

**ASIA**  
AMERICAN SPINAL INJURY ASSOCIATION

A · N · N · U · A · L  
**SCIENTIFIC  
MEETING**



**2021**



**JULY 8-10 • 2021**

**PRE-COURSE • JULY 7**

**St. Louis Union Station Hotel**

1820 MARKET STREET • ST. LOUIS, MISSOURI 63103



# 2021 ANNUAL SCIENTIFIC MEETING

## Research from the SCI Model Systems Pre-Course: Understanding Spinal Cord Injury from Cell to Community

### PRE-COURSE PROGRAM CHAIRS

**Leslie Morse, DO**

Department Head, Professor, Department of Rehabilitation Medicine  
University of Minnesota Medical School

**Jeanne M. Zanca, PhD, MPT, FACRM**

Senior Research Scientist  
Spinal Cord Injury Research, Kessler Foundation

### WEDNESDAY, JULY 7TH: PRE-COURSE SCHEDULE All Program times are in Central Time (CT)

TIME	TOPIC	PRESENTER(S)
9:00 AM - 9:15 AM	Welcome and Introduction	Allen Heinemann, PhD
9:15 AM - 10:30 AM	<b>SESSION 1: Neurological and Functional Recovery</b>	
	1.1 The Value of Trauma Indicators in Understanding Outcomes in Persons with Traumatic Spinal Cord Injury: The Case of Blood Alcohol Level	Mary Joan Roach, PhD
	1.2 Influence of Intensive Locomotor Skill Training and Non-Invasive Brain Stimulation in Chronic Spinal Cord Injury: A Pilot Randomized Clinical Trial	Nicholas Evans, MHS, CEP, PhD Candidate
	1.3 A Randomized Comparative Effectiveness Trial to Evaluate Two Programs for Promotion of Physical Activity after Spinal Cord Injury in Manual Wheelchair Users	Sara Mulroy, PhD, PT
	1.4 Differential Expression of microRNA Regulators of Neuronal Apoptosis in Individuals with Spinal Cord Injury	Jesse L. Kowalski, PT, DPT, PhD Candidate
10:30 AM - 11:45 AM	<b>SESSION 2: Using Technology to Enhance Health and Function</b>	
	2.1 Factors Influencing Incidence of Wheelchair Repairs and Consequences Among Individuals with Spinal Cord Injury	Michael Boninger, MD
	2.2 Budget Impact Analysis of Robotic Exoskeleton Use for Locomotor Training Following Spinal Cord Injury in Four SCI Model Systems	Daniel Pinto, PT, DPT, PhD
	2.3 Promoting the Psychological Health of Women with Spinal Cord Injury: A Virtual World Intervention	Susan Robinson-Whelen, PhD
	2.4 Effectiveness of Group Wheelchair Maintenance Training for People with Spinal Cord Injury: A Randomized Controlled Trial	Lynn Worobey, PhD, DPT, ATP
11:45 AM - 1:00 PM	Lunch (on your own)	

**WEDNESDAY, JULY 7TH: PRE-COURSE SCHEDULE, CONTINUED**

TIME	TOPIC	PRESENTER(S)
1:00 PM - 2:00 PM	<b>SESSION 3: Secondary Complications (Part 1)</b>	
	3.1 Prediction of Acute SCI-Associated Infections (SCI-AI) by Markers of Autonomic Instability (PROSPECT-ADDITION-SCI) Study	Jan Schwab, MD, PhD
	3.2 Autonomic Impairment and Hemodynamic Dysfunction in Individuals with Acute Spinal Cord Injury	Jill Wecht, EdD
	3.3 Impact of Pain at Follow-up in Individuals with SCI	Elizabeth Roy Felix, PhD
2:00 PM - 3:00 PM	<b>SESSION 4: Secondary Complications (Part 2)</b>	
	4.1 Mortality Beyond the First Year after Spinal Cord Injury: Does Body Mass Index Matter?	Huacong Wen, MD, PhD
	4.2 Gut Microbiome Composition and Serum Metabolome Profile Among Individuals with Spinal Cord Injury and Normal Glucose Tolerance or Prediabetes/Type 2 diabetes	Ceren Yazar-Fisher, PT, PhD
	4.3 Early SCI Stakeholders' Perceived and Objectively Measured Cardio-Endocrine Disease Risks	Mark Nash, PhD
3:00 PM - 3:15 PM	<b>Refreshment Break (15 minutes)</b>	
3:15 PM - 4:45 PM	<b>SESSION 5: Community Life and Long-Term Outcomes</b>	
	5.1 Demographic and Health Profiles of People Living with Spinal Cord Injury 2015-2019	Yuying Chen, MD, PhD
	5.2 Pregnancy, Labor, and Delivery Outcomes of Women with and without Spinal Cord Injury: A Prospective/Retrospective Comparison Study	Amie McLain, MD
	5.3 A Concordance Table to Convert FIM Basic Mobility and Self-Care Scale Scores to SCI-FI/AT Scores	Mary Slavin, PT, PhD
	5.4 Why Do People Move After Spinal Cord Injury? Perceptions of Disability, Housing, and Neighborhoods from a Spinal Cord Injury Model Systems Module Study	Amanda Botticello, PhD, MPH
	5.5 Resilience and Health Outcomes in Chronic Spinal Cord Injury	Heather Taylor, PhD
4:45 PM - 5:00 PM	<b>Discussion/Summation</b>	Leslie Morse, DO Jeanne Zanca, PhD, MPT

The contents of this educational program were developed under several grants from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this program do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.



# 2021 ANNUAL SCIENTIFIC MEETING

**THURSDAY, JULY 8TH** *All Program times are in Central Time (CT)*

TIME	REGENCY C	REGENCY B	REGENCY A
7:00 AM - 6:00 PM	<b>Registration</b>		
7:00 AM - 8:00 AM	Early Career Breakfast	Breakfast with Exhibitors & Partners	
8:00 AM - 8:30 AM	<b>Catch Up With Your Colleagues!</b> <i>(social distancing required)</i>		
8:30 AM - 8:45 AM		<b>Welcome and Introduction</b> <b>President Andrei Krassioukov, MD, PhD, FRCPC</b> ASIA President (2019 - 2021) ICORD-BCSS, UBC GF Strong Rehabilitation Centre Vancouver, Canada	
8:45 AM - 9:30 AM		<b>Sell Lecture:</b> The physiologic and molecular consequences of spinal cord stimulation after cervical spinal cord injury: Does electrode position matter?  <b>Philip J. Horner, PhD</b> Dr. Horner is the Scientific Director of the Center for Neuroregeneration, Co-Director of Center for Regenerative and Restorative Neurosurgery, Vice Chairman, Research, Department of Neurosurgery, Professor and Full Member of Research Institute with Houston Methodist Neurological Institute.	
9:30 AM - 10:15 AM	<b>Posters Session 1 / Break with Exhibitors &amp; Partners</b>		
10:15 AM - 11:00 AM	<b>Exhibitor/Partner Recognition</b> Recognition of our generous conference supporters who remain loyal to our mission and Annual Scientific Meeting: Craig H. Neilsen, DP Clinical, ONWARD		
11:00 AM - 11:15 AM	Stretch Break / Transfer to Next Session		
11:15 AM - 12:15 PM	<b>COURSE</b> Cancer Related Rehabilitation; Current Concepts and Challenges in 2021 Injury: From Bedside to Bank Account	<b>COURSE</b> Economic Impact and Cost Saving Strategies in the Management of Individuals Living with Spinal Cord Pathology	<b>COURSE TRIP</b> A Systems-Biology Approach: How Metabolic and Organ Studies Provides a More Comprehensive Look into SCI Pathology

**THURSDAY, JULY 8TH,** CONTINUED

TIME	BALLROOM A	BALLROOM B	BALLROOM C
12:15 PM - 1:15 PM	Lunch with Exhibitors & Partners		
1:15 PM - 2:15 PM	<b>COURSE</b> The Science of Sleeplessness: Sleep-Related Considerations After Spinal Cord Injury	<b>GENERAL SESSION</b> Clinical Pearls in the Acute Care Setting	<b>COURSE TRIP</b> Applications of Machine Learning and Artificial Intelligence to Solve Big Data Problems in Clinical Research: As Illustrated in TRACK-SCI (1:15 - 2:30 PM)
2:15 PM - 2:30 PM	Stretch Break / Transfer to Next Session		
2:30 PM - 3:30 PM	<b>COVID-19 Abstracts/Research</b>		
3:30 PM - 4:00 PM	Refreshment Break with Partners and Exhibitors		
4:00 PM - 5:00 PM	<b>COURSE</b> Evidence About ISNCSCI's Accuracy and Recent Evolution	<b>GENERAL SESSION</b> Gender Bias in Research and Treatment	<b>COURSE TRIP</b> Magnetic Resonance Imaging as a Clinical Predictor: Advances and Challenges
5:00 PM - 6:30 PM	<b>GENERAL SESSION</b> Hearts, Hands, Health	<b>GENERAL SESSION</b> Topics in Tissue Injury: Predicted Metrics, Preventative Measures, and Accidental Deaths	<b>COURSE TRIP</b> A Rodent-Human Sensorimotor Outcomes Matrix: Overlap and Gaps (Sponsored by SCOPE)



*Pack Your Bags!*



# 2021 ANNUAL SCIENTIFIC MEETING

**FRIDAY, JULY 9TH** All Program times are in Central Time (CT)

TIME	BALLROOM A	BALLROOM B	BALLROOM C		
7:15 AM - 6:00 PM	<b>Registration</b>				
7:15 AM - 8:15 AM	Breakfast with Exhibitors and Partners				
8:15 AM - 9:00 AM		<p><b>Keynote Talk:</b>  <b>Spinal Cord Gateways to Restore Neurological Function</b>            Gregoire Courtine, PhD and Jocelyne Bloch, MD            Gregoire Courtine, PhD is Professor of Neuroscience and Neuro-technology École Polytechnique Fédérale de Lausanne (EPFL) Swiss Federal Institute of Technology, Lausanne, Switzerland</p>			
9:00 AM - 10:10 AM	<p><b>Award Eligible Oral Presentations</b></p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>1. 1H NMR Urine Metabolomics is an Effective Prognostic Indicator in Acute Spinal Cord Injury (ASCI) <i>Rajeshwar Nath Srivastava</i></p> <p>2. miR-19a and miR-19b Discriminate Between Presence and Absence of Neuropathic Pain in Chronic SCI <i>Ricardo Battaglini, PhD</i></p> <p>3. Lifetime Abuse Experience of Women with Spinal Cord Injury <i>Susan Robinson-Whelen</i></p> </td> <td style="vertical-align: top;"> <p>4. The Current State of Spinal Cord Injury Rehabilitation in Latin America <i>Camilo Castillo, MD</i></p> <p>5. Phase 2 Study Design Evaluating Safety and Efficacy of Elezanumab in Patients with SCI <i>Kim Pfleeger, PhD</i></p> <p>6. Prevalence Estimates of Prescription Opioids Among Individuals with Spinal Cord Injury <i>James Krause, PhD</i></p> <p>7. The Unique Impact of COVID-19 on Individuals with Cervical SCI <i>Allison L'Hotta</i></p> </td> </tr> </table>			<p>1. 1H NMR Urine Metabolomics is an Effective Prognostic Indicator in Acute Spinal Cord Injury (ASCI) <i>Rajeshwar Nath Srivastava</i></p> <p>2. miR-19a and miR-19b Discriminate Between Presence and Absence of Neuropathic Pain in Chronic SCI <i>Ricardo Battaglini, PhD</i></p> <p>3. Lifetime Abuse Experience of Women with Spinal Cord Injury <i>Susan Robinson-Whelen</i></p>	<p>4. The Current State of Spinal Cord Injury Rehabilitation in Latin America <i>Camilo Castillo, MD</i></p> <p>5. Phase 2 Study Design Evaluating Safety and Efficacy of Elezanumab in Patients with SCI <i>Kim Pfleeger, PhD</i></p> <p>6. Prevalence Estimates of Prescription Opioids Among Individuals with Spinal Cord Injury <i>James Krause, PhD</i></p> <p>7. The Unique Impact of COVID-19 on Individuals with Cervical SCI <i>Allison L'Hotta</i></p>
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10:10 AM - 10:55 AM	<b>Posters Session 2 / Break with Exhibitors &amp; Partners</b>				
10:55 AM - 11:55 AM	<p><b>COURSE</b>            Networking Tips for Early Career Members: Conquering an In-Person or Virtual Conference</p>	<p><b>COURSE</b>            Surgical Spinal Options: Traumatic / Non-Traumatic SCI Point / Counter Point</p>	<p><b>GENERAL SESSION</b>            Topics in Neuromodulation and Statistics</p>		
11:55 AM - 12:55 PM	<p><b>Sponsored Lunch with ONWARD – Developing Breakthrough Therapies for People with SCI</b>            Presenter: <i>Dave Marver, CEO</i></p>				

**FRIDAY, JULY 9TH, CONTINUED**

TIME	BALLROOM A	BALLROOM B	BALLROOM C
12:55 PM - 1:55 PM	<p><b>COURSE</b> State of Healthcare Accessibility for Individuals with SCI: Experiences Seeking Primary Care and Laws / Practices Surrounding Healthcare</p>	<p><b>COURSE</b> Integrative Care: Concepts of Acute Rehabilitation &amp; Neurointensive Care After Acute Spinal Cord Injury</p>	<p><b>COURSE TRIP</b> Barriers to Functional Recovery from SCI: Pain and its Management (part 1)</p>
1:55 PM - 2:10 PM	Stretch Transfer to Next Session		
2:10 PM - 3:10 PM	<p><b>COURSE</b> Emerging Models of Care / Leveraging Technology to Improve Care: Emerging Models for Care and Electronic Health Records</p>	<p><b>COURSE</b> Integrative Care: Bracing for Acute and Chronic Spine Disorders</p>	<p><b>COURSE TRIP</b> Barriers to Functional Recovery from SCI: Pain and its Management (part 2)</p>
3:10 PM - 3:40 PM	Refreshment Break with Exhibitors and Partners		
3:40 PM - 4:40 PM	<p><b>COURSE</b> Disability Education: Enlightening Future Providers: Training Future Providers: LCME / ACGME Standards and an Education Program in Disability Care</p>	<p><b>COURSE</b> Nerve Transfers for Restoring Upper Extremity Function After Spinal Cord Injury</p>	<p><b>COURSE TRIP</b> Understanding and Treating Spasticity and Spasms Following Spinal Cord Injury (3:40 - 4:55 PM)</p>
4:40 PM - 5:00 PM	Stretch Transfer to Next Session		
5:00 PM - 6:00 PM	<b>COVID-19 Abstracts/Research – Session II</b>		
6:30 PM - 8:00 PM	<p><b>PRESIDENTS RECEPTION</b> Hosted by Andrei Krassioukov, MD, PhD, FRCPC</p>		





# 2021 ANNUAL SCIENTIFIC MEETING

**SATURDAY, JULY 10TH** *All Program times are in Central Time (CT)*

TIME	BALLROOM A	BALLROOM B	BALLROOM C
7:00 AM - 6:00 PM	<b>Registration</b>		
7:00 AM - 8:00 AM	Breakfast with Exhibitors and Partners		
8:00 AM - 9:00 AM	<b>Awards Session:</b> Neilsen Foundation Allied Health Professional Research Award of ASIA • Apple Award • Vogel Award • Mulcahey Award • TRoHNS Award • Anthony DiMarco Award • Top 3 Oral Talk Awards • Top Poster • Early Career		
9:00 AM - 10:00 AM	<b>COURSE</b> Health Care Access and Medical Management of Sexuality, Fertility and Pregnancy for Women with Spinal Cord Injury/ Dysfunction	<b>COURSE</b> Neuromodulation and Pain Syndromes	<b>COURSE TRIP</b> The Impact of SARS-CoV-2 and COVID-19 in the SCI Population: Emerging Findings from the Bench and Bedside (9:00 -10:15 AM)
10:00 AM - 10:15 AM	Stretch Break / Transfer to Next Session		
10:15 AM - 11:15 AM	<b>COURSE</b> Approaches to Treatment in Pediatric SCI: Goal Setting and Treatment Challenges	<b>GENERAL SESSION</b> Chronic Care Considerations: Exercise, ER Visits, & Elder Care	<b>COURSE TRIP</b> Restoring Bladder Function: An Interactive Session Between Clinician, Engineer, and Person with SCI Lived Experience
11:15 AM - 11:30 AM	Stretch Break / Transfer to Next Session		
11:30 AM - 12:30 PM	<b>COURSE</b> SCITrialsFinder.net Facilitating Clinical Trial Recruitment Through Website Analytics		<b>COURSE TRIP</b> Restoring Upper and Lower Extremity Motor Function After Spinal Cord Injury: An Interactive Session Between Clinician, Engineer, and Person with SCI Lived Experience
12:30 PM	<b>Conclusion</b>		





# ASIA 2021 POSTERS

## AWARD-ELIGIBLE POSTERS

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| <p><b>1</b> Estimation of Indirect Costs Based on the Employment and Earnings Changes After Spinal Cord Injury<br/>◆ Yue Cao</p> <p><b>2</b> International SCI Data Sets in the Electronic Medical Record: Data Collection and Reporting ◆ Kelly Tausk</p> <p><b>3</b> Pre-Implementation Analysis to Establish an SCI Fertility Clinic at a VA Medical Center ◆ James Wilson</p> <p><b>4</b> Relationship Between Cardiorespiratory Fitness and Glycemic Control in Individuals with Chronic Spinal Cord Injury ◆ Jennifer Maher</p> <p><b>5</b> Can Early MRI Measures Predict Who Will Walk Outside One Year After SCI? ◆ Andrew Smith</p> <p><b>6</b> Employment Among Adults with Pediatric-Onset Spinal Cord Injuries ◆ Kathy Chlan</p> <p><b>7</b> Modulating Spinal Reflex Pathway for Treatment of Detrusor Overactivity in Patients with SCI by Stimulating Sacral Afferents at Sole of Foot<br/>◆ Abhinav Singh</p> <p><b>8</b> Cause of Death Trends Among Persons with Spinal Cord Injury ◆ Michael DeVivo</p> <p><b>9</b> Cardiovascular Responses to Vagus Nerve Stimulation Following Experimental Spinal Cord Injury ◆ Rahul Sachdeva</p> <p><b>10</b> Ventilatory Threshold Changes with Two Different Exercise Modalities in Individuals with Cervical and Upper-Thoracic SCI: A Randomized Clinical Trial ◆ Abdullah Alrashidi</p> | <p><b>11</b> Can Early MRI Measures Predict Who Will Walk Outside One Year After Spinal Cord Injury?<br/>◆ Andrew Smith</p> <p><b>12</b> Daily Acute Intermittent Hypercapnia Training to Improve Respiratory Plasticity Following Cervical Spinal Cord Injury. ◆ Margo Randelman</p> <p><b>13</b> Diffusion Tensor Imaging as a Biomarker to Identify Microstructural Changes in Pediatric Spinal Cord Injury ◆ Laura Krisa</p> <p><b>14</b> Digital Phenotyping to Quantify Psychosocial Trajectories After Spinal Cord Injury ◆ Hannah Mercier</p> <p><b>15</b> Identifying Challenges in Adherence to Follow-Up Medical Appointments 6 Months After Traumatic Spinal Cord Injury ◆ Andreane Richard-Denis</p> <p><b>16</b> Closed Loop Electrical Stimulation Technologies to Modulate Autonomic Function After Spinal Cord Injury ◆ Jordan Squair</p> <p><b>17</b> 3D Printed Microneedle Array for Electronically Controlled Transdural Drug Release ◆ Joyce Huang</p> <p><b>18</b> Cardio-Centric Hemodynamic Management to Optimize Chronic Cardiovascular Function in High-Thoracic Spinal Cord Injury ◆ Alexandra Williams</p> <p><b>19</b> A Case Comparison of Endogenous Fat Metabolism During a Prandial Challenge ◆ David McMillan</p> <p><b>20</b> The Translational Potential of a Noninvasive Neuroprosthesis for Blood Pressure Control Following Spinal Cord Injury: Preclinical Evidence with a Case Report ◆ Rahul Sachdeva</p> |
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### POSTER SESSIONS: Thursday, July 8, 9:30-10:15 am & Friday, July 9, 10:10-10:55 am

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| <p><b>21</b> Modulating Inflammation after SCI Via Tailored Anti-Inflammatory Cytokine Delivery ◆ Daniel Hellenbrand</p> <p><b>22</b> Risk Factors for Heterotopic Ossification Development after Spinal Cord Injury: A Systematic Review and Meta-Analysis ◆ Yagiz Yolcu</p> <p><b>23</b> Does Prophylactic Medication Lower the Odds of Developing Heterotopic Ossification after Spinal Cord Injury? ◆ Yagiz Yolcu</p> <p><b>24</b> Noninvasive Chronic Spinal Stimulation as a Multi-Session Therapy to Improve Cardiovascular Function After Spinal Cord Injury ◆ Kiran Pawar</p> | <p><b>25</b> Bell's Cruciate Paralysis in Type II Odontoid Fracture: Case Report. ◆ Zainab Al lawati</p> <p><b>26</b> Trait That Caused Quadriplegia: Rare Case of Sickle Cell Trait and Anterior Spinal Cord Infarction ◆ Matthias Linke</p> <p><b>27</b> Delay In SCI Care Among the US Immigrant Community ◆ Matthias Linke</p> <p><b>28</b> Medical Complications in the Rehabilitation Unit: Immune Checkpoint Inhibitor-Induced Myocarditis ◆ Robert Pagan Rosado</p> <p><b>29</b> Withdrawn</p> <p><b>30</b> Withdrawn</p> |
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# 2021 ANNUAL SCIENTIFIC MEETING

**POSTER SESSIONS:** Thursday, July 8, 9:30-10:15 am & Friday, July 9, 10:10-10:55 am

- 31** Hemi-Hyperhydrosis: An Unusual Initial Presentation of Autonomic Dysreflexia – A Case Report ♦ *James Wilson*
- 32** Translational Use of a Musculoskeletal Ultrasound Research Tool to Clinically Demonstrate Multifocal Shoulder Tendon Enthesopathy in a Veteran with SCI and Ankylosing Spondylitis: A Case Report ♦ *Ryan Thachen-Cary*
- 33** COVID-19 3D-Printed Earguard Quality Improvement Initiative: Improving Facemask Comfort in a VA SCI Center ♦ *Cesar Colasante*
- 34** ARMEMO Spring Upper Limb Exoskeleton Combined with Virtual Task of Drinking In Spinal Cord Injured Patients ♦ *Monica Alcobendas*
- 35** Identifying SCI Consumer and Clinician Priorities for Use of Robotic Exoskeletons ♦ *Manon Schladen*
- 36** Partial Medial Gastrocnemius Tear with Hematoma Due to Exoskeleton Assisted Walking Injury: Case Report ♦ *Jonathan VandenBerg*
- 37** The Axial Damage Ratio: A MRI Biomarker for Prognosis of Future Walking Ability ♦ *Andrew Smith*
- 38** Acquired Pneumonia After SCI Causes Chronic Functional Deficits in Translationally Relevant Rodent Model ♦ *Angela Filous*
- 39** Biomarkers of Spontaneous Recovery from Traumatic Spinal Cord Injury ♦ *Ona Bloom*
- 40** Epidural Hematoma Following Spinal Cord Stimulator Trial ♦ *Chris Ha*
- 41** Secondary Benefits in Non-Walking Functions of TSCS and Therapy for Patients with iSCI ♦ *Rebecca Martin*
- 42** Bone Response with Dried Plum Supplementation in Persons with SCI - Pilot findings ♦ *Jenny Kiratli*
- 43** Left Ventricular Twist in Individuals with Chronic, Motor-Complete, Cervical and Upper-Thoracic Spinal Cord Injury after Six Months of Exercise Training: A Randomized Clinical Trial ♦ *Shane Balthazaar*
- 44** The Impact of Different Examination Tools on The Interrater Reliability of ISNCSCI's (International Standards for Neurological Classification of Spinal Cord Injury) Pinprick Examination in Individuals with and without SCI ♦ *Laura Heutehaus*
- 45** Development of the The SCI Movement Index (SCI-MI) Item Pool ♦ *MJ Mulcahey*
- 46** Neuroplasticity Underlying Balance Recovery In Individuals with Incomplete Spinal Cord Injury: A Pilot Study ♦ *Charlotte Pion*
- 47** Serotonin Syndrome with Myoclonus in a Veteran with Spinal Cord Injury, Low Net Serotonin Load ♦ *Kathlin Ramsdell, MD*
- 48** Sex/Gender Matters: Life Satisfaction Trajectories after Spinal Cord Injury ♦ *Yuying Chen*
- 49** Sepsis in Cervical Spinal Cord Injury ♦ *Deborah Crane*
- 50** An Exploration of Support Needs of Family Caregivers of Individuals with SCI or Disease ♦ *Gaya Jayathevan*
- 51** Psychosocial Impact in Individuals with New Onset SCI: Data from a Longitudinal Study ♦ *Sara Frye*
- 52** The Impact Pain Has on Quality of Life and Independence Following SCI ♦ *Amanda Rounds*
- 53** Comparison of Shoulder MRI Findings in Manual Wheelchair Users with SCI Across Years of Wheelchair Use ♦ *Omid Jahanian*
- 54** Factors Associated with Failure to Return Home Following Specialized Inpatient Rehabilitation in Traumatic Spinal Cord Injury ♦ *Antoine Dionne*
- 55** Structural Connectivity Analysis of the Brain in Patients with Chronic Spinal Cord Injury ♦ *Mahdi Alizadeh*
- 56** Guns Violence and Spinal Cord Injury: Contributions to the Public Health Epidemic and Suggestions for Prevention ♦ *Stephanie Kolakowsky-Hayner*
- 57** Prevalence, Incidence, Survival and Mortality of Traumatic SCI in Olmsted County, Minnesota, 1995-2017 ♦ *Yagiz Yolcu*
- 58** Mindfulness Program in Inpatient SCI Setting ♦ *Sussan Askari*
- 59** Overcoming In-Patient Dependence: Transitioning to Community Independence ♦ *Julius Penning*
- 60** Capsaicin 8% Patch for SCI Neuropathic Pain ♦ *Madeline Dicks*
- 61** Impact of Chronic Nociceptive and Neuropathic Pains on Activities, Mood, And Sleep in Those with Traumatic Spinal Cord Injury: A SCI Model Systems Pain Module Study ♦ *Elizabeth Felix*
- 62** Case Report: HeartRate Variability Biofeedback Training for Chronic Pain Management in Two Individuals with SCI ♦ *Sara Mulroy*
- 63** Chronic Pain in Spinal Cord Injury: The Role of Gender, Depression, and Resilience ♦ *Heather Taylor*
- 64** Pain as a Predictor of Poor Sleep Over Time in Pediatric-Onset Spinal Cord Injury ♦ *Alicia January*
- 65** Qualitative Investigation of Health Information Resources for Caregivers and Individuals Living with Spinal Cord Injury ♦ *Kacey Ferguson*
- 66** Stroke Pattern Classification in Pediatric Manual Wheelchair Users with Spinal Cord Injury ♦ *Paige Aschenbrener*
- 67** Intrathecal Chemotherapy: A Case Report of a Rare Cause of Spinal Cord Toxicity in a Pediatric Patient ♦ *Laura Prince*
- 68** Walk Training with Lokomat Device in Adolescents with SCI ♦ *Monica Alcobendas*
- 69** Diffusion Tensor Imaging as a Biomarker to Identify Microstructural Changes in Pediatric Spinal Cord Injury ♦ *Laura Krisa*

**POSTER SESSIONS:** Thursday, July 8, 9:30-10:15 am & Friday, July 9, 10:10-10:55 am

- 70** Prevention of Hypoglycemia in NPO-Tube-Fed Patients During Transfer to Post-Acute Rehabilitation ♦ *Rebecca Boova*
- 71** Caregivers of People with Cervical Spinal Cord Injury: Exploring the Lived Experiences Over Time ♦ *Rachel Heeb*
- 72** Appraisals of Disability Predictive of Psychosocial/Medical Outcomes in Individuals with Pediatric-Onset Spinal Cord Injury ♦ *Kyle Deane*
- 73** Exploring Why Individuals with and Caregivers of those with SCI Utilize Online Support Groups ♦ *Ali Weinstein*
- 74** Management of Chronic Electrode Infections in Patients with Percutaneous Functional Electrical Stimulation Systems ♦ *Randal Betz*
- 75** Feasibility and Impact of High Intensity Home Inspiratory Muscle Training in SCI ♦ *Anne Palermo*
- 76** Comparison of One Year Post-Injury Outcomes Between Intensive Locomotor Training and Conventional Therapy After Motor Incomplete Spinal Cord Injury ♦ *Candy Tefertiller*
- 77** Are Reflexes Useful in Differentiating LMN from UMN Injury in Persons with SCI? ♦ *Maria Grabnar*
- 78** The Therapeutic Potential of Cannabis in People with Spinal Cord Injury: A Systematic Review ♦ *Emmanuel Tse*
- 79** Interdisciplinary Approach to Locomotor Training in Pediatrics: Optimizing Principles in the Child's Community ♦ *Courtney Mullen*
- 80** Integration of Robotic Exoskeletons During Outpatient Physical Therapy ♦ *Allen Heinemann*
- 81** Decreased Locomotor Dysfunction and Improved Spinal Cord Grey Matter Morphology Induced by Spirulina Platensis Following SCI in Rat Models ♦ *Dauda Abdullahi*
- 82** Postprandial Effects of Protein compared to Carbohydrate Meals on Core Body Temperature in Persons with Spinal Cord Injury ♦ *John Handrakis*
- 83** Decreasing the Inflammatory Response After SCI via Tailored Anti-Inflammatory Cytokine Delivery ♦ *Danielle Cilien*
- 84** Decreasing the Inflammatory Response after SCI via Tailored Anti-Inflammatory Cytokine Delivery ♦ *Daniel Hellenbrand*
- 85** Withdrawn
- 86** Aquatic Restorative Therapy to Enhance Functional Mobility in Individuals with Spinal Cord Injury: A Case Series. ♦ *Amanda Oakley*
- 87** During an Epidemic of Gun Violence in the United States, Analyzing Cervical SCI from Gunshot Wounds with Respiratory Compromise: The Role of Diaphragm Pacing ♦ *Raymond Onders*
- 88** There is a Role for Diaphragm Pacing for Respiratory Compromise in Non-Traumatic Spinal Cord Injured Patients ♦ *Raymond Onders*
- 89** Characterizing Real-Time Ventilator Data Collected Among Individuals With SCI Undergoing IPV Treatment ♦ *Benjamin Dirlikov*
- 90** Initiating a Research Partnership with the South Florida SCI Community to Address Hurricane Preparedness ♦ *David McMillan*
- 91** Withdrawn
- 92** QI of Resident Assessment of Pressure Injuries: Patients with a SCI Hospitalized in Acute Rehabilitation. ♦ *Matthias Linke*
- 93** Modifications to Complete Decongestive Therapy in the Spinal Cord Population for Lymphedema Treatment ♦ *Quyen Catania*
- 94** Peak Interface Pressures of the Skin Safe Spine Board ♦ *Elizabeth Twist*
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