IHS Fellowship recipients 2006

We are pleased to introduce the two IHS Fellowship recipients in 2026.

Kadir Oğuzhan Soylu, Turkey
Research institution: Leiden University Medical Center, Netherlands
Research mentors: Else Tolner and Arn van den Maagdenberg
Research title: The role of sleep and PACAP signalling in migraine attack initiation in familial hemiplegic migraine type 2 mutant mice that exhibit spontaneous cortical spreading depolarization events

I am a physician-scientist from Ankara, Türkiye. I have always been interested in neurology and neuroscience research, so I enrolled in MD-PhD integrated programme during medical school to pursue a PhD degree in neuroscience while also actively participating in patient care as a general practitioner. I have recently received my PhD degree in neuroscience from Institute of Neurological Sciences and Psychiatry, Hacettepe University, under the guidance of Prof. Dr. Muge Yemisci. During my PhD thesis, I investigated the role of innate immune responses in the brain, specifically interferon response, in migraine pathophysiology by employing a non-invasive cortical spreading depolarization (CSD) model, as preclinical model of migraine aura. I investigated the effects of endogenous interferon response in the brain on CSD generation and associated pain behaviours. My PhD research provided important insights into the role of immune mechanisms in migraine, with potential to be translated into new treatment options and allowed me to gain essential experience in translational headache research.

Leiden University Medical Center and the migraine research group headed by Dr. Tolner and Prof. Dr. van den Maagdenberg has world-leading expertise in translational headache research using genetic mouse models of migraine and related neurological disorders. Their work in various genetic models

of hemiplegic migraine and epilepsy, ranging from generating novel disease models to uncovering robust therapeutic targets, has advanced headache research in ways unattainable with other models. International Headache Society (IHS) 2026 Research Fellowship provides me a unique opportunity to work on a novel and innovative project in the early stage of my research career in the laboratory of Dr. Tolner and Prof. Dr. van den Maagdenberg. Under their mentorship, I will be investigating the role of sleep-cycle, hypothalamic activity and PACAPergic signaling in migraine aura initiation, by employing a novel transgenic model of familial hemiplegic migraine type 2 that exhibits spontaneous CSD events. I am confident that the mentorship and expertise of the supervisors combined with my background in translational headache research will make this fellowship a successful project. Furthermore, the research experience and connections gained through this fellowship will serve as vital supporters for the rest of my research career.

I am deeply thankful to IHS for this opportunity.

Rune Häckert Christensen, Denmark
Research institution: Beth Israel Deaconess Medical Center, Boston, USA
Research mentors: Rami Burstein
Research title: Cortical representation of the meninges: from nociception to perception

I am a translational physician-scientist whose research focuses on migraine and other headache disorders. Using a combination of preclinical models and human neuroscience, my work seeks to uncover how headache and migraine attacks develop. My research has provided insights into how migraine-provoking compounds activate pain-sensing nerve fibres in the meninges and how such signals affect the brain in individuals with migraine, bridging mechanistic discoveries with observations in patients.

My 2026 IHS Fellowship will be undertaken with Professor Rami Burstein at Harvard Medical School and Beth Israel Deaconess Medical Center in Boston. Building on neuroimaging findings, the project will use advanced electrophysiological techniques to investigate whether the meninges have a dedicated representation in the cerebral cortex, analogous to the brain's maps of the body and internal organs. It will then examine how trigeminal pain signals are integrated in this cortical

representation to give rise to the multisensory hypersensitivity that characterizes migraine. Of direct molecular and therapeutic relevance, the project will also investigate how CGRP modulates this system, providing mechanistic insight into one of the key pathways targeted by migraine therapies. Altogether, the project aims to address the fundamental question of how simple trigeminal signals evolve into the complex clinical presentation of migraine attacks.