

Sunday, April 14, 2024

8:00am – 3:30pm

Pre-Conference Workshop: Updated Essentials of Primary Care Pain Management

Speakers: Scott Fishman, MD and Brett Stacey, MD

Room: Fifth Avenue, Fourth Floor

Updated Essentials of Primary Care Pain Management is a one-day course offered for physicians, NP/PAs, and other clinicians interested in education by expert faculty regarding the management of patients with complex pain conditions. The course will target pressing topics related to pain management with didactic presentations and in-person discussion and demonstration sessions. The learner objectives include understanding effective evaluation and diagnosis of the patient in pain as well as implementation of evidence-based treatment options for pain. This program will offer CMEs for eligible participants.

8:00am – 12:00pm

Pre-Conference Workshop: Optimizing Mentorship to Ensure a Bright Future for Pain Research

Speakers: Tonya Palermo, PhD and Roger Fillingim, PhD

Room: Vashon, Third floor

Mentorship is critical to the success, persistence, and satisfaction of trainees and early career investigators. In pain research specifically, workforce and lack of pipeline have been raised as limiting factors, particularly in clinical pain research. Indeed, abundant evidence demonstrates multiple benefits of effective mentorship for enhancing career outcomes, including increased productivity, retention in science, and career satisfaction. Also, beneficiaries of effective mentorship are more likely to become mentors themselves. Despite these benefits, most individuals engaged in mentorship in pain research have not received formal training in best mentoring practices. In recent years, multiple studies have demonstrated that effective mentors possess specific skills and characteristics. Importantly, these mentorship skills can be enhanced through evidence-based training. Adapting tools from validated mentorship development curricula, this interactive half-day workshop will provide experiential training designed to optimize the practice of mentorship with highlights on the issues encountered in pain research mentorship. The intended audience includes early and mid-career faculty who are actively engaged in mentoring (or want to be) and are interested in optimizing their mentoring relationships. The co-facilitators have extensive experience in mentorship and mentor development across the spectrum of training from undergraduate students to early career faculty in pain science. The workshop will apply a facilitative learning process to promote interaction, discussion, and self-reflection. Attendees will leave with a set of tools and strategies they can implement to enhance their mentorship with pain research mentees. We will address the following topics. Each topic will include active learning experiences, including polls, case scenarios, role plays, etc.

8:00am – 12:00pm

Board of Directors Meeting

Room: Glacier Peak, Second floor

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12:30pm – 1:30pm

Early Career Forum Lunch

Room: Grand Ballroom 3, Fourth Floor

1:00pm – 4:30pm

2024 Leadership Academy Workshop

Room: Grand Crescent, Fourth Floor

1:30pm – 2:30pm

Early Career Forum Session 1: Building Your Professional Brand

Room: Grand Ballroom 3, Fourth Floor

2:30pm – 3:30pm

Early Career Forum Session 2: Small Group Mentoring Round Tables

Room: Grand Ballroom 3, Fourth Floor

3:30pm – 4:30pm

Early Career Forum Session 3: What Jobs Are Available to Me?

Room: Grand Ballroom 3, Fourth Floor

4:30pm – 6:00pm

President's reception (All Attendees are Welcome)

Room: Grand Foyer and Grand Ballroom 3, Fourth Floor

Monday, April 15, 2024

8:00am – 8:30am

Poster Set-Up A + Symposia Set-Up

Room: Grand Ballrooms 1&2, Fourth Floor

8:30am – 9:30am

Plenary Presentation: The Role of Dermal Fibroblasts in the Initiation and Resolution of Acute Inflammatory Pain

Speaker: Michael Burton, PhD, University of Texas at Dallas

Room: Grand Ballroom 3, Fourth Floor

9:30am – 9:50am

USASP Business Updates

Room: Grand Ballroom 3, Fourth Floor

9:50am – 10:00am

Break

10:00am – 11:15am

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Poster Session A

Room: Grand Ballroom 1 & 2, Fourth Floor

11:15am – 11:30am

Coffee Break

11:30am – 1:00pm

SYMPOSIA SESSION 1

Accessible and Evidence-Based Whole Person Pain Care: Integrative Innovations Across Veteran, Civilian, Urban, and Rural Care Settings

Room: Grand Crescent, Fourth Floor

Primary Content: Clinical

Speakers: Beth Darnall, PhD, Stanford University School of Medicine; Rena E. Courtney, PhD, Virginia Tech Carilion School of Medicine; Aram Maridan, MD, University of Arizona College of Medicine Phoenix

Abstract: Session faculty include a pain physician and two psychologists from 3 different U.S. regions and 3 practice settings (rural, urban, academic) in civilian and Veteran populations, and will cover advances that enable more rapid access to behavioral pain treatment, including 'whole health' innovations, a 1-session skills-based treatment, and internet pain self-management within stepped-care delivery models. Dr. Darnall presents Empowered Relief® an evidence-based 1-session pain relief skills intervention that is delivered in 25 countries and in 7 languages. She will describe published outcomes data from 4 randomized trials, adoption across practice settings and patient populations, online delivery, and options for free access or clinical adoption. Dr. Courtney will describe adoption as 'standard care' in 3 specialty clinics in a rural VA hospital and Dr. Mardian will describe 'standard care' implementation at the Phoenix VA primary care and pain clinics. Dr. Courtney describes a whole health interdisciplinary team (IDT) chronic pain treatment model within a rural VA setting using monthly telephone coaching, video-to-home technology, and a shared appointment model to reduce patient barriers (i.e., transportation) called the PREVAIL Center for Chronic Pain IDT Track. She will describe patient data, and lessons learned from implementing an IDT program in a complex healthcare system. Dr. Mardian describes innovative pragmatic research involving pain treatment sequencing in a national 20 site, randomized, 2-step comparative effectiveness study that aims to identify the optimal approach to chronic low back pain by studying common non-surgical, non-pharmacologic treatments (i.e. enhanced PT, yoga, CBT, chiropractic, and internet-based self-management).

Intersectionality of Sex, Gender, Race, and Neurodiversity in Understanding Pain Disparities

Room: Grand Ballroom 3, Fourth Floor

Primary Content: Translational, Clinical

Speakers: Rui Li, MBBS, PhD, Seattle Children's Research Institute; Karen E. Weiss, PhD, LP, ABPP, Mayo Clinic College of Medicine; Chen X. Chen, PhD, RN, MBBS, FAAN, Indiana University; Katelynn E. Boerner, PhD RPsych, University of British Columbia & BC Children's Hospital Research Institute

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Abstract: Intersectionality is a critical framework for understanding pain disparities.

In this session, the intersection of social positions and identity factors (sex, gender, sexual orientation, race, neurodiversity) will be considered for impact on pain, understanding of mechanisms, and relevance to prevention and intervention efforts across the lifespan. Dr. Li will discuss epidemiological data regarding sex and gender disparities in chronic pain burden across the lifespan, emphasizing underlying biopsychosocial mechanisms. She will present avenues for future research and practical suggestions for incorporating sex and gender-specific considerations into chronic pain prevention. Dr. Weiss will present data from the 2020 and 2021 National Survey of Children's Health showing that children who have experienced sexual orientation and gender minority (SGM)- based discrimination are twice as likely to have chronic pain. She will highlight how SGM stress influences health disparities and discuss chronic pain assessment and intervention in children who experience SGM-based marginalization and discrimination. Dr. Chen will discuss the impacts of dysmenorrhea including the role of dysmenorrhea in contributing to sex/gender disparities in pain, racial disparities in dysmenorrhea from US-based studies, and potential biopsychosocial factors that contribute to racial disparities in dysmenorrhea. Dr. Boerner will provide an overview of the intersection of gender, sex, and neurodiversity in the context of pain. She will present data on pain experiences of gender-diverse and autistic young people, concluding with recommendations for inclusive research and clinical practice. Panelists will engage the audience in a discussion of next steps for integrating intersectional perspectives into research methodology, policy development, and clinical practice.

Bridging the Gap: Using Human Nervous System Tissue for Preclinical Research

Room: Vashon, Third Floor

Primary Content: Basic Science

Speakers: Bryan Copits, PhD, Washington University School of Medicine in St. Louis; Olivia Davis, PhD, Center for Advanced Pain Studies, The University of Texas at Dallas; Mike Hildebrand, PhD, Carleton University; Eve Tsai, MD, PhD, FRCSC, Ottawa Hospital Research Institute, University of Ottawa

Abstract: Chronic pain is a debilitating condition that is often resistant to treatment, hence the ongoing need for novel therapeutic strategies. Preclinical animal research has provided essential insight into the neuronal circuitry underlying pain transmission and how changes in this cellular network can lead to a switch from acute to chronic pain. The extent to which this reflects the human condition, however, is still not fully understood. Sensory stimuli in the periphery are detected by primary afferent fibers and transmitted to the dorsal horn of the spinal cord, where these primary afferents synapse onto second order neurons. Excitatory and inhibitory dorsal horn circuits can facilitate or reduce the information transmitted to the brain, respectively, meaning the spinal cord is the crucial first site of processing of incoming sensory information. A major improvement in the accessibility and quality of human postmortem tissue over recent years has expanded the possibilities of using human tissues for preclinical pain research. Together, this panel will present novel anatomical and physiological findings using human dorsal root ganglia and spinal cord tissue. Firstly, Dr Bryan Copits will discuss approaches to develop a cellular taxonomy of human somatosensory neuron cell types to understand how they are impacted by chronic pain. Dr Olivia Davis will then focus on how immunohistochemistry can be used to unravel the circuitry that primary afferents engage in the human dorsal. Finally, Dr Mike

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Hildebrand will cover how electrophysiological approaches are being used to characterize molecular determinants of dorsal horn excitability, starting with synaptic NMDA receptors.

Recent Advances in Sex-Specific Pain Mechanisms

Room: Fifth Avenue, Fourth Floor

Primary Content: Basic Science, Translational, Clinical

Speakers: Jeffrey S. Mogil, PhD, FCAHS, FRSC, McGill University; Diana Tavares-Ferreira, PhD, University of Texas at Dallas; Fadel Zeidan, PhD, UC San Diego

Abstract: Females, when compared to males, exhibit significantly higher prevalence of chronic pain and opioid prescriptions. Further, among individuals with chronic pain, females exhibit greater pain severity, morbidity and poorer treatment efficacy than males. Basic science investigations point to several mechanisms that support potential sex-based differences in nociceptive and analgesic processes that are mediated by genes, endogenous opioids, hormonal dimorphism, immune factors, and others. This symposium will provide a translational perspective using novel data to demonstrate neural, cellular, genetic and endogenous mechanisms supporting sex differences in nociceptive and analgesic processing. Dr. Jeffrey Mogil will present an overview and history of the subfield, and present data showing sex differences that interact with duration of injury. Dr. Diana Tavares-Ferreira will present findings from spatial and single-nuclei RNA sequencing data, revealing sexual dimorphism in gene expression and cell-type proportion within human dorsal root ganglia from organ donors with and without a history of neuropathic pain. Dr. Zeidan will present results from a recently completed double-blinded and drug-crossover-designed clinical trial in healthy individuals and those with chronic pain that found that intravenous high-dose naloxone (opioid antagonist) reversed meditation-induced analgesia in males but not females. Time will be allocated after each talk for audience-directed questions. After all presentations, Dr. Zeidan will moderate a 20-minute audience-panel discussion directed at determining how the identification of sex-based differences in analgesia and opioidergic processes can be applied to the clinic and discuss different treatment modalities that can be targeted and tailored to sex to enhance precision pain medicine.

1:00pm – 2:00pm

Lunch

Poster Set-Up B + Symposia Set-Up

General Lunch Seating

Grand Ballroom 3, Fourth floor

Fifth Avenue, Fourth Floor

Grand Crescent, Fourth Floor

Whidbey, Third Floor

Stuart, Second Floor

Special Interest Group Meetings

Diversity, Inclusion, and Anti-Racism SIG & Psychosocial Factors and Interventions SIG

Room: Vashon, Third Floor

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Sleep and Pain SIG

Room: Orcas, Third Floor

Pediatric Pain SIG

Room: Olympic, Second Floor

Committee Meetings

IDEA Committee + 2024 DEI Scholars Lunch

Room: Blakely, Third Floor

Education and Professional Development Committee

Room: Adams, Second Floor

Finance Committee

Room: Glacier Peak, Second Floor

2:00pm – 3:15pm

Poster Session B

Room: Grand Ballrooms 1&2, Fourth Floor

2:30pm-3:30pm

Book Sale and Signing Event with Dr. John Loeser and Dr. Jane Ballantyne

Please visit the *Springer* Table, 4th Floor

Please note that this book can be purchased at a 30% discount and taken from the conference only on this day/time. Please email Richard.Lansing@springernature.com with your name to reserve a copy for purchase with extra discount at the conference, using “*USASP - Reserve*” in the subject line.

John Loeser: The Man Who Reimagined Pain is a uniquely written title that presents both the fascinating biography of Dr. John Loeser, a visionary pioneer in the field of pain medicine, as well as the compelling account of the birth and evolution of pain medicine in the United States and beyond. In this captivating work, the author, Dr. Jane Ballantyne, takes readers down the path of an extraordinary man who not only shaped the discipline of pain medicine but also embraced a multitude of passions, leaving an indelible mark on those lucky enough to know him.

3:15pm – 3:30pm

Coffee Break

3:30pm – 5:00pm

SYMPOSIA SESSION 2

The Science of Pain Prevention/Mitigation through Lifestyle Intervention

Room: Fifth Avenue, Fourth Floor

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Speaker: Scott Fishman, MD, University of California, Davis

Abstract: A clinician's attempts at reducing a patient's pain and suffering almost always starts after the pain emerges or increases. However, there are choices, actions and lifestyles available to patients – what we refer to as *wellness* – that may proactively reduce the potential for pain or mitigate it if it arrives. Research exists that speaks to a scientific basis for strategic lifestyle choices that may reduce the potential for and the impact of acute and chronic pain, yet the pain field rarely prioritizes this important subject area. Health systems function almost entirely as *disease response systems*. Likewise, healthcare providers are trained to be *disease responders*. Wellness and prevention of disease and optimizing quality and quantity of life is, at best, an afterthought. Health care scientists and professionals have an obligation to help people make informed decisions that can improve and preserve their health. First, we must examine the latest research and consensus, and then share what we learn with our colleagues, patients and the public related to how lifestyle factors impact pain, such as diet and food, movement and physical strength, emotional stress and mental wellness, as well as issues around culture, community, social connectivity, justice, equity, safe environments, and climate change. This symposium will begin the process of raising awareness of this important but neglected area of pain management through highlighting the science and practices of pain and wellness and discuss future agendas in health education and science that will stimulate more knowledge and advance clinical practices.

Unlocking the Social Neuroscience of Pain: Trust, Learning, and Support

Room: Grand Ballroom 3, Fourth Floor

Primary Content: Basic Science, Translational

Speakers: Tor D. Wager, PhD, University of Dartmouth; Przemysław Bąbel, PhD, Jagiellonian University, Poland; Luana Colloca, MD, PhD, MS, University of Maryland

Abstract: In the realm of pain research, there is a growing realization that social factors play a significant role in shaping individuals' pain experiences. Recent studies have unveiled the profound influence of social learning, support from close individuals, and even support from strangers who share group membership on pain perception. These factors not only enhance trust but also reduce the overall pain experience. Furthermore, they induce physiological synchrony during painful episodes and decrease brain neuromarkers associated with pain. The convergence of these insights leads to the realization that social influences create a distinctive brain and social construct affecting pain perception. In the face of ongoing challenges in pain research, this workshop addresses a critical advancement in the field. It combines findings from diverse disciplines, including psychology, neuroscience, and medicine. These interdisciplinary approaches are increasingly vital as we strive for a holistic understanding of complex social and psychological processes. As the workshop unravels the neural mechanisms underpinning social learning, trust, and pain, it directly influences clinical practice, offering a deeper comprehension of how social factors impact pain perception and experience. Our choice of speakers—Wager, Babel, and Colloca—encompasses a well-rounded approach to the workshop's theme. They collectively draw from the fields of social science, neuroscience, and clinical applications. Their expertise covers the entire spectrum of understanding how social learning, support, and trust impact pain perception, making them the most appropriate and credible authorities on this multifaceted subject.

Forecasting the Future in Pain Research: Editors' Picks for 2024

Room: Grand Crescent, Fourth Floor

Primary Content: Basic Science, Translational, Clinical

Speakers: Tonya Palermo, PhD, University of Washington; Rajesh Khanna, PhD, University of Florida; Yensiel Cruz-Almeida, MSPH, PhD; Mark C. Bicket, MD, PhD, FASA, University of Michigan

Abstract: Join editors in discussion, deliberation, and dialogue about the research articles most likely to sustain the largest impact and the big concepts that have moved the field of pain research over the past year. Highlights will span the full spectrum of research from the basic and translational sciences to clinical research. Speakers will include the Editor and Associate Editors from The Journal of Pain, which is the scientific publication of the United States Association for the Study of Pain (USASP).

Getting Pain on the Policy Agenda: Recent Policy Advancements, Why Advocacy's Important, and How to Do It

Room: Vashon, Third Floor

Primary Content: Translational

Speakers: Maria Hudspith, MA, Pain BC/Pain Canada; Kate M. Nicholson, JD, National Pain Advocacy Center; Juan Hincapie-Castillo, PharmD, MS, PhD, University of North Carolina; Carmen Green, MD, CUNY School of Medicine, University of Michigan Schools of Medicine and Public Health; Diane Hoffman, JD, University of Maryland

Abstract: Improving pain demands not only advancements in research and clinical practice but also getting pain on the policy agenda. This symposium examines recent policy advancements in Canada, the US, and the WHO. Leading patient advocates, researchers, and clinicians will address why advocacy is important and how to do it. Maria Hudspith, Executive Director of Pain BC, will describe co-chairing the Canadian Pain Task Force, serving as lead author of the Canadian Action Plan on Pain, and spearheading the development of Pain Canada. She will address bottom-up and top-down advocacy strategies. Kate Nicholson, J.D., Executive Director of the National Pain Advocacy Center, will address advancements in the U.S., including policies by administrative agencies, such as CDC, DEA and CMS, state and federal legislation, and developments in the U.S. Supreme Court. Nicholson will also address global advocacy with the WHO. Juan Hincapie-Castillo, PharmD, MS, PhD, is an assistant professor of Epidemiology at the Gillings School of Global Public Health at the University of North Carolina (UNC). His research includes assessment of inpatient pain management and medication use. He will discuss why he chose to become engaged with pain advocacy and how he has turned his research into direct policy action. Carmen Green MD, Dean of CUNY School of Medicine and Professor of Anesthesiology with joint appointments in Obstetrics and Gynecology and Health Management and Policy at the University of Michigan's Schools of Medicine and Public Health, will address her long history of advocacy and policy work on pain inequities and disparities.

Nociceptive Mechanisms of Neck Pain

Room: Olympic, Second Floor

Primary Content: Translational

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Speakers: Michele Curatolo, MD, PhD, University of Washington; Beth Winkelstein, PhD, University of Pennsylvania; Ted Price, PhD, University of Texas at Dallas

Abstract: Chronic neck pain is very prevalent, is a leading cause of disability, contributes substantially to the opioid epidemic, and is associated with enormous healthcare costs. The lack of understanding of the mechanisms underlying neck pain has hampered the development of effective mechanism-specific therapeutics. As a result, the treatment of chronic neck pain is highly unsatisfactory, leaving the vast majority of patients with daily pain and disability. The proposed symposium will discuss how pre-clinical models of neck pain and studies on pathological tissues and dorsal root ganglion (DRG) of patients with neck pain can advance the understanding of the mechanisms of chronic neck pain, thereby facilitating the development of mechanism-specific treatments. The first presentation (Michele Curatolo) will review the current knowledge on peripheral and central mechanisms of human neck pain and highlight the knowledge gaps that need to be addressed by mechanistic research. New models to study the mechanisms of musculoskeletal pain that combine human molecular neuroscience with advanced phenotyping will be presented. Beth Winkelstein will provide an overview of preclinical models of neck pain and highlight several non-opioid therapies leveraging such mechanisms that have shown promise. Finally, Ted Price will present new data on C2 DRG recovered from patients having C1-2 fusion surgery, focusing on the molecular profile of these DRGs in humans and how this transcriptomic profile changes in people who have acute or chronic neck pain. He will also discuss how distinct neuropathological features may be associated with chronic neck pain in patients.

5:00pm –5:30pm

Break/Transition

5:00pm-7:00pm

UC Davis Consensus Discussion—Invited Guests

Room: Stuart, Second Floor

5:30pm – 7:00pm

Special Interest Group Meetings

Basic Science-Preclinical SIG

Room: Grand Ballroom 3, Fourth Floor

Substance Use and Addiction SIG

Room: Orcas, Third Floor

5:30-6:30 pm

Committee Meeting

Membership Committee & Organizational Partnerships Committee

Room: Adams, Second Floor

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8:00am - 8:30am

Poster Set-Up C + Symposia Set-Up

Room: Grand Ballrooms 1&2, Fourth Floor

8:30am - 9:30am

Plenary Presentation: Phenotyping for Low Back Pain: The Right Treatment for the Right Patient at the Right Time

Speaker: Gwendolyn Sowa, MD, PhD, University of Pittsburgh

Room: Grand Ballroom 3, Fourth Floor

9:30am - 9:50am

USASP Lifetime Achievement Award: Dr. John Loeser and Dr. Jane Ballantyne

Room: Grand Ballroom 3, Fourth Floor

9:50am - 10:00am

Break

10:00am - 11:15am

Poster Session C

Room: Grand Ballroom 1 & 2, Fourth Floor

11:15am - 11:30am

Coffee Break

11:30am - 1:00pm

SYMPOSIUM SESSION 3

Patient Engagement in Clinical Pain Research: Consensus Recommendations and Stakeholder Perspectives

Room: Fifth Avenue, Fourth Floor

Primary Content: Clinical

Speakers: Katie Holzer, PhD, LCSW, Washington University School of Medicine in St. Louis; Christin Veasley, Bsc, Chronic Pain Alliance; Rebecca Baker, PhD, National Institute of Health; Robert D. Kerns, PhD, Yale University

Abstract: It is increasingly recognized that patient engagement in the design and conduct of clinical research, as well as the dissemination of its findings, is important for improving patient-centeredness and impact. While guidance on patient engagement exists for other fields – and given that the nature of pain is a personal, subjective experience – the absence of specific guidance in pain research is a significant gap. To address this, the ACTION public-private partnership organized an IMMPACT consensus meeting to develop recommendations for patient engagement in clinical pain research. This symposium will provide an overview of patient engagement and best practices, informed by recent systematic reviews. Dr. Holzer will present the IMMPACT core principles and consensus recommendations for patient engagement in clinical pain research. Ms. Veasley will share insights and lessons learned from her decades-long

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experience as a patient partner in multiple settings, including research studies, federal research advisory committees and the development of national pain research, education and care initiatives. Dr. Baker will discuss her work with Ms. Veasley through the NIH HEAL initiative and the critical and active engagement of patient partners in the planning, design and conduct of HEAL-funded research projects, as well as other NIH engagement efforts. Dr. Kerns will highlight his experience as a scientist invested in patient/partner engagement and leader of several patient pain research engagement initiatives funded by the VA, NIH, and PCORI, providing practical guidance on how to meaningfully incorporate patient engagement. Time will be allocated for questions and interactions between the panelists and the audience.

Psychedelics for Treatment of Chronic Pain: Evidence From Rodents to Patients

Room: Grand Ballroom 3, Fourth Floor

Primary Content: Basic Science, Translational, Clinical

Speakers: Jon Gregory Dean, PhD, University of California, San Diego; Julia Borenmann, BSc. Hons, PhD Candidate, Centre for Psychedelic Research, Imperial College London ; Nicholas Kolbman, MS, PhD Candidate, Michigan Psychedelic Center, University of Michigan; Patrick Finan, PhD, University of Virginia School of Medicine

Abstract: Psychedelics (e.g., psilocybin) induce profound affective and sensory changes and have emerged as promising new treatments for debilitating psychiatric conditions via rigorous clinical trials. A single dose of psilocybin is associated with decreases in inflammation and depression and increases in sociability. Yet, the utility of psychedelics for relieving chronic pain, for which treatment options are limited, remains unknown. This symposium will outline a proposed mechanistic model for how chronic pain patients may benefit from psychedelics, and considerations for their safe administration, via findings from three groundbreaking clinical/preclinical studies on psilocybin for pain. Upwards of 80% of amputees experience phantom limb pain, a centralized pain condition defined by pain in a limb no longer physically present alongside its maintained sensory representation in the brain. Results from a double-blinded, placebo-controlled functional magnetic resonance imaging clinical trial on psilocybin for phantom limb pain (Study-1; completion date=12/2023) will be presented. Fibromyalgia is a chronic pain condition characterized by widespread, nociplastic pain. Though its underlying cause is unclear, hypotheses highlight central sensitization with potential immune, genetic, endocrine, and psychological involvement. An electroencephalogram study investigating psilocybin for fibromyalgia (Study-2), including its rationale, methodology, preliminary findings, and practical implications, will be discussed. Finally, results from a rodent study that found a single administration of intravenous psilocybin to longitudinally attenuate formalin-induced bilateral mechanical hypersensitivity will be presented (Study-3). Attendees will gain a cross-species appreciation of the utility of psychedelics for relief of multiple chronic pain types and potential unique versus shared behavioral/neural mechanisms that may underly these effects.

Impact of Sexually Dimorphic Neuro-immune Interactions on Pain

Room: Grand Crescent, Fourth Floor

Primary Content: Basic Science, Translational

Speakers: Geoffroy Laumet, PhD, Michigan State University; Juliet Mwirigi, PhD, Washington University School of Medicine; Andrea Nackley, PhD, Duke University

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Abstract: We are a diverse group of researchers (e.g. career stage, gender, ethnicity, geographical location, and expertise). We recognize that research is strengthened through diverse perspectives and scientific approaches. Furthermore, our symposium will directly discuss sexually dimorphic mechanisms involved in the transition from acute to chronic pain. As women display more robust immune responses than men, including increased cytokine production, and are overrepresented in the population of people living with chronic pain, the findings that will be discussed in this symposium strengthen the equity and inclusion of chronic pain research. Presentations will highlight recent investigations into the sexually dimorphic response of immune cells and their impact on the nervous system, including 1) the impact of androgen and Ly6C+ monocytes on the resolution of pain in mice and humans (Geoffroy Laumet); 2) sex differences in macrophage-neuron interactions in the human dorsal root ganglia (Juliet M. Mwirigi) and 3) Activation of adipocyte Adrb3 (adrenergic receptor) leads to stimulation of pro-inflammatory cytokines and recruitment of immune cells in peripheral tissues as well as enhanced activity of primary afferent nociceptors and this mechanisms is alter sexually dimorphic in models of chronic primary pain conditions. The symposium will reveal new mechanisms of interactions between DRG neurons and immune cells and such mechanisms are influence by sex hormones and genetic sex (Andrea Nackley). In summary our symposium is presented by a diverse group of researchers, discuss neuro-immune interactions, sex difference, in mice and humans.

Movement-Evoked Pain: Addressing the Complexity and Variability Across Patients, Disciplines, and Settings

Room: Vashon, Third Floor

Primary Content: Translational, Clinical

Speakers: Ericka Merriwether, PT, DPT, PhD, New York University; Staja 'Star' Booker, PhD, RN, University of Florida; Ruth L. Chimenti, DPT, PhD, University of Iowa; Katie Butera, DPT, PhD, University of Delaware; Corey Simon, DPT, PhD, Duke University

Abstract: Seventeen million Americans experience daily high-impact pain that is most often musculoskeletal in nature. Musculoskeletal pain is the most disabling health condition in the U.S. and globally, and also the costliest to treat. A central component of high-impact musculoskeletal pain is movement-evoked pain (MEP), or pain during and after movement. Research suggests that MEP may add value to clinical care based on a higher responsivity to interventions than resting pain. However, the variability in MEP conceptualization, terminology, and assessment in research is high; which impedes scientific crosstalk and translation. In response, a multi disciplinary contingent of MEP specialists, through the USASP Pain, Movement, and Rehabilitation Science Special Interest Group, developed a research framework to guide future research and clinical implementation. This symposium will present key scientific components of MEP mechanisms, current translatable measurement techniques, and management. Attendees will gain a foundational understanding of MEP complexity including the interface between pain, movement, and activity engagement; MEP temporality; and the multitude of underlying biopsychosocial factors. Structured, interactive demonstration of MEP measurement approaches will also be provided to increase attendees' capacity for translating MEP evaluation to their own research or clinical setting. Moreover, learners will recognize the extent to which racialized and marginalized groups experience worse musculoskeletal pain outcomes; and how current cutting-

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edge research in such groups aims to identify links between life stressors and MEP. The overarching goal of this symposium is to focus the MEP research lens across disciplines and USASP members such that future research is interpretable, innovative, translatable, and impactful.

1:00pm - 2:00pm

Lunch

General Lunch Seating

Fifth Avenue, Fourth Floor
Grand Crescent, Fourth Floor
Whidbey, Third Floor
Blakely, Third Floor
Adams, Second Floor

Special Interest Group Meetings

Acute (to Chronic) Pain SIG
Room: Grand Ballroom 3, Fourth Floor

Abdominal and Pelvic Pain SIG
Room: Orcas, Third Floor

Clinical Trials for Pain Research
Room: Olympic, Second Floor

Pain, Movement, and Rehabilitation Science
Room: Stuart, Second Floor

Committee Meetings

Journal of Pain Editorial Board Meeting
Room: Vashon, Third Floor

2:00pm - 3:15pm

Poster Session D

Room: Grand Ballroom 1 & 2, Fourth Floor

3:15pm - 3:30pm

Coffee Break

Macrophage-Directed Immunomodulation as a Novel Analgesic Strategy for Neuropathies and Trauma

Room: Fifth Avenue, Fourth Floor

Primary Content: Basic Science

Speakers: Andrew Shepherd, PhD, University of Texas MD Anderson Cancer Center; Alfonso Romero-Sandoval, MD, PhD, Wake Forest School of Medicine; Jelena M. Janjic, PhD, Duquesne University, School of Pharmacy

Abstract: Macrophages predominate in tissues where pain hypersensitivity originates and play pivotal roles in inflammatory mediator output and healing from tissue injury, both of which underlie the therapeutic potential of modifying macrophage activity in acute and chronic pain. Diabetic peripheral neuropathy is associated with dysregulated macrophage function and phenotype, along with perturbed inflammation. Our recent findings show that repurposing an ACE (angiotensin-converting enzyme) inhibitor can locally dampen inflammation in diabetic mouse hind paws, restoring sensory loss in late-stage models and normalizing sensory gain in early-stage models of type 2 diabetes. We will also show that shifting macrophage phenotype from M1 to M2 can be achieved by inducing expression of ED2/CD163 in macrophages, which accelerates healing and reduces pain behaviors post-surgery. Targeted overexpression of the scavenger receptor CD163 in macrophages results in a more efficient wound healing process, mediated partly by modification of pro-inflammatory cytokine levels such as TNF- α , IL-6 and IL-1 β . Finally, we will show that a nerve and muscle injury ‘polytrauma’ model develops prolonged pain hypersensitivity that can be targeted using COX-2 inhibiting nanomedicines. A single dose of nanomedicine was effective in males, and most effective when delivered 1-3 days post-injury. Efficacy was markedly reduced in females, revealing sexual dimorphism in response to this macrophage-specific treatment. Importantly, we will also show that in the NHP surgical nerve injury model, a single dose of the nanomedicine produced long-lasting analgesia with improved wound healing and reduced inflammation.

Recent Advances in Migraine Research

Room: Vashon, Third Floor

Primary Content: Basic Science, Translational, Clinical

Speakers: Gregory Dussor, PhD, University of Texas at Dallas; Hadas Nahman-Averbuch, PhD, Washington University; Marie-Eve Hoepli, PhD, Cincinnati Children’s Hospital

Abstract: Migraine is one of the most common neurological disorders worldwide, affecting more than 1 billion people. It is often complicated by comorbidities, including depression and anxiety. These comorbidities and the symptoms of migraine episodes themselves are severely limiting the social and economic well-being of the patients and their families. A better understanding of its underlying mechanisms is needed to define new treatment targets and improve the efficiency of current treatments. In this symposium, Drs. Dussor, Nahman-Averbuch, and Hoepli will present the latest findings arising from basic and translational research on migraine. Dr. Dussor will present findings from preclinical migraine models that aim to uncover mechanisms by which pharmacological migraine triggers like nitric oxide donors and CGRP contribute to the headache

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phase of attacks. Dr. Nahman Averbuch will discuss the role of sex hormones in migraine and present her recent findings on androgen levels in adolescents with migraine and their relationships with migraine severity and experimental pain sensitivity. Dr. Hoeppli will present brain mechanisms involved in a pediatric population diagnosed with chronic migraine before they undergo treatment. Using connectivity analyses in resting-state fMRI data, Dr. Hoeppli will describe novel findings in this population.

Injustice Appraisals in Pain: Measurement and Relationships with Racial Disparities, Lifespan Development, and Social Context

Room: Grand Ballroom 3, Fourth Floor

Primary Content: Clinical

Speakers: Megan Miller, PhD, University of Cincinnati School of Medicine; Taylor Crouch, PhD, Virginia Commonwealth University; Zina Trost, PhD, Texas A&M University; John (Drew) Sturgeon, PhD, University of Michigan Medical School

Abstract: Injustice appraisals related to pain and injury have emerged as a powerful predictor of adjustment in pain populations over the past 15 years. Notably, patterns of pain-related injustice perception appear to be shaped by past and current social experiences, indicating that injustice-based appraisals are best understood as a cognitive variable shaped heavily by development and social context. The current symposium will review experimental and observational research detailing new issues in measurement of injustice perception (e.g., its stability across time and validity across pain conditions) as well as its relationships with salient social factors such as racial/ethnic identity, health disparities, and human development. Dr. Trost (moderator) will review a program of research detailing the psychosocial impact of injustice perception across chronic pain conditions and among people with diverse racial/ethnic backgrounds. Dr. Miller will review cross-sectional and longitudinal research and the role of interpersonal factors (e.g., parent-child relationships) in injustice perception in pediatric pain. Dr. Crouch will describe research on the interplay of injustice perception with pain acceptance and broader social psychological constructs such as belief in a just world. Dr. Sturgeon will review emerging measurement research related to injustice perception, including daily diary and longitudinal studies of adults with acute injury and chronic pain. A key focus of this presentation will be lived experiences of disparity for adults and children from diverse racial and ethnic backgrounds. This symposium will be structured to allow for significant audience participation and will conclude with a Q&A panel session for attendees.

Improving Psychological and Behavioral Interventions for Older and Medically Complex Patients

Room: Grand Crescent, Fourth Floor

Primary Content: Translational, Clinical

Speakers: Marcus G. Wild, PhD, VISN 17 Center of Excellence for Research on Returning War Veterans; Joel N. Fishbein, PhD, VA San Diego Healthcare System & Department of Psychiatry, University of California San Diego; Emily J. Bartley, PhD, University of Florida; Taylor Buchanan, M.Ed, PhD, University of Alabama at Birmingham

Abstract: Psychological and behavioral interventions for chronic pain have been disseminated to a wide range of settings and populations. A critical next step in the development of these

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interventions is to better understand how they work across the lifespan and to tailor them to the needs of specific patient groups. As people age, their receptiveness to interventions may change, and they have an increasing burden of non-pain medical conditions such as overweight/obesity and cardiovascular disease. Aging and medical comorbidity thus present challenges and opportunities for optimizing pain interventions. This symposium will explore the cutting edge of psychological and behavioral interventions for middle-aged and older adults whose medical needs include and extend beyond chronic pain. Dr. Marcus Wild will report on age differences in mindfulness, self-compassion, and emotion regulation, three important pre-intervention characteristics for psychological interventions in pain. Dr. Joel Fishbein will describe findings from a trial of Acceptance and Commitment Therapy for chronic pain showing that older adults responded more quickly to the intervention, but then showed greater post-intervention relapse. Dr. Emily Bartley will examine the feasibility and efficacy outcomes of an integrated pain and weight management treatment for middle- and older-aged adults with comorbid obesity and chronic musculoskeletal pain. Dr. Taylor Buchanan will report on the impact of high-intensity interval training on self-reported and quantitative sensory testing pain outcomes in older adults living with HIV and comorbid hypertension. Overall, this symposium will highlight treatment-relevant characteristics of older, medically complex patients, and identify ways to improve chronic pain treatments in these populations.

5:00pm - 5:30pm

Break/Transition

5:30pm - 7:00pm

Special Interest Group Meetings

Pain Neuroimaging SIG

Room: Grand Ballroom 3, Fourth Floor

Sex Differences in Pain and Analgesia SIG

Room: Fifth Avenue, Fourth Floor

Pain and Aging SIG

Room: Orcas, Third Floor

Clinical and Translational Research SIG

Room: Stuart, Second Floor

Wednesday, April 17, 2024

8:00am - 8:30am

Symposia Set-Up

Room: Grand Ballroom 3, Fourth Floor

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8:30am - 9:30am

Plenary Presentation: Opioids for Chronic Pain – Is Evidence Still Insufficient?

Speaker: Erin Krebs, MD, MPH, University of Minnesota

Room: Grand Ballroom 3, Fourth Floor

9:30am - 9:50am

USASP Awards Ceremony

Room: Grand Ballroom 3, Fourth Floor

9:50am - 10:15am

Break

10:15am - 11:45am

SYMPOSIA SESSION 5

Menstrual Health: Biopsychosocial Vulnerabilities and Impact of Dysmenorrhea

Room: Fifth Avenue, Fourth Floor

Primary Content: Clinical

Speakers: Frank Tu, MD, MPH, NorthShore University Health System, University of Chicago Pritzker School of Medicine; See Wan Tham, MBBS, MS, University of Washington School of Medicine, Seattle Children's Research Institute; Emma Fisher, PhD, University of Bath

Abstract: In 2022, the World Health Organization called for menstrual health to be recognized as a health issue with physical, psychological and social dimensions. One dimension of optimizing menstrual health is the timely evaluation and treatment of severe menstrual pain, or dysmenorrhea. This is a global health issue, and a leading cause of gynaecologic morbidity impacting millions of girls and women. Despite growing awareness of menstrual-related challenges, there remain gaps in understanding the biopsychosocial vulnerabilities that predispose girls and women to the development of dysmenorrhea, hindering the advancements of novel treatment. This multi-disciplinary and international panel will share innovative and exciting research outlining the risk factors and impact of dysmenorrhea in community and clinical cohorts (including those in lower income countries), and emerging interventions. Dr. Frank Tu is a gynaecologist and obstetrician with expertise in pelvic pain disorders. He will present on how risk factors (particularly measures of sensory sensitivity) for menstrual pain and chronic pelvic pain evolve between menarche and young adulthood. Dr. Tham is a pediatric pain physician and researcher who will provide data on the prevalence and impact of dysmenorrhea on a vulnerable population, adolescents with functional gastrointestinal pain disorders, compared to their pain-free peers. Dr. Fisher is a psychologist and researcher notable for her work in methodology and data synthesis in pain science. She will provide a cross-cultural perspective and describe barriers of menstrual health such as resource limitations and sociocultural context, as well as the development and implementation of an intervention targeting pain and menstrual justice.

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Shared and Distinct Mechanisms of Psychosocial Interventions for Chronic Pain:

Refining Concepts, Methods, and Results

Room: Grand Ballroom 3, Fourth Floor

Primary Content: Translational, Clinical

Speakers: Jeungchan Lee, PhD, Spaulding Rehabilitation Hospital, Harvard Medical School; Marta Čeko, PhD, Institute of Cognitive Science, University of Colorado Boulder; John W. Burns, PhD, Rush University Medical Center; Mark A. Lumley, PhD, Wayne State University

Abstract: The efficacy of psychosocial treatments for chronic pain is well-established; however, how these treatments work is less clear. Unique mechanisms—typically assessed via patient report—are usually hypothesized, but recent comparative trials suggest that cognitive-behavioral, acceptance, mindfulness-based, and pain education interventions may work via similar mechanisms. Moreover, fMRI findings of treatment-induced brain changes may reflect these mechanisms, but there is a need to integrate imaging and self-reported treatment mechanism research. In this symposium, three clinical scientists will share new data from their trials of psychosocial treatments for chronic pain, focusing on both self-reported mechanisms and brain changes. The first will present data from a controlled trial in fibromyalgia, which found that CBT reduced pain catastrophizing, pain intensity, interference, and negative mood; improvements were associated with altered brain connectivity, including the ventral posterior cingulate cortex. The second will present data from a randomized trial of a novel virtual reality therapy for back pain, which found reduced pain intensity and interference compared to control and changes in somatosensory and prefrontal brain networks, suggesting that the intervention's effectiveness was tied to changes in neurobiological circuits. The third will share data from trials of cognitive, behavioral, and mindfulness-based therapies, demonstrating that there are usually common mechanisms across seemingly different therapies, and also propose a novel conceptualization—decoupled mechanism-outcome links. Overall, the presentations will suggest that psychosocial treatments induce changes in psychological mechanisms that are often common or shared across treatments, and that such self-reported changes are likely mediated by brain function changes.

Inclusion in Analgesic Clinical Trials: Promoting Change in Research Practices

Room: Vashon, Third Floor

Primary Content: Translational

Speakers: Dale Langford, PhD, Chronic Pain Research, Hospital for Special Surgery; Marcia Mellado Lagarde, MSc, PhD, Clinical Research Scientist Early Pain Division, Eli Lilly and Company; Jonathan Jackson, PhD, Community Access, Recruitment, & Engagement (CARE) Research Center, Massachusetts General Hospital & Harvard Medical School; John Markman, MD, University of Rochester Medical Center

Abstract: Inclusive clinical pain research enhances the external validity of analgesic trial results. Historically, chronic pain trial cohorts have tended to be more homogeneous than real-world populations. This significant limitation is at odds with the long-term goal of discovering novel pain treatments supported by data valid across population subgroups. Given that minoritized and marginalized groups are disproportionately affected by pain, it is critical to understand: the level of comprehensive diversity embedded in the current evidence base, trends from recent clinical trials, and specific measures that will promote inclusion. This symposium will feature

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three presentations. The first topic will characterize the diversity of the human-subjects research that supports current measures and treatments of pain. The second topic will examine aspects of inclusivity from a recent series of early phase analgesic clinical trials designed and conducted to ensure the participation of underrepresented groups. The last presentation will consider practical recommendations for stakeholder and community engagement to ensure equitable access to pain research.

Rita Allen Foundation Scholars Award in Pain Panel

Room: Grand Crescent, Fourth Floor

Primary Content: Basic Science

Speakers: Victoria Eugenia Guadalupe Abaira, PhD, Rutgers University; William R. Rental, MD, PhD, Brigham and Women's Hospital, Harvard Medical School, Broad Institute; Seungwan (Sebastian) Choi, PhD, UT Southwestern Medical Center; Emerson Krock, PhD, McGill University

11:45am - 12:00pm

Break

12:00pm - 1:30pm

NIH Lunch Panel: NIH Funding Opportunities in Pain Research and Management

Room: Grand Ballroom, Fourth Floor

Speakers: Michael Oshinsky, PhD, National Institute of Neurological Disorders and Stroke (NINDS) - NIH; DP Mohapatra, PhD, National Institute of Neurological Disorders and Stroke (NINDS) - NIH; Mary Ann Pellemounter, National Institute of Neurological Disorders and Stroke (NINDS) - NIH; Eric Hudak, PhD, National Institute of Neurological Disorders and Stroke (NINDS) - NIH; Linda Porter, PhD, National Institute of Neurological Disorders and Stroke (NINDS) - NIH; Laura Wandner, PhD, National Institute of Neurological Disorders and Stroke (NINDS) - NIH

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IASP 2024 WORLD CONGRESS ON PAIN

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5,000+
ATTENDEES



2,500+
POSTER
ABSTRACTS



400+
SPEAKERS



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10
PLENARY
LECTURES



2
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