and Tolerability of Atogepant 60 mg Following Once Daily Dosing Over 1 Year for the Preventive Treatment of Migraine**  
 P089 Messoud Ashina (Glostrup/DK), Stewart J. Tepper (Hanover, NH/US), Uwe Reuter (Berlin/DE), Andrew M. Blumenfeld (Carlsbad, CA/US), Susan Hutchinson (Irvine, CA/US), Jing Xia, Rosa Miceli, Lawrence Severt, Michelle Finnegan, Joel M. Trugman (Madison, NJ/US)

10:45 **Can migraine features, hypersensitivity or cervical musculoskeletal dysfunction explain neck disability in migraine?**  
 P090 Zhiqi Liang, Lucy Thomas, Gwendolen Jull, Julia Treleaven (St Lucia/AU)

10:48 **Transcranial sonography in migraine: periaqueductal gray matter (PAG)**  
 P091 Natascia Ghiotto, Elena Guaschino, Roberto De Icco, Eleonora Cecconi, Cristina Tassorelli, Grazia Sances (Pavia/IT)



- 10:51 **Association of white matter hyperintensities with different migraine subtypes**  
P092 Larisa Dobrynina, Anastasia Suslina, Mariia Gubanova, Anastasia Belopasova, Anastasia Sergeeva (Moscow/RU), Stefan Evers (Münster/DE), Marina Krotenkova (Moscow/RU)
- 10:54 **Craniocervical exercises reduce disability in patients with migraine**  
P093 Mariana Tedeschi Benatto (Ribeirão Preto/BR), Lidiane Lima Florencio (Alcorcón/ES), Marcela Mendes Bragatto, Fabíola Dach, Débora Bevilaqua-Grossi (Ribeirão Preto/BR)
- 10:57 **Pharmacological characterisation of mouse calcitonin and calcitonin receptor-like receptors reveals differences compared to human receptors**  
P094 Michael Garelja (Dunedin/NZ), Christopher Walker (Auckland/NZ), Debbie Hay (Dunedin, Auckland/NZ)
- 11:00 **Registry-based, Prospective, Observational Studies to Assess Maternal, Fetal, and Infant Outcomes Following Exposure to Migraine Treatments, Including Galcanezumab**  
P095 Sara Ephross (Morrisville, NC/US), Krista Schroeder, Nicole Kellier-Steele (Indiana, IN/US), Angie Graves (Morrisville, NC/US), Mark Bangs, Russell Nichols, Lynn Do, Paula Hauck (Indiana, IN/US), Jan Brandes (Nashville, TN/US)
- 11:03 **Mindfulness-based Stress Reduction (MBSR) vs. HA Education: A Randomized Clinical Trial Showing Mindfulness Treats Total Migraine Burden**  
P096 Rebecca Erwin Wells, Nathaniel O'Connell, Charles R. Pierce, Paige Estave, Donald B. Penzien (Winston Salem, NC/US), Elizabeth Loder (Boston, MA/US), Fadel Zeidan (San Diego, CA/US), Timothy T. Houle (Boston, MA/US)
- 11:06 **Switching Associated with Initiation of Calcitonin Gene-Related Peptide (CGRP) Monoclonal Antibodies (mAbs) Versus non-CGRP mAb Treatments for Prevention of Migraine**  
P097 Shonda A. Foster (Indiana, IN/US), Janna Manjelienskaia (Cambridge, MA/US), Janet H. Ford, Wenyu Ye, Allison Perry, Kory Schuh, Richard Wenzel (Indiana, IN/US)
- 11:09 **Regular practice of autogenic training reduces migraine frequency and associated with brain activity changes in response to fearful visual stimuli**  
P098 Dóra Dobos (Budapest/HU), Szabó Edina (Budapest/HU, Boston, MA/US), Dániel Baksa, Kinga Gecse, Natália Kocsel, Dorottya Pap, Terézia Zsombók, Lajos Rudolf Kozák, Kökönyei Gyöngyi, Gabriella Juhász (Budapest/HU)
- 11:12 **Real-world Evidence for the Safety and Efficacy of CGRP Monoclonal Antibody Therapy Added to OnabotulinumtoxinA Treatment for Migraine Prevention in Adult Patients with Chronic Migraine**  
P099 Laszlo Mechtler, Nicolas Saikali, Jennifer McVige (Buffalo, NY/US), Olivia Hughes (Boston, MA/US), Alexandra Traut, Aubrey Adams (Irvine, CA/US)
- 11:15 **Effect of Occipital Nerve Stimulation (ONS) on the Orbicularis Oculi Reflex Triggered by a Standardized Air Flow in Patients with Chronic Migraine—A Prospective, Randomized, Interventional Study**  
P0100 Carl Göbel, Axel Heinze, Sarah Karstedt, Svenja Clasen, Hartmut Göbel (Kiel/DE)
- 11:18 **Modulation of cortical networks functional connectivity in migraine patients by repetitive transcranial magnetic stimulation**  
P0101 Kirill Markin, Daria Frunza, Dmitriy Tarumov, Michael Sorokin, Artem Trufanov (St. Petersburg/RU)
- 11:21 **Abnormal Multisensory Integration in Migraine: A Study of Concurrent Visual and Somatosensory Stimulation**  
P0102 Gabriele Sebastianelli, Chiara Abagnale, Francesco Casillo, Mariano Serrao, Gianluca Coppola (Latina/IT)
- 11:24 **The association of cortical thickness at MRI with clinical presentation of migraine aura: a whole brain surface-based morphometry study.**  
P0103 Chiara Abagnale (Latina/IT), Antonio Di Renzo, Emanuele Tinelli, Barbara Petolicchio (Rome/IT), Mariano Serrao (Latina/IT), Vincenzo Parisi, Marco Fiorelli, Francesca Caramia, Vittorio Di Piero (Rome/IT), Gianluca Coppola (Latina/IT)

- 11:27  
P0104 **Erenumab effects at the level of the caudal trigeminal nucleus and on the somatosensory cortex**  
Francesco Casillo, Gabriele Sebastianelli, Chiara Abagnale, Francesco Pierelli, Gianluca Coppola (Latina/IT)
- 11:30  
P0105 **Treatment failure with anti-CGRP therapy: should we discontinue the treatment or switch it?**  
Candela Nieves Castellanos, Mireya Losada López, María Isabel Fabrich Marín, Julia Pérez García, Samuel Díaz Insa (Valencia/ES)
- 11:33  
P0106 **Efficacy and Safety of Eptinezumab in Patients With Migraine and Self-Reported Aura: Post Hoc Analysis PROMISE-1 and PROMISE-2**  
Messoud Ashina (Copenhagen/DK), Peter McAllister (Stamford, CT/US), Roger Cady (San Diego, CA/US), Joe Hirman (Woodinville, WA/US), Anders Ettrup (Copenhagen/DK)
- 11:36  
P0107 **Tardive Dyskinesia Associated with Dopamine Blocking Agents Used in Migraine**  
Wojciech Gryc, Natalia Murinova, Daniel Krashin, Angela Argyropoulos (Seattle, WA/US)
- 11:39  
P0108 **Consecutive Migraine-free Days with Fremanezumab Treatment: Results of the Double-blind, Placebo-controlled FOCUS Study**  
Hans-Christoph Diener (Essen/DE), Joshua M. Cohen (West Chester, PA/US), Maja Galic (Amsterdam/NL), Verena Ramirez Campos, Steve Barash, Xiaoping Ning (West Chester, PA/US), Ladislav Pazdera (Rychnov nad Kněžnou/CZ)
- 11:42  
P0109 **Efficacy of Galcanezumab for the treatment of migraine in Korea: the first real-world data from an Asian country**  
Soonwook Kwon (Incheon/KR), Young-Eun Gil, Mi-Ji Lee (Seoul/KR)
- 11:45  
P0110 **Safety Findings from CENTURION, a Phase 3 Consistency Study of Lasmiditan for the Acute Treatment of Migraine**  
Cristina Tassorelli (Pavia/IT), Sonja Bragg, John Krege, Erin G Doty, Paul A Ardayfio, Dustin Ruff, Sherie Dowsett (Indiana, IN/US), Todd J. Schwedt (Phoenix, AZ/US)
- 11:48  
P0111 **Haematohidrosis with Headache-A Rare Phenomenon of Sweating Blood: A Case Report**  
Amit Chowdhury (Dhaka/BD)
- 11:51  
P0112 **Preventive oral migraine treatment utilization patterns (POLARIS STUDY): A retrospective claims data analysis**  
Jessica Ailani (Washington, DC/US), Anand R. Shewale (North Chicago, IL/US), David Oliveri, Lauren Wilson (Hoboken, NJ/US), Kate Burslem (North Chicago, IL/US), Richard B. Lipton (Bronx, NY/US)
- 11:54  
P0113 **Exercised Brain in Pain: Quantification of Exercise in Migraine Patients Seen at a Large Tertiary Headache Center**  
Mason Dyess, Ami Cuneo, Gabriella O'Fallon (Seattle, WA/US), Helen Haley (Boston, MA/US), Arnav Narula (Seattle, WA/GB), Natalia Murinova, Daniel Krashin, Mui Chan-Goh, Marcel Budica (Seattle, WA/US), Silvie Belaskova (Brno/CZ)
- 11:57  
P0114 **Clinical characteristics of headache after vaccination against COVID-19 (Coronavirus SARS-CoV-2) with the COVID-19 mRNA-1273 Moderna vaccine: a prospective multicentre observational cohort study**  
Carl Göbel (Lübeck, Kiel/DE), Axel Heinze (Kiel/DE), Sarah Karstedt (Lübeck, Kiel/DE), Mascha Morscheck, Lilian Tashiro (Kiel/DE), Anna Cirkel (Lübeck, Kiel/DE), Qutyaba Hamid, Rabih Halwani (Sharjah/AE), Mohamad-Hani Temsah (Riyadh/SA), Malte Ziemann, Siegfried Görg, Thomas Münte (Lübeck/DE), Hartmut Göbel (Kiel/DE)
- 10:45–11:45 **German General Practitioners Track - Kopfschmerztag**  
Room Room 3
- 10:45  
IL073 **Prophylaxe der Migräne – mehr als die LL: Tipps vom Experten**  
Charly Gaul (Frankfurt a. M./DE)
- 11:15  
IL074 **Stress als Ursache für Kopfschmerzen? Intervenieren Sie professionell**  
Astrid Gendolla (Essen/DE)

## 12:00–13:00 Industry Satellite Symposium - Kopfschmerztag

Room Room 3

Chair Charly Gaul (Frankfurt a. M./DE), Martin Marziniak (Haar/DE)

### 12:00 Diagnostik und Red Flags

Charly Gaul (Frankfurt a. M./DE)

### 12:30 Akute Therapie der Migräne und des Clusterkopfschmerzes

Martin Marziniak (Haar/DE)

## 12:15–13:15 Poster Session 7

Room ePoster | Networking

Chair Shih-Pin Chen (Taipei/TW), Tissa Wijeratne (Melbourne/AU)

### 12:15 A Survey of the Most Common Drugs Causing Headaches in FDA Adverse Event Reporting System

P0115 Brett Musialowicz, Brad Kamitaki, Pengfei Zhang (New Brunswick, NJ/US)

### 12:18 Migraine Management with Telemedicine Visits Only: Can Patients Achieve Clinically Meaningful Improvement?

P0117 Bradley Torphy, Melody Smith, Ann Calvillo, Alexia Kovlari (Chicago, IL/US)

### 12:21 How much weight loss is required to reduce intracranial pressure in idiopathic intracranial hypertension?

P0118 Susan P. Mollan, James Mitchell, Andreas Yiangou, Ryan Ottridge, Zerin Alimajstorovic, David Cartwright (Birmingham/GB), Simon Hickman (Sheffield/GB), Rishi Singhal, Abd Tahrani, Emma Frew, Kristian Brock, Alexandra J. Sinclair (Birmingham/GB)

### 12:24 Bariatric surgery versus community weight management intervention for the treatment of idiopathic intracranial hypertension (IIH:WT): A randomized controlled trial

P0119 Susan P. Mollan, James Mitchell, Ryan Ottridge, Magda Aguiar, Andreas Yiangou, Zerin Alimajstorovic, David Cartwright, Olivia Grech, Gareth G Lavery, Connor Stanley James Westgate, Vivek Vijay, Will Scotton, Benjamin R. Wakerley, Tim Matthews (Birmingham/GB), Alec Ansons (Manchester/GB), Simon Hickman (Sheffield/GB), James Benzimra (Exeter/GB), Caroline Rick (Nottingham/GB), Rishi Singhal, Abd Tahrani, Kristian Brock, Emma Frew, Alexandra J. Sinclair (Birmingham/GB)

### 12:27 Intracranial pressure determines headache morbidity in idiopathic intracranial hypertension

P0120 Susan P. Mollan, Benjamin R. Wakerley, Zerin Alimajstorovic, James Mitchell, Ryan Ottridge, Andreas Yiangou, Mark Thaller, Olivia Grech, Gareth G Lavery, Kristian Brock, Alexandra J. Sinclair (Birmingham/GB)

### 12:30 Safety of Select Headache Medications in Patients with Cerebral and Spinal Cavernous Malformations

P0121 Chia-Chun Chiang, Robert Brown, Giuseppe Lanzino, Kelly Flemming (Rochester, MN/US)

### 12:33 Neuroimaging in the Diagnosis of Idiopathic Intracranial Hypertension – Is It Useful?

P0122 Johanne Juhl Korsbaek (Glostrup/DK), Dagmar Beier, Lisbeth Hoegedal (Odense/DK), Rigmor Højland Jensen (Glostrup/DK)

### 12:36 Thunderclap Headache: A primary symptom of a steroid responsive encephalopathy with autoimmune thyroiditis.

P0123 Naman Zala, Lena Wirth, Timolaos Rizos, Berit Jordan (Frankfurt am Main/DE), Hagen Meredig (Heidelberg/DE)

### 12:39 Fertility in Idiopathic Intracranial Hypertension

P0124 Mark Thaller, Jemma Mytton, Andreas Yiangou, James Mitchell, Olivia Grech, Zerin Alimajstorovic, Benjamin R. Wakerley, Susan P. Mollan, Alexandra J. Sinclair (Birmingham/GB)

### 12:42 Changes in Intracranial Pressure Waveform in Patients with Idiopathic Intracranial Hypertension

P0125 Rebecca Buckman, James Mitchell, Andreas Yiangou, Mark Thaller, Olivia Grech, Zerin Alimajstorovic, Benjamin R. Wakerley, Susan P. Mollan, Alexandra J. Sinclair (Birmingham/GB)

- 12:45  
P0127 **Obstructive sleep apnoea in idiopathic intracranial hypertension: findings from the Idiopathic Intracranial Hypertension Weight Trial (IIH:WT)**  
Andreas Yiangou, James Mitchell, Matthew Nicholls (Edgbaston, Birmingham, Birmingham/GB), Yu Cheat Chong (Birmingham/GB), Vivek Vijay (Birmingham, Edgbaston, Birmingham/GB), Benjamin R. Wakerley (Birmingham/GB), Gareth G Lavery (Birmingham, Edgbaston, Birmingham/GB), Abd Tahrani (Edgbaston, Birmingham, Birmingham/GB), Susan P. Mollan (Birmingham/GB), Alexandra J. Sinclair (Edgbaston, Birmingham, Birmingham/GB)
- 12:48  
P0128 **Changes in the Intensity of Pain and Quality of Life in Patients with Low-Grade Gliomas After Surgical Treatment**  
Mariia Kurnukhina, Vladislav Cherebillo (St. Petersburg/RU)
- 12:51  
P0129 **Minimally invasive surgery for spinal CSF-leaks in spontaneous intracranial hypotension**  
Jürgen Beck, Ulrich Hubbe, Jan-Helg Klingler, Roland Rölz, Luisa M. Kraus, Horst Urbach, Christian Fung (Freiburg/DE)
- 12:54  
P0130 **Spinal CSF leaks and superficial siderosis: Closely linked diseases?**  
Christian Fung, Benedikt Haupt, Debora Cipriani (Freiburg/DE), Levin Häni, Andreas Raabe (Bern/CH), Luisa M. Kraus, Katerina Argiti, Amir El-Rahal, Jürgen Beck (Freiburg/DE)
- 12:57  
P0131 **Persistent headache attributed to past cervicocephalic artery dissection: clinical characterization and predictors of headache persistence**  
Bárbara Martins, Inês Mesquita, Pedro Abreu, Andreia Costa (Porto/PT)
- 13:00  
P0132 **Outcome after surgical treatment of cerebrospinal fluid leaks in spontaneous intracranial hypotension – a matter of time**  
Levin Häni (Bern/CH), Christian Fung (Freiburg/DE), Christopher Marvin Jesse, Christian Thomas Ulrich, Eike Immo Piechowiak, Jan Gralla, Andreas Raabe, Tomas Dobrocky (Bern/CH), Jürgen Beck (Freiburg/DE)
- 13:03  
P0133 **New diagnostic criteria for acute headache attributed to ischemic stroke**  
Elena R. Lebedeva, Anton V. Ushenin, Natalia M. Gurary, Denis V. Gilev (Yekaterinburg/RU), Jes Olesen (Copenhagen/DK)
- 13:06  
P0134 **Sex Differences in Spontaneous Intracranial Hypotension**  
Shuu-Jiun Wang, Po-Tso Lin, Yen-Feng Wang, Jr-Wei Wu, Jiing-Feng Lin, Shya-Shu Hseu, Shih-Pin Chen (Taipei City/TW)
- 13:09  
P0135 **Semiology & outcome of headache in Chiari-malformation type 1**  
Dennis Thunstedt, Michael Schmutzer, Matthias Fabritius, Jun Thorsteinsdottir, Mathias Kunz, Ruth Ruscheweyh, Andreas Straube (Munich/DE)
- 13:12  
P0136 **The Effectiveness of Blockade of the Occipital Nerve in the Complex Treatment of Medication-Overuse Headache**  
Dmytro Sotnikov, Olexander Potapov (Sumy/UA)
- 13:30–14:30 **Scientific Session 9 - Insights into a better understanding of headache & migraine**  
Room Room 1  
Chair Patricia Pozo-Rosich (Barcelona/ES)
- 13:30  
IL075 **Headache as a symptom COVID-19: Possible pathophysiological explanations**  
Edoardo Caronna (Barcelona/ES)
- 13:45  
IL076 **COVID-19 and headache: Epidemiological perspective What have we learned so far?**  
Robert Shapiro (Vermont/US)

## 14:00 **Migraine as an evolutionary adaptation: Evidence from COVID-19**

IL077 Patricia Pozo-Rosich (Barcelona/ES)

## 14:15 **Q&A**

## 13:30–14:30 **Scientific Session 10 - Mechanisms of migraine symptoms: Photophobia, allodynia, nausea**

Room Room 2

Chair Koichi Hirata (Tochigi/JP)

## 13:30 **Is migraine a brain multisensory disorder?**

IL078 Koichi Hirata (Tochigi/JP)

## 13:35 **Photophobia**

IL079 Rodrigo Nosedá (Boston, MA/US)

## 13:50 **Allodynia**

IL080 Antonio Russo (Caserta/IT)

## 14:05 **Nausea**

IL081 Braden Kuo (Boston, MA/US)

## 14:20 **Q&A**

## 13:30–15:30 **German General Practitioners Track - Kopfschmerztag**

Room Room 3

## 13:30 **Typische Fehler, die Sie bei der Behandlung von Kopfschmerzpatienten vermeiden können**

IL082 Stefanie Förderreuther (München/DE)

## 14:00 **Digital health: Apps auf Rezept und vieles Neues mehr für die Hausarztpraxis**

IL083 Lars Neeb (Berlin/DE)

## 14:30 **... und immer wieder zu viele Akutmedikamente: Wie kann der Hausarzt helfen?**

IL084 Zaza Katsarava (Unna/DE)

## 15:00 **Besonderheiten der Kopfschmerztherapie bei somatischen Komorbiditäten (Niere, Leber, GI Probleme)**

IL085 Torsten Kraya (Leipzig/DE)

## 14:45–15:45 **Scientific Session 11 - IHS & EHF guideline session**

Room Room 1

Chair Paolo Martelletti (Rome/IT)

## 14:45 **Are the guidelines followed?**

IL086 Paolo Martelletti (Rome/IT)

## 14:50 **Refractory vs. resistant migraine**

IL087 Simona Sacco (L'Aquila/IT)

## 15:05 **Clinical trials for episodic migraine**

IL088 Stephen D. Silberstein (Philadelphia, PA/US)

## 15:20 **Preventive treatment of migraine in children?**

IL089 Ishaq Abu-Arafeh (Glasgow/GB)

## 15:35 **Q&A**

## 14:45–15:45 **Scientific Session 12 - A data driven approach to differentiate amongst headache types**

Room Room 2  
Chair Gianluca Coppola (Latina/IT)

### 14:45 **A pathophysiological driven classification**

IL090 Gianluca Coppola (Latina/IT)

### 14:50 **Clinical symptoms**

IL091 Richard B. Lipton (Bronx, NY/US)

### 15:05 **Imaging and physiology**

IL092 Wei-Ta Chen (Taipei/TW)

### 15:20 **Genetics**

IL093 John-Anker Zwart (Oslo/NO)

### 15:35 **Q&A**

## 16:00–16:45 **Cephalalgia Award Lecture**

Room Room 1  
Chair Arne May (Hamburg/DE)

### 16:00 **Introduction**

Arne May (Hamburg/DE)

### 16:05 **Soluble guanylyl cyclase is a critical regulator of migraine-associated pain**

IL094 Arynah Pradhan (Chicago, IL/US)

## 16:45–17:45 **Plenary Session 5**

Room Room 1  
Chair Manjit Matharu (London/GB)

### 16:45 **How is the TACs field changing?**

IL095 Manjit Matharu (London/GB)

### 16:50 **Cluster headache: What are we learning from around the world?**

IL096 Chin-Sang Chung (Seoul/KR)

### 17:05 **Practical experience on neuromodulation for cluster headache**

IL097 Jean Schoenen (Liege/BE)

### 17:20 **International classification of orofacial pain: What is in it for headache specialists?**

IL098 Arne May (Hamburg/DE)

### 17:35 **Q&A**

## 17:45–18:15 **Poster Session 8**

Room ePoster | Networking  
Chair Håkan Ashina (Copenhagen/DK), Silvia Benemei (Florence/IT)

### 17:45 **Altered Speech Patterns in Patients with Post-Traumatic Headache**

P0137 Catherine Chong, Jianwei Zhang (Phoenix, AZ/US), Jing Li (Atlanta, GA/US), Theresa Wu, Gina Dumkrieger, Simona Nikolova, Katherine Ross, Gabriella Stegmann, Todd J. Schwedt, Suren Jayasuriya, Visar Berisha (Phoenix, AZ/US)



- 17:48  
P0138 **Psychological changes in adolescents with a tension-type headache after heart rate variability biofeedback training**  
Kostiantyn Stepanchenko, Vira Marchenko (Kharkiv/UA)
- 17:51  
P0139 **Psychological predictors of real-life experience with Erenumab in chronic migraine with or without medication overuse: data from a 1-year follow-up**  
Sara Bottiroli (Pavia, Benevento/IT), Roberto Deicco, Gloria Vaghi, Giuseppe Fiammingo, Elena Guaschino, Marta Allena, Natascia Ghiotto, Cristina Tassorelli, Grazia Sances (Pavia/IT)
- 17:54  
P0140 **Subjective cognitive impairment in patients with transformed migraine and the associated psychological and sleep disturbances**  
Mohammed ELSherif, Mohamed Abdelsalam (Mansoura/EG), Amr Shoukri (Cairo/EG), Ahmed Esmael (Mansoura/EG)
- 17:57  
P0141 **Clinical features of medication overuse headache following overuse of different acute symptomatic headache drugs**  
Sun-Young Oh, Jin-Ju Kang (Jeonju/KR), Hong-Kyun Park (Seoul/KR), Soo-Jin Cho (Hwaseong/KR), Min Kyung Chu (Seoul/KR)
- 18:00  
P0142 **Association between migraine and psychological and behavioural factors**  
Giulia D'Aurizio, Gennaro Saporito, Francesca Pistoia, Raffaele Ornello, Valeria Caponnetto, Federico Bruno, Alessandra Splendiani, Simona Sacco (L'Aquila/IT)
- 18:03  
P0143 **Impaired decision-making under ambiguity but not under risk in patients with medication overuse headache**  
Chi leong Lau (Taipei City/TW, London/GB), Wei-Hung Chen (Taipei City/TW), Vincent Walsh (London/GB)
- 18:06  
P0144 **Efficacy of cognitive-behavioral therapy for the prophylaxis of migraine in adults: a randomized controlled trial**  
Timo Klan (Mainz/DE), Charly Gaul, Eva Liesering-Latta (Koenigstein im Taunus/DE), Bernhard Both, Isabella Held, Michael Witthöft (Mainz/DE)
- 18:09  
P0145 **Visual Quality of Life in Patients with Visual Snow Syndrome**  
Katherine S. Hu, Cecilia Martindale, Melissa M. Cortez, Kathleen B. Digre (Salt Lake City, UT/US)
- 18:12  
P0146 **CASE REPORT: Galcanezumab for a chronic headache in idiopathic intracranial hypertension.**  
Thaiza Lima, Mario Peres (São Paulo/BR)
- 18:15–18:45 **Awards Presentations**  
Room Room 1
- 18:45–19:30 **Industry Satellite Symposium**  
Room Room 1  
Chair Messoud Ashina (Copenhagen/DK)
- 18:45 **CGRP-targeted mAbs in migraine prevention: Global real-world experience**  
Patricia Pozo-Rosich (Barcelona/ES)
- 18:46 **CGRP-targeted mAbs in migraine management: Talking long term**  
Messoud Ashina (Copenhagen/DK)
- 18:47 **CGRP-targeted mAbs in migraine prevention: Can we break the cycle?**  
Uwe Reuter (Berlin/DE)
- 18:48 **The role of CGRP-targeted mAbs in migraine management: Your questions answered**  
Messoud Ashina (Copenhagen/DK), Patricia Pozo-Rosich (Barcelona/ES), Uwe Reuter (Berlin/DE)

## 08:00–09:00 **Scientific Session 13 - Coming soon: Innovative ideas to study headache**

Room Room 1  
Chair Mark Braschinsky (Tartu/EE)

### 08:00 **Why do we need other perspectives to increase headache knowledge?**

IL099 Mark Braschinsky (Tartu/EE)

### 08:05 **Artificial Intelligence (AI) in Headache Medicine**

IL0100 Bhavik Patel (Phoenix, AZ/US)

### 08:20 **Patient centered digitalized platforms and registries**

IL0101 Faisal Mohammad Amin (Glostrup/DK)

### 08:35 **Remote monitoring of patients with migraine**

IL0102 Visar Berisha (Phoenix, AZ/US)

### 08:50 **Q&A**

## 08:00–09:00 **Scientific Session 14 - New treatment targets for headache**

Room Room 2  
Chair Stewart J. Tepper (Lebanon, NH/US)

### 08:00 **Introduction**

Stewart J. Tepper (Lebanon, NH/US)

### 08:05 **Delta and Kappa Opioid Receptors**

IL0103 Amynah Pradhan (Chicago, IL/US)

### 08:20 **Purinergic receptors**

IL0104 Antoinette Maassen van den Brink (Rotterdam/NL)

### 08:35 **Glutamate**

IL0105 Anna P. Andreou (London/GB)

### 08:50 **Q&A**

## 08:00–09:00 **Late Breaking Abstract Lectures 1**

Room Room 3  
Chair Sait Ashina (Brookline, MA/US), Jasem Kumsa (Kuwait City/KW)

### 08:00 **Trigeminal nerve: functional brainstem somatotopy during nociception**

AL061 Lisa-Marie Sturm, Hauke Basedau, Jan Mehnert, Arne May (Hamburg/DE)

### 08:10 **Galcanezumab changes somatosensory perception exclusively in the face, whereas heat pain threshold before treatment predicts efficacy**

AL062 Kuan-Po Peng, Hauke Basedau, Thalea Oppermann, Arne May (Hamburg/DE)

### 08:20 **The PACAP pathway is independent of CGRP in mouse models of migraine: A possible new drug target**

AL063 Charlotte Ernstsén, Sarah Christensen, Rikke Rasmussen, Brian Nielsen, Inger Jansen-Olesen, Jes Olesen (Glostrup/DK), David Møbbjerg Kristensen (Rennes/FR, Glostrup/DK)

### 08:30 **Impact on the Pain Syndrome of the Degree of Invasion of Pituitary Adenoma into**

AL064 **Cavernous Sinus According to the KNOSP Scale (Before and After Transphenoidal Endoscopic Resection)**

Mariia Kurnukhina (St. Petersburg/RU), Elvira Semina (St. Petersburg/RU), Vladislav Cherebillo (St. Petersburg/RU)

- 08:40 **Nummular headache endophenotyping**  
 AL065 Oyindamola Ikepo Ogunlaja (London/GB), Peter J. Goadsby (London/GB, Los Angeles, CA/US)
- 08:50 **Interictal pontine metabolism in migraine without aura patients: a 3 tesla proton magnetic resonance spectroscopy study**  
 AL066 Samaira Younis, Anders Hougaard, Casper E. Christensen, Mark B Vestergaard (Glostrup/DK), Olaf B Paulson (Copenhagen/DK), Henrik B W Larsson, Messoud Ashina (Glostrup/DK)
- 09:15–10:15 **Scientific Session 15 - CGRP monoclonal antibodies are disease modifying: A debate**  
 Room Room 1  
 Chair Dimos Mitsikostas (Athens/GR)
- 09:15 **Introduction**  
 Dimos Mitsikostas (Athens/GR)
- 09:25 **PRO**  
 IL0106 Lars Edvinsson (Lund/SE)
- 09:45 **CON**  
 IL0107 Elizabeth Leroux (Calgary/CA)
- 10:05 **Q&A**
- 09:15–10:15 **Late Breaking Abstract Lectures 2**  
 Room Room 2  
 Chair Simona Sacco (L'Aquila/IT), Deborah Friedman (Dallas, TX/US)
- 09:15 **Predictors of health-related quality of life in patients with cluster headache during the active periods using the time trade-off method**  
 AL067 Soo-Kyoung Kim, Seungchan Kim (Jinju/KR), Min Kyung Chu, Byung-Kun Kim, Pil-Wook Chung, Mi-Ji Lee (Seoul/KR), Yunjoo Choi (Jeonju/KR), Jung-Wook Park (Uijeongbu/KR), Byung-Su Kim, Kyungmi Oh, Heui-Soo Moon, Tae-Jin Song, Jin-Young Ahn (Seoul/KR), Jong-Hee Sohn (Chuncheon/KR), Kwang-Soo Lee, Kwang-Yeol Park, Jae Myun Chung, Chin-Sang Chung (Seoul/KR), Soo-Jin Cho (Hwaseong/KR)
- 09:25 **HMGB1, NLRP3, IL-6 and ACE2 Levels Are Elevated in COVID-19 with Headache: A Window to the Infection-Related Headache Mechanism**  
 AL068 Hayrunnisa Bolay, Omer Karadaş, Bilgin Öztürk, Rıza Sonkaya (Ankara/TR), Bahar Taşdelen (Mersin/TR), Tuba Bulut, Özlem Gülbahar (Ankara/TR), Aynur Özge (Mersin/TR), Betül Baykan (Istanbul/TR)
- 09:35 **Galcanezumab has central effects in the migraine brain**  
 AL069 Hauke Basedau, Lisa-Marie Sturm, Jan Mehnert, Kuan-Po Peng, Marlene Schellong, Arne May (Hamburg/DE)
- 09:45 **International Consortium for Cluster Headache Genetics: two initiatives report first genome-wide association hits**  
 AL070 Bendik Slagsvold Winsvold (Trondheim, Oslo/NO), Aster V. E. Harder (Leiden/NL), Carmen Fourier (Stockholm/SE), Raymond Noordam (Leiden/NL), Emer O'Connor (London/GB), Caroline Ran (Stockholm/SE), Jana Vandrovcova (London/GB), John-Anker Zwart (Oslo, Trondheim/NO), Henry Houlden (London/GB), Gisela M. Terwindt (Leiden/NL), Manjit Matharu (London/GB), Arn van den Maagdenberg (Leiden/NL), Andrea C Belin (Stockholm/SE), CCG Int. Consortium for Cluster Headache Genetics (Oslo/NO)
- 09:55 **Neurovascular contact plays no role in trigeminal neuralgia secondary to multiple sclerosis**  
 AL071 Navid Noory, Emil Andonov Smilkov, Jette Lautrup Frederiksen, Tone Bruvik Heinskou, Anne Sofie Schott Andersen, Lars Bendtsen, Stine Maarbjerg (Glostrup/DK)
- 10:05 **Voice change and/or throat swelling as cranial autonomic symptoms in the primary headache disorders**  
 AL072 Nazia Karsan (London/GB), Peter J. Goadsby (London/GB, Los Angeles, CA/US)

**09:15–10:15 Late-Breaking Oral Abstract Presentations of Industry Sponsored Clinical Trials**

Room Room 3

Chair Amy Gelfand (San Francisco, CA/US), Andreas Straube (Munich/DE)

**09:15 AL073 Safety and efficacy of occipital nerve stimulation for attack prevention in medically intractable chronic cluster headache (ICON): a randomised, double-blind, multicentre, phase 3, electrical dose-controlled trial**  
Poldi Wilbrink (Heerlen/NL), Ilse de Coe, Patty Doesborg (Leiden/NL), Wim Mulleners (Nijmegen/NL), Onno Teernstra (Maastricht/NL), Eveline Bartels (Leiden/NL), Katja Burger (Leiderdorp/NL), Frank Wille (Zeist/NL), Robert Dongen, Erkan Kurt (Nijmegen/NL), Geert Spincemaille (Maastricht/NL), Joost Haan, Erik Zwet (Leiden/NL), Frank Huygen (Rotterdam/NL), Michel Ferrari (Leiden/NL)

**09:25 AL074 Acute Treatment with Rimegepant 75 mg Confers Long Term Improvements in Median Time to 30% and 50% Reductions in Monthly Migraine Days – Post Hoc Results from an Open Label Safety Study (BHV3000-201)**  
 Gilbert L'Italien (New Haven, CT/US), Evan Popoff, Karissa Johnston (Vancouver/CA), Donnie McGrath, Charles M. Conway (New Haven, CT/US), Lauren Powell (Vancouver/CA), Linda Harris, Nicole Kowalczyk, Robert Croop, Vladimir Coric (New Haven, CT/US)

**09:35 AL076 Efficacy Results from an Open-Label Safety Study of Galcanezumab in Patients with Episodic or Chronic Cluster Headache**  
Charly Gaul (Frankfurt/DE), Robert Riesenberg (Atlanta/US), Chad Stroud, Yan Dong, Tina Myers Oakes (Indianapolis/US)

**09:45 AL077 Evaluation of the Long-Term Safety and Tolerability of Oral Atogepant 60 mg Once Daily for Preventive Treatment of Migraine: A Phase 3, 40-Week, Multicenter Extension to the Advance Trial**  
 Brad Klein (Abington, PA/US), Rosa Miceli, Lawrence Severt (Madison, NJ/US), Peter McAllister (Stamford, CT/US), Laszlo Mechtler, Jennifer McVige (Amherst, NY/US), Merle Diamond (Chicago, IL/US), Michael J. Marmura (Philadelphia, PA/US), Hua Guo, Michelle Finnegan, Joel M. Trugman (Madison, NJ/US)

**09:55 AL078 Real-world effectiveness data of erenumab-treated migraine patients in Switzerland: The SQUARE study**  
 Elisabeth Schäfer, Michael Arzt, Ina Meyer (Rotkreuz/CH), Andreas Gantenbein (Bad Zurzach/CH)

**10:30–11:00 Meeting Highlights**

Room Room 1

**10:30 Basic Science**  
 KC Brennan (Salt Lake City, UT/US)

**10:40 Genetics, Imaging, Neurophysiology**  
 Gianluca Coppola (Latina/IT)

**10:50 Clinical Science**  
 Hayrunnisa Bolay (Ankara/TR)

**11:00–13:05 Patient Course**

Room Room 3

Course Chair Elena Ruiz de la Torre (Valencia/ES)

**11:00 Introduction and welcome**  
 Elena Ruiz de la Torre (Valencia/ES)

**11:05 2018 first steps – Why migraine at work?**  
 Elena Ruiz de la Torre (Valencia/ES)

**11:10 How migraine affected your worklife?**

**11:20 Do you think without migraine your worklife would be better?**

- 11:30 **Have you hide your migraine at work because you were afraid to speak openly about it**
- 11:40 **Studies highlights – Women at work/My migraine voice**  
Elena Ruiz de la Torre (Valencia/ES)
- 11:50 **Beginnings of the project and presentation of the project**  
Elena Ruiz de la Torre (Valencia/ES)
- 12:05 **What do you think it is important to protect the migraine patient at work**  
Messoud Ashina (Copenhagen/DK)
- 12:10 **How do you think this stamp would improve migraine patients worklife?**  
Zaza Katsarava (Unna/DE)
- 12:15 **Why do you think this project is innovative for migraine history?**
- 12:20 **What do you think is the greatest positive impact that migraine patients are going to experience with this stamp?**  
Peter J. Goadsby (London/GB)
- 12:25 **Introduction to the implementation of the stamp and make way for company testimonials**  
Elena Ruiz de la Torre (Valencia/ES)
- 12:30 **Why were you interested in the implementation of the seal in your company?**
- 12:35 **What significant changes have you noticed in your company after converting it into a Migraine Friendly Workplace?**
- 12:40 **Introduction to a video of the members in which in a sentence they say what is the greatest benefit that this project represents.**  
Elena Ruiz de la Torre (Valencia/ES)
- 12:45 **Questions and answers**  
Elena Ruiz de la Torre (Valencia/ES)
- 12:50 **Presentation of the campaign for Migraine Day of Action and encourage sharing on social networks.**  
Elena Ruiz de la Torre (Valencia/ES)
- 13:00 **Acknowledgments and close of the meeting**  
Elena Ruiz de la Torre (Valencia/ES)