Alberta Infrasound Project – Expert Panel Member Professional Summaries

Dr. William Benjamin Johnson

Dr. William Benjamin Johnson, often published as W. Benjamin Johnson or W. B. Johnson, is a distinguished cardiologist based in the United States with a robust career in clinical and research cardiology. Affiliated with esteemed institutions such as the University of Iowa and practicing within networks like MercyOne/UnityPoint Health, Dr. Johnson has made significant contributions to the field through his work on heart failure management, cardiac resynchronization therapy (CRT), and implantable cardioverter-defibrillators (ICDs). His publications, appearing in journals such as *Journal of Cardiac Failure*, *Pacing and Clinical Electrophysiology*, and *American Heart Journal*, reflect a deep expertise in electrophysiology and patient outcomes following cardiac interventions. Notable works include studies on long-term survival post-cardiac arrest and the efficacy of advanced device therapies in heart failure patients. Beyond his published research, Dr. Johnson's clinical insights extend to emerging areas of interest, including the potential cardiovascular impacts of environmental factors such as low-frequency noise and vibroacoustic disease, positioning him as a valuable collaborator for interdisciplinary investigations.

Dr. Ursula Bellut-Staeck

Dr. Ursula Maria Bellut-Staeck is a German physician and researcher recognized for her contributions to understanding the physiological impacts of environmental stressors on human health, with a particular focus on cardiovascular and endothelial function. Based in Germany, she has explored the effects of infrasound and low-frequency noise on microcirculation and endothelial cells, bridging cardiology with environmental medicine. Her notable publication, "Impairment of the Endothelium and Disorder of Microcirculation in Humans and Animals Exposed to Infrasound due to Irregular Mechano-Transduction" (*ResearchGate*, 2023), investigates how infrasound disrupts endothelial integrity and microcirculatory dynamics, potentially linking to cardiovascular pathology. Dr. Bellut-Staeck's work extends to mechanotransduction—the process by which cells convert mechanical stimuli into biological responses—offering insights into how low-frequency vibrations might contribute to systemic health issues. Her focus on noise-related effects positions her as a unique voice in interdisciplinary health studies, appealing to experts interested in emerging environmental risk factors.

Dr. Robert (Bob) Thorne

Dr. Robert (Bob) Thorne is an Australian acoustician and researcher renowned for his extensive work in environmental acoustics, noise impact assessment, and the human perception of sound—areas closely tied to psychoacoustics. With a career spanning decades, Dr. Thorne has focused on how low-frequency noise, infrasound, and vibration affect human health and well-being, making significant contributions to the understanding of sound perception in real-world settings. He holds a PhD and has been affiliated with organizations like Noise Measurement Services Pty Ltd in Queensland, Australia, and Massey University in New Zealand, where he served as an adjunct researcher. His notable publications include "Noise Impact Assessment: Wind Farms and Low Frequency Noise" (*Acoustics Australia*, 2014) and extensive reports on wind turbine noise effects, such as the "Wind Farm Noise Study" (2011), which explore subjective and physiological responses to sound—key psychoacoustic concerns. Dr. Thorne's work bridges acoustics with public health, offering practical insights into noise annoyance, sleep disturbance, and community responses to environmental soundscapes.

Richard R. James (recently deceased however much is on the public record and he has published significant amounts of research)

Richard R. James is a prominent American acoustical engineer and consultant with over four decades of experience in noise control engineering, environmental sound assessment, and the study of noise-induced health effects. Operating through his firm, E-Coustic Solutions in Okemos, Michigan, James has become a leading voice in evaluating the impacts of industrial noise, notably from wind turbines, on human health and community well-being. His work blends acoustics with public health, focusing on low-frequency noise and infrasound—areas intersecting with psychoacoustic principles of sound perception. Key publications include "Wind Turbine Noise and Human Health: A Review of the Scientific Literature" (co-authored with Pamela A. James, *Bulletin of Science, Technology & Society*, 2018) and numerous expert reports for legal and regulatory proceedings, such as "The Problems with 'Noise Numbers' for Wind Farm Noise Assessment" (*Acoustics Australia*, 2011). With a background in industrial acoustics and affiliations with the Institute of Noise Control Engineering (INCE), James brings a practical, evidence-based perspective to the intersection of sound, environment, and physiology.

Carmen Krogh

Carmen Krogh, BScPharm, is a retired Canadian pharmacist and independent researcher renowned for her advocacy and investigation into the health effects of industrial wind turbine noise. With a background as Director of Publications and Editor-in-Chief of the Compendium of Pharmaceuticals and Specialties (CPS), she brings a meticulous, evidence-based approach to her work. Krogh has co-authored influential papers, including "Wind Turbines: An Exploration of Research Participants' Living Experiences as a Consequence of Ontario's Green Energy Act" (*Open Access Library Journal*, 2023) and "Diagnostic Criteria for Adverse Health Effects in the Environs of Wind Turbines" (*JRSM Open*, 2014, with Robert Y. McMurtry). Her research focuses on adverse health outcomes like sleep disturbance and stress reported by residents near wind farms, emphasizing the need for protective siting guidelines. Krogh's collaboration with affected communities and her submissions to Health Canada's Wind Turbine Noise and Health Study highlight her as a compassionate and determined voice in public health and environmental policy.

Anne Dumbrille

Anne Dumbrille is a Canadian health advocate and researcher based in Milford, Ontario, known for her leadership in community-driven efforts to address the health impacts of industrial wind turbines. With a background in pharmaceuticals and scientific communication, she has served as a director of CCSAGE Naturally Green, an organization focused on promoting safe and appropriate green energy policies. Her work emphasizes the need for evidence-based setbacks and regulations to protect residents from noise-related health effects, drawing on her skills in synthesizing complex data for public benefit. While not widely published in academic journals, Anne's contributions include co-authored submissions to regulatory bodies and presentations at community forums, such as the CCSAGE Annual General Meetings. Her dedication to public health and environmental justice makes her a compelling collaborator for initiatives exploring the intersection of renewable energy and well-being.

Additional Expert Research and AUC Witnesses on Past Proceedings

Dr. Alec N. Salt

Dr. Alec N. Salt is a distinguished auditory scientist and Professor Emeritus in the Department of Otolaryngology at Washington University School of Medicine in St. Louis, Missouri. With a PhD from the University of Birmingham (UK), he has dedicated over four decades to researching the physiology of the inner ear, particularly the cochlea's response to low-frequency sound and infrasound. His groundbreaking work has elucidated how inaudible sound, such as that produced by wind turbines, can stimulate outer hair cells in the cochlea, potentially leading to physiological and perceptual effects despite not being consciously heard. Key publications include "Responses of the Inner Ear to Infrasound" (*Acoustics Today*, 2014) and "Infrasound: A Physiological Perspective" (*Hearing Research*, 2010), which have significantly influenced debates on environmental noise and health. Dr. Salt's research bridges auditory science with public health, offering critical insights into how low-frequency noise might affect human well-being.

Robert W. Rand

Robert W. Rand is an accomplished acoustical consultant and principal of Rand Acoustics, based in Brunswick, Maine, with over 40 years of experience in noise measurement, analysis, and control. A member of the Institute of Noise Control Engineering (INCE), Rand specializes in environmental acoustics, with a focus on the impact of industrial noise sources like wind turbines on communities. His work emphasizes field measurements and the characterization of low-frequency noise and infrasound, often challenging conventional noise assessment standards that overlook these components. Notable contributions include co-authored reports such as "Wind Turbine Noise: An Independent Assessment" (2011, with Stephen Ambrose) and presentations like "Low-Frequency Noise and Infrasound from Wind Turbines" at acoustics conferences. Rand's practical, data-driven approach complements psychoacoustic and health research, positioning him as a key figure in understanding the real-world implications of environmental noise exposure.

Dr. Christopher D. Hanning

Dr. Christopher D. Hanning is a retired British physician and sleep medicine specialist, formerly an Honorary Consultant in Sleep Disorders Medicine at University Hospitals of Leicester NHS Trust, UK. With qualifications including a BSc, MBBS, MRCS, LRCP, FRCA,

and MD, he has shifted his expertise from clinical practice (retired 2007) to researching the health impacts of environmental noise, particularly wind turbine noise. His work focuses on sleep disturbance as a primary mechanism linking noise exposure to broader health issues, such as cardiovascular disease and psychological stress. Key publications include "Wind Turbine Noise" (*British Medical Journal*, 2012, co-authored with Alun Evans) and expert testimony in reports like "Sleep Disturbance and Wind Turbine Noise" (2010). Dr. Hanning's clinical background and research into noise-induced sleep disruption make him a vital contributor to interdisciplinary efforts examining environmental noise and public health.

Dr. Mariana Alves-Pereira

Dr. Mariana Alves-Pereira is a Portuguese biomedical engineer and environmental scientist based at Lusófona University in Lisbon, with degrees in physics, biomedical engineering, and a PhD in environmental sciences. She is a leading researcher on vibroacoustic disease (VAD), a condition she links to prolonged exposure to infrasound and low-frequency noise (ILFN), including from wind turbines. With over 30 years of study alongside Dr. Nuno Castelo Branco, her key works include "Low-Frequency Noise and Health: A Wind Turbine Case (2007–2013)" and "Infrasound and Low-Frequency Noise: Does It Affect Human Health?" (*ResearchGate*, co-authored). Alves-Pereira's research, such as her 2013 Portuguese case study showing ILFN's impact on brain function and breathing, has sparked debate about noise standards and health. Her interdisciplinary expertise and provocative findings make her a pivotal figure for exploring the biological effects of environmental noise pollution.

Carl V. Phillips, PhD

Carl V. Phillips, PhD, is an American epidemiologist and public health scholar known for his critical analyses of environmental exposures and health policy, including the impacts of wind turbine noise. Formerly a professor at the University of Alberta and the University of Texas, he now operates as an independent consultant through his firm, Epiphi Consulting. Phillips has authored significant works like "Properly Interpreting the Epidemiologic Evidence About the Health Effects of Industrial Wind Turbines on Nearby Residents" (*Bulletin of Science, Technology & Society*, 2011), arguing that epidemiological data supports a causal link between turbine noise and adverse health effects like annoyance and sleep disruption. His broader career critiques establishment science, advocating for rigorous, transparent methodology. Phillips's expertise in epidemiology and his contrarian

perspective make him a compelling contributor to debates on wind energy's public health implications.

Dr. Nina Pierpont

Dr. Nina Pierpont, MD, PhD, is an American physician and researcher celebrated for her pioneering work on the health effects of wind turbine noise, notably through her book *Wind Turbine Syndrome: A Report on a Natural Experiment* (2009). A graduate of Yale University (BA), Columbia University (PhD in behavioral ecology), and Oregon Health & Science University (MD), she brings a unique blend of medical and scientific expertise to her investigations. Based on case studies of families living near wind farms, Pierpont coined "Wind Turbine Syndrome" to describe a cluster of symptoms—such as sleep disturbance, headaches, tinnitus, and vertigo—she attributes to low-frequency noise and infrasound exposure. Her detailed interviews and clinical observations, conducted during her time as a pediatrician in upstate New York, offer a human-centered perspective on environmental noise impacts. Dr. Pierpont's work has inspired further research into the physiological effects of turbine noise, establishing her as a dedicated advocate for affected communities and a thought-provoking contributor to the intersection of medicine and environmental science.

Brett Horner (retired)

Brett Horner is a Canadian acoustical consultant and researcher recognized for his expertise in assessing the health implications of industrial noise, particularly from wind turbines. With a Bachelor of Arts and a Certified Management Accountant (CMA) designation, he has collaborated with prominent figures like Carmen Krogh and Dr. Roy Jeffery on studies linking low-frequency noise to adverse health outcomes. His notable contributions include co-authored papers such as "Adverse Health Effects of Industrial Wind Turbines" (*Canadian Family Physician*, 2013) and presentations at the First International Symposium on Adverse Health Effects from Wind Turbines (2010). Based in Ontario, Horner's work focuses on compiling and analyzing references that support the need for updated noise guidelines, offering a practical perspective grounded in community experiences. His analytical approach and commitment to public welfare position him as a key contributor to interdisciplinary research on environmental noise and health.