

APPENDIX A

STATEMENTS OF INTEREST OF *AMICI CURIAE*

SMFM, founded in 1977, is the medical professional society for obstetricians who have additional training in high-risk, complicated pregnancies. SMFM represents more than 5,000 members who care for high-risk pregnant people and provides education, promotes research, and engages in advocacy to reduce disparities and optimize the health of high-risk pregnant people and their families. SMFM and its members are dedicated to optimizing maternal and fetal outcomes and assuring medically appropriate treatment options are available to all patients.

RCOG works to improve the health and wellbeing of women everywhere, by setting standards for clinical practice, providing doctors with training and lifelong learning, and advocating for women's health globally. Founded in 1929, RCOG has over 16,000 members worldwide and works with partners both in the UK and globally to improve the standard of care delivered to women, encourage the study of obstetrics and gynaecology and advance the science and practice of the specialties.

The **USASP** is the United States chapter of the International Association for the Study of Pain and represents more than 650 scientists, clinicians, and policymakers nationwide. The USASP's members work to increase the knowledge of pain, develop and disseminate evidence-based treatments of pain across the lifespan, and advocate for public policy that

supports research, education, and clinical care to reduce the burden of pain.

Dr. Apkar Vania Apkarian is Founding Director of the Center for Translational Pain Research, and the Center of Excellence for Chronic Pain and Drug Abuse, and is a professor of neuroscience, anesthesia, and physical medicine and rehabilitation at Feinberg School of Medicine, Northwestern University. He has authored >250 scientific publications on the neurobiology of pain, cited over 27,000 times. His research has been funded by the National Institutes of Health (“NIH”) and the U.S. Department of Defense (“DOD”).

Dr. Allan Basbaum is a professor and the Chair of the Department of Anatomy at UCSF. He has published >300 manuscripts—cited almost 70,000 times—and served as Editor-in-Chief of PAIN, co-chaired a subcommittee of the Intergovernmental Pain Research Coordinating Committee, and is a council member of the National Institute of Neurological Disease and Stroke. He is an elected member of the National Academy of Medicine (“NAM”) and the National Academy of Sciences (“NAS”) and is a fellow of the Royal Society.

Dr. Catherine Bushnell is the Harold Griffith Professor *Emerita* at McGill University (“McGill”). She was Founding Director of the McGill Alan Edwards Centre for Research on Pain. She has received Lifetime Research Achievement awards from the Canadian Pain Society (“CPS”) and the American Pain Society (“APS”) and is President-elect of the IASP.

Dr. John Farrar is a neurologist, pharmaco-epidemiologist, and professor of epidemiology at Perelman School of Medicine, University of Pennsylvania. He has served on advisory boards for the U.S. Food and Drug Administration (“FDA”), the NAS Committee on Missing Data in Clinical Trials, and the Institute of Medicine’s Committee on Relieving Pain in America.

Dr. Justin Feinstein is a Clinical Neuropsychologist who is an expert in the neuroscience of emotion. He is the first author of a study exploring the experience of pain in a rare neurological patient with brain damage to very specific regions of his cortex thought to be important for pain.

Professor Maria Fitzgerald is a Professor of Developmental Neurobiology at University College London (“UCL”). She is a world authority on developing pain pathways. Her research has led to election as a Fellow of the Academy of Medical Sciences, Fellow of the Royal College of Anaesthetists and Fellow of the Royal Society. She is an honorary member of the IASP and was awarded the Feldberg prize.

Dr. Gerald Gebhart is a neuroscientist with over 40 years of research experience studying pain modulation and pain mechanisms. At the Universities of Iowa, Heidelberg, and Pittsburgh, he published >350 research articles and dozens of systematic reviews and book chapters.

Dr. Michael Gold is a Professor of Neurobiology at the University of Pittsburgh School of Medicine. He has published >100 scholarly works on pain, has served on review panels for the NIH, DOD, the Medical Research Council of Canada, the Wellcome Trust in the UK, and the European Union, has served on the Council of the IASP, and is currently USASP's President.

Dr. James Holsapple is a neurosurgeon and the Chair of Neurological Surgery at Boston University. He has extensive experience in the management of acute and chronic pain, including the implantation of spinal cord stimulators and neuro-ablative procedures.

Professor Giandomenico Iannetti is a professor of neuroscience at UCL and the Director of the Neuroscience and Behaviour Laboratory at the Italian Institute of Technology. He has written >160 scholarly works on neurophysiology—cited over 15,000 times. He reviews fellowship and grant submissions in the field of pain neuroscience for international government funding bodies. He has been awarded the Royal Society Research Fellowship, the Patrick Wall Award of the IASP, and the Wall Medal of the BPS.

Dr. David Julius is a professor and the Chair of the Department of Physiology at UCSF, where he holds the Morris Herzstein Chair in Molecular Biology & Medicine. Widely recognized as a world leader in identifying molecules and mechanisms underlying nociception, he has published >100 articles on pain and molecular physiology and has received numerous

awards, including the F.W.L. Kerr Basic Science Research Award. Dr. Julius is a member of the NAS, NAM, the American Academy of Arts and Science, and a foreign member of the Norwegian and Hungarian Academies of Science.

Dr. Christof Koch was a professor of biology and engineering for 27 years at the California Institute of Technology focusing on the biophysics of the cortex and consciousness. He currently leads MindScope, a group of 70 neuroscientists, engineers, and staff at the Allen Institute. He has authored >300 articles—cited over 140,000 times—and is the author of three books on consciousness.

Dr. John Loeser is Professor *Emeritus* of Neurological Surgery and Anesthesiology and Pain Medicine, and was the Director of the Multidisciplinary Pain Center, at the University of Washington. He formerly served as President of APS and IASP.

Dr. Vitaly Napadow is a professor of physical medicine and rehabilitation at Harvard Medical School (“HMS”) and the Director of the Scott Schoen and Nancy Adams Discovery Center for Recovery from Chronic Pain at Spaulding Rehabilitation Hospital. Dr. Napadow’s laboratory has conducted neuroimaging research focusing on the difference between pain and nociception.

Dr. Volker Neugebauer is a neuroscientist with >30 years of expertise in the analysis of neurobiological mechanisms of pain, the Chair of the Department of Pharmacology at Texas Tech

University Health Sciences Center, and the Founding Director of the Center of Excellence for Translational Neuroscience and Therapeutics. He has received continuous NIH funding for his work on affective and cognitive pain aspects for >20 years and numerous awards, including the Chancellor's Distinguished Research Award from the Texas Tech University System in 2021.

Dr. Mary Norton is a perinatologist and clinical geneticist, and a professor in the Department of Obstetrics, Gynecology and Reproductive Sciences, of Pediatrics, and of Surgery at UCSF. She is Vice Chair of Clinical and Translational Genetics, and holds the David E. Thorburn, M.D. and Kate McKee Thorburn Endowed Chair in Perinatal Medicine and Genetics. She previously served as president of SMFM. Dr. Norton has extensive experience in prenatal diagnoses and therapy and has authored >150 scholarly works and received several major honors.

Dr. Markus Ploner is a professor of human pain research at the Technical University of Munich. He has pioneered research on brain rhythms and brain communication in the processing of pain. He has received numerous awards and honors, was a member of the IASP presidential task force on brain imaging of pain and serves as a frequent reviewer and editor for leading pain research and neuroscience journals.

Dr. Bruce Price is Chief of the Department of Neurology at McLean Hospital, an Associate in Neurology at Massachusetts General Hospital ("MGH"), and Associate Professor of Neurology at HMS. He is the Co-Founder and Co-Director of the

MGH Center for Law, Brain and Behavior. In 2006, the Bruce H. Price, M.D. Award for Clinical and Academic Excellence in Neuropsychiatry and Behavioral Neurology was established in his honor.

Dr. Theodore Price is the Ashbel Smith Professor of the University of Texas Board of Regents at the University of Texas. He has published >150 scholarly articles on pain neuroscience and pharmacology and has held numerous NIH grants totaling over \$15 million.

Dr. Steven Ralston is the Chief of Obstetrics and Interim Program Director, OB/GYN Residency at Howard University Hospital. He is also Professor of Clinical OB/GYN at Howard University. Dr. Ralston is recognized for his expertise in medical ethics and genetics, formerly serving on ACOG's Committee on Ethics. He is an ad hoc reviewer for a number of prestigious medical journals.

Dr. Tim Salomons is an assistant professor of Clinical Psychology and Director of the Pain, Affect, and Cognition Laboratory at Queen's University. He has >45 published scientific works examining the neural and behavioural mechanisms of pain perception—cited over 5,000 times. He frequently reviews grant submissions in the field of pain, and serves on the Grants and Awards committee of CPS and IASP. He is an Associate Editor of PAIN and The Canadian Journal of Pain.

Dr. Prasad Shirvalkar is a neurologist, pain physician and assistant professor in anesthesia at UCSF, and leads clinical trials for brain stimulation

for refractory pain disorders. He has received multiple awards for his work, including the Best Scientific Abstract award from the International Neuromodulation Society.

Dr. Gregory Terman is the Director of the inpatient Acute Pain Service at the University of Washington Medical Center, a Special Federal Employee advising the CDC and FDA on opiate safety, and past-President of the APS. He has more than 40 years of research on the pharmacology and physiology of pain and pain inhibition.

Dr. Irene Tracey is the Head of Merton College, Oxford, a professor of anaesthetic neuroscience, the Pro-Vice Chancellor at Oxford, and the President-elect of the Federation of European Neuroscience Societies. She was a founding member of the Oxford Centre for Functional Magnetic Resonance Imaging of the Brain. She has published >240 papers and has been elected to IASP, Lundbeck Brain Prize Committee, and the Medical Research Council. She has received many honors, including the British Neuroscience Association's Outstanding Contribution to Neuroscience Award.

Dr. Robert Truog is the Frances Glessner Lee Professor of Medical Ethics, Anaesthesiology & Pediatrics and Director of the Center for Bioethics at HMS. He serves as the Executive Director of the Institute for Professionalism and Ethical Practice and Senior Associate in Critical Care Medicine and Perioperative Anesthesia, as well as practices pediatric intensive care medicine, at Boston Children's Hospital.

Professor Tor Wager is the Diana L. Taylor Distinguished Professor in Neuroscience at Dartmouth College and directs the Cognitive and Affective Neuroscience laboratory. He has authored >200 peer-reviewed scientific publications—cited over 70,000 times—and has served on the Federal Pain Research Strategy workgroup, the IASP Presidential Task Force on pain biomarkers, the leadership Council of the Organization for Human Brain Mapping and American Psychosomatic Society, and the IASP Program Committee. He currently serves as co-Chair of the NIH’s Acute to Chronic Pain Signatures Consortium.

Dr. Clifford Woolf is Director of the Neurobiology Program at Boston Children’s Hospital and a professor of neurology and neurobiology at HMS. He has received many awards related to his research on the nervous system and pain, including the Kerr Award from APS, a founder’s award from the American Academy of Pain Medicine, and the Gill Distinguished Scientist Award from Indiana University.