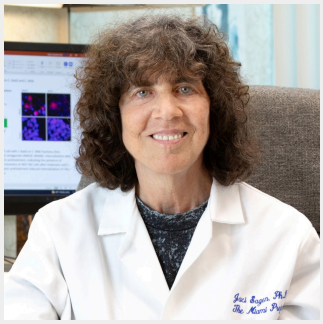
PAGE MORTON HUNTER DISTINGUISHED SEMINAR SERIES

Developing cell transplants and gene therapy for chronic pain treatment

Chronic pain, such as that resulting from injuries to the nervous system, contributes to reduced quality of life, productivity, and ability to fully participate in rehabilitative strategies. Neuropathic pain is difficult to to manage clinically, and pharmacological options for patients are marginally effective in the long term and fraught with unacceptable side effects. Dr. Sagen's laboratory explores novel and more effective strategies in the therapeutic management of chronic pain and reduced reliance on opioids. Cell transplantation or gene therapy via direct delivery to the nervous system can provide a sustained and renewable source of pain-reducing agents at circumscribed nervous system sites, avoiding off-target side effects. The overall goal of this research is to achieve improved and more permanent chronic pain alleviation by providing synergistic naturally-derived analgesic molecules to reduce persistent pathological pain processes. In this seminar, Dr. Sagen will present her current research initiatives and challenges toward this objective, including development and assessment of human induced pluripotent stem cell (hiPSC) derived analgesic cells for transplantation in the spinal cord, evaluation of cell biomatrices, design of synergistic combination analgesic gene constructs for cell transplantation and viral vector-based delivery, and addition of exercise training to reduce inflammation and enhance analgesic benefits for long-term pain relief and well-being.

Jacqueline Sagen, Ph.D., M.B.A.



Professor
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Dr. Jacqueline Sagen is currently Professor of Neurological Surgery, Miami Project to Cure Paralysis. She received a BA in Neuroscience (Northwestern Univ), PhD in Pharmacology (Univ IL Coll Med), and MBA in Entrepreneurship. In 1986 she joined the faculty at University of Illinois where she initiated studies on intrathecal adrenal medullary transplants for control of pain that led to early clinical trials. She was Associate Director of Pharmacology and Behavioral Research at CytoTherapeutics Inc, prior to joining the University of Miami in 1998. Dr. Sagen's laboratory is focused on exploring novel therapeutic strategies for chronic pain management that have the potential to provide sustained relief. Dr. Sagen has published over 150 articles and book chapters and holds 6 patents in the field of pain therapies. She currently serves as faculty representative to the Federal Demonstration Partnership (FDP) and Board Member of the Consortium for Medical Marijuana Clinical Outcomes Research.

November 14, 2024 • 3:30 p.m.

Location:
111 Rhodes Annex

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