

PRECOURSE 1

MONDAY

MAY 20, 2024 • Americas – DME State of SCI

Click Here for Abstract

Session Time (Atlantic ST)	Location: San Crisotbal D		
8:00 AM - 8:05 AM	Intro: Isaac Henandez		
8:05 AM - 9:05 AM	ADLs • Moderator: Ronald Reeves, MD	Presenters	
	Where Do I Begin? Selecting and Prioritizing AT and DME Throughout the Rehabilitation Continuum	Keara McNair, MS, OTR/L, BCPR, ATP	
	Equipment for ADLs for People with Cervical SCI: Challenges, Knowledge and Creativity from a User Clinician Perspective	Marcelo Ullua, PT	
	Occupational Therapy Interventions for Autonomy: Our Argentinian Experience in the Use of DME	Mariana Bonetto, OT	
~~~~~	Q&A	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
9:10 AM - 10:10 AM	WCs and Cushions • Moderator: Ronald Reeves, MD	Presenters	
	Seating Success: Tailoring Wheelchair and Cushion Solutions for Spinal Cord Injury Patients	Erika Gosai, MD	
	Wheelchairs and Cushions: A Mexican Perspective	Isaac Perez, PhD	
	Seating and Mobility in Cervical SCI: Frequent Problems and Creative Ideas to Solve them in a Developing Country	Josefina Martinez Paz, PT	
10:10 AM - 10:25 AM	Q&A Break		
10:25 AM - 11:25 AM	Transfers • Moderator: Steffen Franz, MD	Presenters	
	Seamless Shifts: Navigating Durable Medical Equipment for Smooth Transfers in SCI	Niña Tamayo DO, MS, MPH	
	Selecting and Recommending Transfer Type and Equipment Based on Prognostic Indicators	Keara McNair, MS, OTR/L, BCPR, ATP	
	Transfer Devices: A Mexican Perspective	Marlene Rodriguez Barragan, MD, MSc	
~~~~	Q&A	~~~~~	
11:30 AM - 12:30 PM	UE/LE Orthotics • Moderator: Steffen Franz, MD	Presenters	
	Incorporating Lower Extremity Orthotics into SCI Care	Lisa Ruppert, MD	
	Orthotics to Improve Upper and Lower Extremity Function After Spinal Cord Injury	Candy Tefertiller, PT, DPT, PhD, NCS	
	Limb Orthotics, Mexican Style	Isaac Perez PhD Jimena Quinzaños, MD, PhI	
12:30 PM - 1:30 PM	Lunch		
1:30 PM - 2:15 PM	A Case Presentation and Discussion: A Multiperspective Look at a Transdisciplin on the Individual with SCI in Latin America	nary Approach	
	Moderators: Isaac Hernandez Jimenez, MD; Camilo Castillo, MD		
	Marcelo Ullua, PT ● Josefina Martinez Paz, PT ● Isaac Perez PhD ● Jimena Quinzaños MD PhD ● Marlene Rodriguez, MD, MSc ● Mariana Bonetto OT		
2:15 PM - 3:00 PM	Training the Trainers Workshop: Cardiovascular, Wound and Sexuality Challenges in the Individual with SCI		
	Moderators: Niña Tamayo DO, MS, MPH; Melina Longoni, MD; Isaac Hernandez Jimenez, MD Niña Tamayo DO, MS, MPH • Melina Longoni, MD • Isaac Hernandez Jimenez, MD		
3:00 PM	Conclusion		

PRECOURSE 2

MONDAY

MAY 20, 2024 • From Molecules to Movement – Scope, Utility, and Application of Biomarkers for SCI Clinical Trials and the Development of SCI Precision Medicine Click Here for Abstract

Session Time (Atlantic ST)	Location: San Crisotbal G		
7:30 AM - 8:00 AM	Poster Set-up and Registration		
8:00 AM 8:10 AM	Course Introduction and Orientation	SCOPE Co-Chairs	
~~~~~		Linda Jones, PT, PhD Jane Hsieh, MSc	
8:10 AM - 10:00 AM	Defining and Explaining Biomarkers – What is a Biomarker?	Presenters	
	What are Biomarkers Good For and Why Should They Matter to Researchers and Clinicians?	Chris Leptak, MD, PhD	
	What are Biomarkers Good For and Why Should They Matter to Researchers and Clinicians?	Brian Kwon, MD, PhD	
	Advanced Considerations	Nikolaos Kyritsis, PhD	
	Industry Perspective	Matt Szapacs, PhD	
~~~~~	Panel Discussion and Audience Interactions	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
10:00 AM - 10:30 AM	Coffee Break	~~~~	
10:30 AM - 12:10 PM	Exploring Biomarkers in SCI at Different Levels of Resolution	Presenters	
	Molecules	Diana Chow, PhD	
	Cells	Ona Bloom, PhD	
	Neural Circuits/Systems	Patrick Freund, MD, PhD	
	Neurological/Functional/Behavioral	Monica Perez, PT, PhD	
	Non-neurological/Functional/Behavioral	Chris West, PhD	
	Panel Discussion and Audience Interactions		
12:40 PM - 2:00 PM	Lunch and Posters (80 minutes)		
2:00 PM - 3:20 PM	Application of Biomarkers for SCI Clinical Trials and Precision Medicine	Presenters	
	Introduction to Part 3: Biomarkers in Research vs Clinical Practice	Keith Tansey, MD, PhD	
	Biomarkers in Research – Success Stories Thus Far	James Guest, MD, PHD	
	Flipping it Around – What the Clinician Wants to Know for Tomorrow's Clinic	Edelle Field-Fote, PT, PhD	
	Panel Discussion and Audience Interactions		
3:20 PM - 3:50 PM	Coffee Break		
3:50 PM - 4:50 PM	Roundtable Discussion Groups – Round I & II		
4:50 PM - 5:30 PM	Speakers Panel (All) and Audience Development of Future/Next Steps		
5:30 PM	Conclusion of Pre-course		
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Spinal Cord

Outcomes C

Partnership

Endeavor



MONDAY

MAY 20, 2024 All program times are in Atlantic Standard Time (AST)

#### **PRECOURSES**

4:00 PM - 5:00 PM EARLY CAREER MEETING - San Cristóbal BCD

5:00 PM - 7:00 PM WELCOME RECEPTION - San Cristóbal Foyer

TUESDAY MAY 21, 2024 All program times are in Atlantic Standard Time (AST)

#### San Gerónimo Ballroom

7:00 AM - 8:00 AM Breakfast with Partners and Exhibitors – San Cristóbal Foyer

8:00 AM - 8:20 AM WELCOME / OPENING REMARKS

Suzanne L. Groah, MD, MSPH
(ASIA President 2022 - 2024)

Susie Charlifue, PhD
(ASIA President 2024 - 2025)

8:20 AM - 8:30 AM FELLOW OF ASIA (FASIA) AWARD

Amy Bohn, OTR/L

Jennifer Coker, PhD, MPH

Linda Jones, PT, PhD

Julio Furlan MD, LLB, MBA, MSc, PhD, FRCPC

Steven Kirshblum, MD

David Magnuson, PhD

Shari McDowell, PT, DPT

Devinder Poonian, CEO

8:30 AM - 9:00 AM LIFETIME ACHIEVEMENT AWARD

Prof. Armin Curt
Chief and Director of the Spinal Cord Injury
Centre Balgrist University Hospital

9:00 AM - 9:45 AM **SELL LECTURE** 

**Inclusive Trial Design: The Value of Real-World Data** 

Prof. Armin Curt
Chief and Director of the Spinal Cord Injury
Centre Balgrist University Hospital

Click Here for Abstract





TUESDAY	MAY 21, 2024 All program times are in Atlantic Standard Time (AST)			
	San Gerónimo Ballroom	San Cristóbal D	San Cristóbal G	Salón Del Mar (Beach Wing 2nd floor)
9:45 AM - 9:55 AM	Stretch Break, Transfer to Next Session			
9:55 AM - 10:55 AM	Partner / Exhibitor Recognition — San Geronimo Ballroom  Click Here for Partner Listing			
10:55 AM - 11:05 AM	Stretch Break / Transfer to Next Session			
11:05 AM - 12:05 PM	COURSE 1 TRIP The Rapidly Evolving Role of Ultrasound in Acute Spinal Cord Injury Care • Click Here for Abstract	Translational Science and Research in Urinary Tract Infection and Lower Urinary Tract Symptoms  Click Here for Abstract	GENERAL SESSION 1 Advances in Upper Extremity Functioning: Hands down, Hand it Over and Hold On Click Here for Abstract	Do I Do the Exam Right Pitfalls and Common Mistakes Performing the ISNCSCI/E-ISNCSCI Exam  Click Here for Abstract
12:05 PM - 12:15 PM	Stretch Break / Transfer to Next Session			
12:15 PM - 1:15 PM	Lunch Break			
1:15 PM - 2:15 PM	COURSE 3 TRIP Are we Getting "TRIPped Up" by the Specifics of Task-Specific Training Click Here for Abstract	GENERAL SESSION 2 Metrics Matter!  Click Here for Abstract	COURSE 4 Use of Targeted Neuromodulation Tools for Enhancing Upper Limb Motor Function Recovery and Rehabilitation  Click Here for Abstract	TSCIR Journal and Guidelines for Reviewers  Click Here for Abstract
2:15 PM - 3:15 PM	Poster Session 1 – San Cris	tóbal A and San Gerónimo C	Click Here for Abstracts	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
2:15 PM - 3:15 PM	Break with Partners & Exhibitors – San Cristobal Foyer			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
3:15 PM - 4:35 PM	COURSE 5 Towards Precision Medicine in Spinal Cord Injury: How Should SCI Clinicians and Researchers Design Questions to Best Capitalize on Large SCI Databases in the Age of AI and Big Data?  Click Here for Abstract	GENERAL SESSION 3 Glad You Asked: Emerging Understandings in Secondary Conditions Click Here for Abstract	COURSE 6 Neuromodulation and Neuroplasticity; Not All Plasticity is Good or Bad. Reflexes, Neuromodulation and Peripheral Plasticity after Spinal Cord Injury Click Here for Abstract	International Standard to Document Autonomi Function following SCI (ISAFSCI): Second Edition – An Update on the Changes  Click Here for Abstract



WEDNESDAY MAY 22, 2024 All program times are in Atlantic Standard Time (AST)

7:00 AM - 8:00 AM Membership Breakfast – San Cristóbal D

7:00 AM - 8:00 AM Breakfast with Partners & Exhibitors (Non-Members) – San Cristóbal Foyer

#### San Gerónimo Ballroom

#### 8:00 AM - 9:30 AM AWARD-ELIGIBLE ORAL PRESENTATIONS (TOP 6)

Denosumab Administration Preserves Trabecular Bone Microarchitecture at the Distal Tibia After Acute Spinal Cord Injury

Early Electrodiagnostic Testing after Cervical Spinal Cord Injury has Prognostic and Treatment Value

Graph Representations of Neurological Test Results as A Novel Approach for Recovery Prediction After Spinal Cord Injury

Transitions in Care After SCI: Impacts of Hidden Work on Support Persons

Blood Pressure Responses to Bladder and Bowel Distension and Impact of Targeted Neuromodulation with Spinal Cord Epidural Stimulation.

Investigating the Impact of Hemodynamic Management and Thromboembolic Prophylaxis on Intraparenchymal Hemorrhage Following Traumatic SCI in a Porcine Model

Click Here for Abstracts

#### 9:30 AM - 10:30 AM KEYNO

#### **KEYNOTE TALK**

The State of Spinal Cord Injury Care in Puerto Rico

Manuel Fernando Mas Rodriguez, MD and Eduardo Nadal Ortiz, MD

Click Here for Abstract

#### 10:30 AM - 10:40 AM

**Stretch Break / Transfer to Next Session** 

#### 10:40 AM - 11:40 AM

#### **COURSE 7**

A Novel SCI Adaptive Trial Platform from Pragmatic to Randomized Controlled Clinical Trials: Accelerating Evidence for Disease Modifying Interventions (Sponsored by Scope)

San Gerónimo Ballroom

Click Here for Abstract

#### San Cristóbal D

### COURSE 8 TRIP

Brain-Computer Interface Neuromodulation for SCI: Engineering Developments to Clinical Applications

Click Here for Abstract

#### San Cristóbal G

#### **GENERAL SESSION 4**

Basic Science for Curious Clinical and Collaborative Researchers

Click Here for Abstract

### Salón Del Mar (Beach Wing 2nd floor)

**Do I Classify this Case Correctly?** Clarifications on Classification of Challenging ISNCSCI Cases

Click Here for Abstract

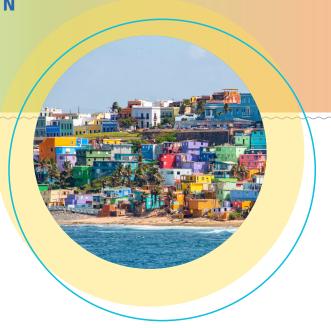


### WEDNESDAY MAY 22, 2024 All program times are in Atlantic Standard Time (AST)

	San Gerónimo Ballroom	San Cristóbal D	San Cristóbal G	Salón Del Mar	(Beach Wing 2nd floor)
11:40 AM - 1:40 PM	Midday Break				
1:40 PM - 3:00 PM	COURSE 9 TRIP Epidural Stimulation or Oxygen Fluctuation — That is the Question! • Click Here for Abstract	COURSE 10 TRIP Neuroimaging for Spinal Cord Injury: Refining the Diagnosis Click Here for Abstract	GENERAL SESSION 5 Reality Check: Advancing Our Understandings of the Lived Experience Click Here for Abstract		
3:00 PM - 3:10 PM	Stretch Break / Transfer to Next Session			~~~~	
3:10 PM - 4:10 PM	Posters Session 2 − San Cristóbal A and San Gerónimo C		~~~~		
3:10 PM - 4:10 PM	Break with Partners & Ex	Break with Partners & Exhibitors – San Cristobal Foyer			~~~~
4:10 PM - 5:10 PM	GENERAL SESSION 6 Cardiovascular Health: Emerging Understandings and Evolving Therapies Click Here for Abstract	COURSE 11 Empowering Healthcare Access for Women with Spinal Cord Injury Click Here for Abstract	COURSE 12 IRID It's a Wrap: Myelin Plasticity in Response to SCI and Driven by External Interventions Click Here for Abstract		
5:30 PM - 7:00 PM					

### PRESIDENTS RECEPTION

Vistabella Garden 5:30 PM - 7:00 PM





THURSDAY

MAY 23, 2024 All program times are in Atlantic Standard Time (AST)

San Gerónimo Ballroom

San Cristóbal D

San Cristóbal G

**Salón Del Mar** 

(Beach Wing 2nd floor)

#### **MORNING OFF**

10:00 AM - 11:00 AM

**GENERAL SESSION 7** 

Acute to Chronic Acute Phase Management: Brains, Bones, Breathing, Brachial, and Bipedal Opportunities

Click Here for Abstract

COURSE 13 TRIP

Breathing after Spinal Cord Injury: Emerging Therapeutics Harnessing the Potential of Respiratory Plasticity

Click Here for Abstract

**COURSE 14** 

Breaking Boundaries: Collaborative Approaches to Enhance SCI Care Across Latin America and the Caribbean

Click Here for Abstract

Do I Do the Exam Right?

Pitfalls and Common Mistakes Performing the ISNCSCI/E-ISNCSCI Exam

Click Here for Abstract

11:00 AM - 11:10 AM

Stretch Break / Transfer to Next Session

11:10 AM - 12:10 PM

#### **AWARDS SESSION**

- Neilsen Foundation Allied Health Professional Research Award of ASIA
   Apple Award
   Vogel Award
- Mulcahey Award
   TRoHNS Award
   Top 3 Oral Talk Awards
   Top 3 Poster Awards
- Early Career Awards

12:10 PM - 12:20 PM

**Stretch Break / Transfer to Next Session** 

12:20 PM - 1:20 PM

COURSE 15 TRIP

Changes in the Gut Morphology, Microbiota, and Metabolites: Roles in Health and Recovery after SCI

Click Here for Abstract

**COURSE 16** 

Neuromodulation – Community Integration and Continuum of Care

Click Here for Abstract

**GENERAL SESSION 8** 

Neurophysiology & Imaging: The Landscape Continues to Evolve

Click Here for Abstract

1:20 PM - 2:20 PM

**Lunch on Own** 

2:20 PM - 3:20 PM

**COURSE 17** 

The Role of Exercise and Diet in Combating Cardiometabolic and Cardiovascular Risk after Spinal Cord Injury

Click Here for Abstract

**COURSE 18** 

Best Practice Panel: Clinical Guidelines to Assist with Evaluation and Recommendations for DME Related to Pregnancy, Lactation and Parenting

Click Here for Abstract

COURSE 19 TRIP

Translational Insights into Pain after Spinal Cord Injury

Click Here for Abstract

**Do I Classify this Case Correctly?** Clarifications on
Classification of Challenging
ISNCSCI Cases

Click Here for Abstract



Salón Del Mar (Beach Wing

**THURSDAY** MAY 23, 2024 All program times are in Atlantic Standard Time (AST)

San Cristóbal D

3:20 PM - 3:30 PM **Stretch Break / Transfer to Next Session** 

San Gerónimo Ballroom

3:30 PM - 4:50 PM **COURSE 20** 

> Panel Discussion of Venous Thromboembolism in **Spinal Cord Injury**

Click Here for Abstract

**COURSE 21** 

Partnering with the SCI Community to Address Challenges in SCI Translation

Click Here for Abstract

**GENERAL SESSION 9** 

San Cristóbal G

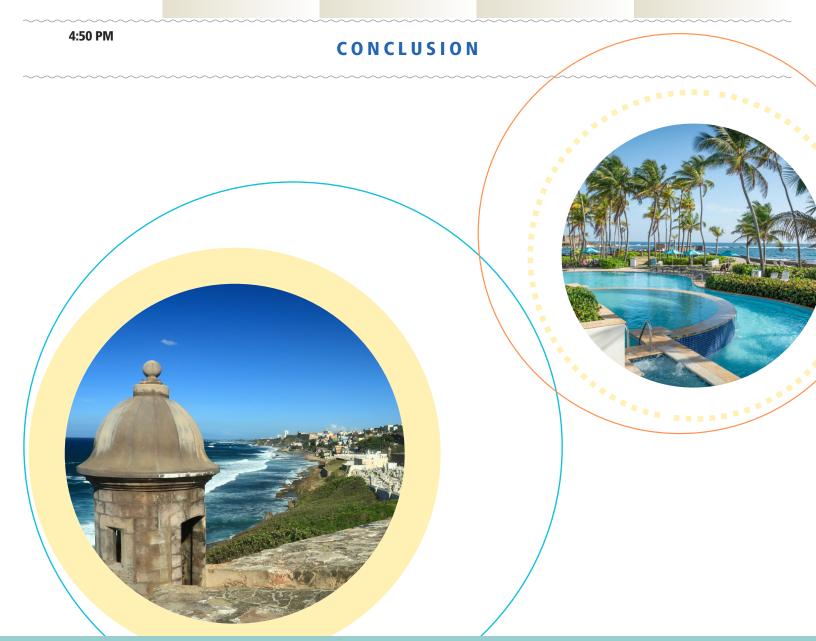
Time for a Stimulating Discussion: Advances in the Application of Neuromodulation

Click Here for Abstract

**International Standards** to Document Autonomic **Function Following SCI** (ISAFSCI):

Second Edition – An Update on the Changes

Click Here for Abstract





# SCIENTIFIC MEETING

## **COURSES**

**TUESDAY** MAY 21, 2024

COURSE	MODERATOR	PRESENTERS
The Rapidly Evolving Role of Ultrasound in Acute Spinal Cord Injury Care	James Guest MD, PhD, FAANS	Zin Z Khaing PhD Brian Kwon MD, PhD, FRCS Christoph Hofstetter MD, PhD, FAANS
Translational Science and Research In Urinary Tract Infection and Lower Urinary Tract Symptoms	Suzanne L. Groah, MD, MSPH	Alan Wolfe, PhD Catherine Forster, MD, MSc Rochelle Tractenberg, PhD Steven Kinsey, PhD
COURSE 3 TRIP  Are we Getting "TRIPped Up" by the Specifics of Task-Specific Training	Nicholas Evans, PhD	Edelle Field-Fote, PhD, PT Karim Fouad, PhD Nicholas Evans, PhD
COURSE 4 Use of Targeted Neuromodulation Tools for Enhancing Upper Limb Motor Function Recovery and Rehabilitation	Aiko Thompson, PhD	Aiko Thompson, PhD Sue Ann Sisto, PT, MA, PhD, FACRM Hang Jin Jo, PT, PhD Blair H.S. Dellenbach, MSOT
COURSE 5 Towards Precision Medicine in Spinal Cord Injury: How Should SCI Clinicians and Researchers Design Questions to Best Capitalize on Large SCI Databases in the Age of Al And Big Data?	Dennis Bourbeau, PhD	Jose Zariffa, PhD Brüningk Sarah, PhD R. James Cotton, MD, PhD Ruediger Rupp, Prof. DrIng.
Neuromodulation and Neuroplasticity; Not All Plasticity is Good or Bad. Reflexes, Neuromodulation and Peripheral Plasticity after Spinal Cord Injury	Linda A. T. Jones, PhD	Bing Chen, MD, PhD, Med Evan Sandler, DPT, PhD Candidate Morgan Sharp-Forston, PhD Alan Phipps, PhD





## **COURSES**

### WEDNESDAY MAY 22, 2024

COURSE	MODERATOR	PRESENTERS
COURSE 7  A Novel SCI Adaptive Trial Platform from Pragmatic to Randomized Controlled Clinical Trials: Accelerating Evidence for Disease Modifying Interventions (Sponsored by Scope)	Norbert Weidner, MD	Norbert Weidner, MD James Guest, MD, PhD Jan Schwab, MD, PhD Jean Raymond, MD
COURSE 8 RIP  Brain-Computer Interface Neuromodulation for SCI: Engineering Developments to Clinical Applications	Matija Milosevic, PhD	Milos R Popovic, PhD Abhishek Prasad, PhD Cesar Marquez-Chin, PhD
COURSE 9 TRIP Epidural Stimulation or Oxygen Fluctuation — That Is the Question!	Christopher West, PhD	Gordon Mitchell, PhD Andrei Krassioukov, MD, PhD Erica Dale, PhD Alicia Vose, PhD
COURSE 10 RIP Neuroimaging for Spinal Cord Injury: Refining the Diagnosis	Laura Krisa, PhD	Patrick Freund, MD, PhD Matthew Budde, PhD Feroze Mohamed, PhD
COURSE 11 Empowering Healthcare Access for Women with Spinal Cord Injury	Heather B. Taylor, PhD	Heather B. Taylor, PhD Susan Robinson-Whelen, PhD
COURSE 12 TRIP It's a Wrap: Myelin Plasticity in Response to SCI and Driven by External Interventions	Timothy D. Faw, PT, DPT, PhD	Dana M. McTigue, PhD Philip J. Horner, PhD Timothy D. Faw, PT, DPT, PhD D. Michele Basso, PT, EdD





## **COURSES**

### **THURSDAY** MAY 23, 2024

COURSE	MODERATOR	PRESENTERS
COURSE 13 TRIP Breathing after Spinal Cord Injury: Emerging Therapeutics Harnessing the Potential of Respiratory Plasticity.	Kajana Satkunendrarajah, PhD	Warren Alilain, PhD Angelo Lepore, PhD Carlos Mantilla, MD, PhD Joshua Meadow, MD, MSc, PhD
COURSE 14 Breaking Boundaries: Collaborative Approaches to Enhance SCI Care Across Latin America and the Caribbean	Niña Carmela Tamayo, DO MS MPH	Melina Longoni, MD Jimena Quinzaños, MD, PhD Ana Valeria Aguirre Guemez, MD
COURSE 15 TRIP Changes in the Gut Morphology, Microbiota, and Metabolites: Roles in Health and Recovery after SCI	Cedric Geoffroy	Ceren Yarar-Fisher, PhD Dr. Warren Alilain, PhD Cedric Geoffroy, PhD Michelle Hook, PhD
COURSE 16  Neuromodulation – Community Integration and Continuum of Care	Claudia Angeli, PhD	Susan Harkema, PhD Leslie Morse, DO Carrie Shogren, OTR/L
COURSE 17 The Role of Exercise and Diet in Combating Cardiometabolic and Cardiovascular Risk after Spinal Cord Injury	Ashraf Gorgey, PhD, MPT	Mark Nash, PhD Gary Farkas, PhD David Dolbow, PhD Ashraf S. Gorgey, PhD
COURSE 18  Best Practice Panel: Clinical Guidelines to Assist with Evaluation and Recommendations for DME Related to Pregnancy, Lactation and Parenting	Allison Kessler, MD	Maryam Berri, MD Stephanie Hendrick, MD Cassandra Renfro, DO Allison Kessler, MD, MSc



## **COURSES**

## THURSDAY MAY 23, 2024

COURSE	MODERATOR	PRESENTERS
COURSE 19 TRIP Translational Insights into Pain after Spinal Cord Injury	Paulina Scheuren, PhD	Eva Widerstrom-Noga, DDS, PhD James Grau, PhD Megan Detloff, PhD Jan Rosner, MD
COURSE 20 Panel Discussion of Venous Thromboembolism in Spinal Cord Injury	Christina Draganich, DO	Andrew Park, MD Jeffrey Berliner, DO Thomas Bryce, MD Brittany Snider, MD
COURSE 21 Partnering with the SCI Community to Address Challenges in SCI Translation	Matthew Rodreick, Executive Director, Unite 2 Fight Paralysis	Lana Zholudeva, PhD Murray Blackmore PhD Jason Biundo, Research Assistant





### AWARD-ELIGIBLE ORAL PRESENTATIONS

**WEDNESDAY** MAY 22, 2024 • 8:00 AM - 9:30 AM

Moderator: Steven Brose, DO • Co-Moderator: Evan Sandler, PT, DPT

ORAL PRESENTATIONS	PRESENTERS
Denosumab Administration Preserves Trabecular Bone Microarchitecture at the Distal Tibia After Acute Spinal Cord Injury	Christopher Cirnigliaro, PhD
Early Electrodiagnostic Testing after Cervical Spinal Cord Injury has Prognostic and Treatment Value	Lukas Linde, PhD
Graph Representations of Neurological Test Results as A Novel Approach for Recovery Prediction After Spinal Cord Injury	Louis Philipp Lukas, M.Sc.
Transitions in Care After SCI: Impacts of Hidden Work on Support Persons	Anne M. Bryden, PhD, OTR/L
Blood Pressure Responses to Bladder and Bowel Distension and Impact of Targeted Neuromodulation with Spinal Cord Epidural Stimulation	Charles Hubscher, PhD
Investigating the Impact of Hemodynamic Management and Thromboembolic Prophylaxis on Intraparenchymal Hemorrhage Following Traumatic SCI in a Porcine Model	Aysha Allard Brown, BSc

TUESDAY MAY 21, 2024 All Program times are in Atlantic Standard Time (AST)

ORAL PRESENTATIONS	PRESENTERS
GENERAL SESSION 1: Advances in Upper Extremity Functioning: Hands down, Hand it Over and Hold On 11:05 am - 12:05 pm • Moderator: Amy Bohn, OTR/L • Co-Moderator: Stephanie Hendrick	z, MD
Automated Estimation of Adapted GRASSP Scores During Activities of Daily Living Using Egocentric Video	Jose Zariffa, PhD, P.Eng.
The Emergence from Hand Paralysis after Cervical Spinal Cord Injury During Inpatient Rehabilitation: The Predictive Value of Electromyography and ISNCSCI Exam Measures	Keith Tansey, MD, PhD, FASNR, FASIA
Loss of Self-Care Independence in Cervical Spinal Cord Injury: Exploring the Impact of Motor Weakness, Spasticity, and Residual Corticomotor Physiology (A Multi-Center Study)	Jia Liu, PhD
Applicability of the Pain Training and Research team (E.F.I.D., by Its Acronym in Spanish) Ladder in Shoulder Pain After Spinal Cord Injury (SCI)	Mauro Guzzardo, MD Melina Longoni, MD
ARC-EX Therapy Transcutaneous Spinal Cord Stimulation Facilitates Upper Extremity Functional Recovery in Spinal Cord Injury: Results from the Up-LIFT Pivotal Trial	Edelle Field-Fote, PT, PhD



## **GENERAL SESSIONS**

TUESDAY MAY 21, 2024 All Program times are in Atlantic Standard Time (AST)

ORAL PRESENTATIONS	PRESENTERS		
GENERAL SESSION 2: Metrics Matter!  1:15 pm - 2:15 pm • Moderator: Rüdiger Rupp, PhD • Co-Moderator: Christian Schuld, Dipl-Inform. Med.			
Imputation Of Not Testable Motor and Sensory Scores in The International Standards for Neurological Classification of Spinal Cord Injury (ISNCSCI) With Regression Models	Christian Schuld, DiplInform. Med.		
Development And Preliminary Evaluation of The Spinal Cord Injury Movement Index	MJ Mulcahey, PhD, OTR\L, FASIA		
Revision Of the International Spinal Cord Injury (SCI) Urinary Tract Infection (UTI) Basic Data Set and Creation of Extended Data Set	Rochelle Tractenberg, PhD, MPH		
A Clinical Prediction Rule for Independence in Individuals with Spinal Cord Injury	Aldo Rafael, Montes Ugalde, MD		
ASIA Impairment Scale Grade E Conversion After Traumatic or Ischemic SCI: Incidence, Conversion Pattern as Well as Neurological and Functional Characteristics	Ruediger Rupp, Prof. DrIng.		
GENERAL SESSION 3: Glad You Asked: Emerging Understandings in			
Secondary Conditions 3:15 pm - 4:35 pm • Moderator: Maureen Miner, MD • Co-Moderator: Nicholas Evans, Ph			
Secondary Conditions 3:15 pm - 4:35 pm • Moderator: Maureen Miner, MD • Co-Moderator: Nicholas Evans, Phi Untreated Moderate-to-Severe Sleep-Related Breathing Disorder Is Associated with More Severe	<b>D, CEP</b> Julio Furlan MD, LLB, MBA, PhD, MSc, FRCPC, FAAN		
Secondary Conditions 3:15 pm - 4:35 pm • Moderator: Maureen Miner, MD • Co-Moderator: Nicholas Evans, Phi Untreated Moderate-to-Severe Sleep-Related Breathing Disorder Is Associated with More Severe Spasticity in Individuals Living with Spinal Cord Injury: A Cross-Sectional Prospective Study	Julio Furlan MD, LLB, MBA, PhD, MSc,		
Secondary Conditions 3:15 pm - 4:35 pm • Moderator: Maureen Miner, MD • Co-Moderator: Nicholas Evans, Phi Untreated Moderate-to-Severe Sleep-Related Breathing Disorder Is Associated with More Severe Spasticity in Individuals Living with Spinal Cord Injury: A Cross-Sectional Prospective Study Non-Invasive Spinal Cord Stimulation for Erectile Function Following Spinal Cord Injury Accelerating UTI Diagnosis and Treatment: Validating the Jiddu® Analyzer for Urine Bacterial Growth	Julio Furlan MD, LLB, MBA, PhD, MSc, FRCPC, FAAN		
Secondary Conditions 3:15 pm - 4:35 pm • Moderator: Maureen Miner, MD • Co-Moderator: Nicholas Evans, Phi Untreated Moderate-to-Severe Sleep-Related Breathing Disorder Is Associated with More Severe Spasticity in Individuals Living with Spinal Cord Injury: A Cross-Sectional Prospective Study Non-Invasive Spinal Cord Stimulation for Erectile Function Following Spinal Cord Injury Accelerating UTI Diagnosis and Treatment: Validating the Jiddu® Analyzer for Urine Bacterial Growth In Spinal Cord Injury/ Disease	Julio Furlan MD, LLB, MBA, PhD, MSc, FRCPC, FAAN Claire Shackelton, PhD		
GENERAL SESSION 3: Glad You Asked: Emerging Understandings in Secondary Conditions 3:15 pm - 4:35 pm • Moderator: Maureen Miner, MD • Co-Moderator: Nicholas Evans, Phl Untreated Moderate-to-Severe Sleep-Related Breathing Disorder Is Associated with More Severe Spasticity in Individuals Living with Spinal Cord Injury: A Cross-Sectional Prospective Study Non-Invasive Spinal Cord Stimulation for Erectile Function Following Spinal Cord Injury Accelerating UTI Diagnosis and Treatment: Validating the Jiddu® Analyzer for Urine Bacterial Growth In Spinal Cord Injury/ Disease Striving To Reduce Bladder Medications to Improve Quality of Life in People With SCI Estimating Renal Function Using Cystatin C In the Spinal Cord Injury Population	Julio Furlan MD, LLB, MBA, PhD, MSc, FRCPC, FAAN Claire Shackelton, PhD Amanda Rounds, PhD		

continued

Ryan, Solinsky, MD

Detailed Patterns of Autonomic Impairment After SCI And Their Relationships to

The International Standards Exam



WEDNESDAY MAY 22, 2024 All program times are in Atlantic Standard Time (AST)

ORAL PRESENTATIONS	PRESENTERS		
GENERAL SESSION 4: Basic Science for Curious Clinical and Collaborative Researchers  10:40 am - 11:40 am • Moderator: Cédric Geoffroy, PhD • Co-Moderator: Dr. Bethany Kondiles			
Promoting Regeneration following SCI through Subthreshold Epidural Electrical Stimulation	Ahad Siddiqui, PhD		
What is Really Going on During Passive (Motorized) Cycling?	David Magnuson, PhD		
Reducing Secondary Damage after Spinal Cord Injury Via Tailored Delivery of Anti-Inflammatory Cytokines	Daniel Hellenbrand, M.S.		
A New Mouse Model of Polytrauma with Spinal Cord Injury-Associated Chronic Pain	Chan Gao, MD, PhD		
Promoting Functional Neurological Recovery after SCI With a Novel Compound Identified Using Proprietary Drug Screening System	Arthur Sefiani, PhD		
Integrating Community-Based Participatory Research Approaches into Program Development and Study Design	Margaret Finley, PT, PhD		
	Margaret Finley, PT, PhD		
Readability Assessment of Patient Education Materials on Autonomic Dysreflexia	Will Bataller, MD, MS Lauren E. Powell, MD		
Loneliness and Its Relation to Psychological and Physical Health Among People with Spinal Cord Injury	Susan Robinson-Whelen, PhD		
From 'Blah, Blah' To Practice: Implementing the Ideal Care Pathway for Traumatic Spinal Cord Injury in Ontario	Matheus Wiest, PhD		
Nationwide Emergency Department Visits for Pediatric Traumatic Spinal Cord Injury in the United States, 2016-2020	James A. G. Crispo, MSc, PhD		
A Pilot Pain Management Program with Heart Rate Variability Biofeedback Training Improves Cardiac Coherence, Pain Intensity, And Self-Efficacy in Individuals with Paraplegia and Chronic Neuropathic Pain	Karen D'Huyvetter, ND, RN		



## **GENERAL SESSIONS**

WEDNESDAY MAY 22, 2024 All program times are in Atlantic Standard Time (AST)

ORAL PRESENTATIONS	PRESENTERS	
GENERAL SESSION 6: Cardiovascular Health: Emerging Understandings and Evolving Therapies 4:10 pm - 5:10 pm • Moderator: Ryan Solinsky, MD • Co-Moderator: Andrew Park, MD		
Treatment With Adjuvant Ethyl Nitrite in The Acute Phase Following Traumatic SCI Improves Cardiovascular Function in Rodents 12 Weeks Following SCI	Ryan Hoiland, PhD	
Treatment Of Post-SCI Hypotension: A Randomized Controlled Study of Usual Care Versus Anti-Hypotensive Therapy	Jill Wecht, EdD	
Association Between Cardiovascular Risk and Incidence of Cardiovascular Disease in Veterans With SCI	Khin Chan, MBBS, MS	
Acute Intermittent Hypoxia Improves Cardiovascular Function in Rats with Incomplete Spinal Cord Injury	Liisa Wainman, BSc, MSc, PhD (c)	
8 Days of Mild Intermittent Hypoxia Improves Autonomic Dysreflexia and Orthostatic Hypotension in Individuals with Motor Incomplete Spinal Cord Injuries	Gino S. Panza, PhD	

### THURSDAY MAY 23, 2024

ORAL PRESENTATIONS	PRESENTERS
GENERAL SESSION 7: Acute Phase Management: Brains, Bones, Breathing, Brachial, and Bipedal Opportunities 10:00 am - 11:00 am • Moderator: Isa A. McClure PT, MAPT • Co-Moderator: Lisa Rupper	rt, MD
Determining The Incidence of Concomitant Traumatic Brain Injury in Patients with Acute Spinal Cord Injury: A Ten-Year Cross-Sectional Study.	Antoine Dionne, MS4
Home-Based ARC-EX Therapy Transcutaneous Spinal Cord Stimulation Safely Maintains and Extends Upper Extremity Functional Recovery Following Spinal Cord Injury: Results from The LIFT Home Trial	Candace Tefertiller, DPT
The Role of Diaphragm Pacing in Pediatric Spinal Cord Injury: Decreasing Invasive Mechanical Ventilation	Raymond Onders, MD, FACS
Association of Calcium and Vitamin D Supplements with Fractures in Persons with a Traumatic SCI	Brian Le, MD
Factors Influencing Standing and Walking Outcomes During Inpatient Rehabilitation in Persons with Traumatic Spinal Cord Injury: A Canadian Perspective	Kristen Walden, PT
	Kristen Walden, PT



**THURSDAY** 

MAY 23, 2024 All program times are in Atlantic Standard Time (AST)

ORAL PRESENTATIONS	PRESENTERS	
GENERAL SESSION 8: Neurophysiology & Imaging: The Landscape Continues to Evolve 12:20 pm - 1:20 pm • Moderator: Monica Perez, PhD • Co-Moderator: Bing Chen	~~~~~	
Advanced Neurophysiology Reveals Topographical Patterns of Myelon Impairment Related to Dynamic Mechanical Stress in Lesional and Non-Lesional Cervical Myelopathies	Paulina S. Scheuren, PhD	
Surface Electromyography for Assessment of Sacral Motor and Reflex Function After Acute Spinal Cord Injury: A Pilot Study	Andréane Richard-Denis, MD-MSc	
Corticospinal Tract Sparing and Motor Recovery after Cervical Spinal Cord Injury	Gustavo Balbinot, PhD	
Cortical Functional Connectivity in Pediatric Participants with Chronic SCI And the Association with Injury Severity	Laura Krisa, PhD	
Neuromodulation of Cervical Spinal Interneurons: A Novel Preclinical Translation Strategy to Restore Breathing After Chronic Cervical Spinal Cord Injury	Kajana Satkunendrarajah, PhD	
GENERAL SESSION 9: Time for a Stimulating Discussion: Advances		
in the Application of Neuromodulation		

3:30 pm - 4:50 pm • Moderator: Professor James Bilzon • Co-Moderator: Dr Jennifer Maher

•	Replacing Bladder Medications with Home Neuromodulation in Spinal Cord Injury	Laura Serrano-Ortiz, MD
	Recovery of Autonomic Function with Lumbosacral Spinal Cord Neuromodulation in those Living with Chronic Motor-Complete, Cervical Spinal Cord Injury	Susan Harkema, PhD
	Neuromodulation-Enhanced Rehabilitation Through Epidural Stimulation in Patients with Subacute and Chronic Spinal Cord Injury	Rodrigo Vilches-Aranguren, MD Beatriz Perez Hernandez
	Transcutaneous and Epidural Stimulation: Understanding their Impact on Impaired Autonomic Regulation After SCI	Ryan Solinsky, MD
	Assessing Blood Pressure Stability in Transcutaneous Spinal Stimulation: A Clinimetric Approach	Einat Engel-Haber, MD
	<b>2021 Craig H. Neilsen Award</b> Feasibility and Early Outcomes of Operant Conditioning of Motor-Evoked Potentials in Upper Extremity of Individuals with Chronic Cervical Spinal Cord Injury	Blair H.S. Dellenbach, MS, OTR/L



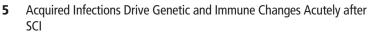
# SCIENTIFIC MEETING

## **POSTERS**

### **AWARD-ELIGIBLE POSTERS**

TUESDAY, MAY 21 & WEDNESDAY, MAY 22, 2024

- 1 Acute Intermittent Hypoxia Improves Airway Protection During Swallowing in Chronic Cervical Spinal Cord Injury Alicia K. Vose, PhD, CCC-SLP
- 2 Dating Satisfaction and Sexual Behaviors of Adults with Pediatric-Onset Spinal Cord Injury Justine Stewart, PsyD
- 3 Working Hard or Hardly Working? Comparing Physical Therapist Burden During Different Gait Training Approaches with a Patient with an Acute Spinal Cord Injury Lindsey Wynne, PT, DPT, NCS
- 4 A Pilot Study Testing Safety and Benefits of Ursolic Acid as a Countermeasure to Myopenia and Insulin Resistance in Chronic SCI Mark S. Nash, PhD, FACSM, FASIA



Angela Filous, PhD

Adaptive Sports for All: Investigating the Socioeconomic Challenges to Participation

Allyson Gorman, BS

- 7 Activity-Based Restorative Therapy (ABRT) and the Risk of developing Medical Device-Related Pressure Injuries in pediatric Patients with Spinal Cord Injury: A Case Report Quyen Catania, PT, DPT, NCS, CWS, CLT
- 8 An Unusual Presentation of Spinal Arachnoid Cyst: The Value of SCI/D Annual Evaluation
  Ryan Shields, MD, MSc
- 9 Upper Extremity Motor Scores and Functional Outcomes in Tetraplegic Spinal Cord Injury Emily Y. Chen, M.D. Candidate
- 10 Adjuvant Ethyl Nitrite on Hemodynamic Management and Spinal Cord Intraparenchymal Hemorrhaging in the Acute Phase Following Traumatic SCI
  Erin Erskine, MSc
- 11 Addressing Sexual Health in Individuals with Spinal Cord Injury (SCI) in Latin America: Results from a Survey Study Melina Longoni, MD
- 12 A Biomarker to Predict Spasticity Reduction Following Transcutaneous Spinal Stimulation
  Evan B. Sandler, PT, DPT, PhDc
- 13 A Feasibility Study of High Intensity Interval Training (HIIT) to Reduce Cardiometabolic Disease Risks in Individuals with Acute Spinal Cord Injury

  James Bilzon, PhD
- 14 The Need to Establish a Model Systems of Care for the Non Traumatic Spinal Cord Injury Population Melissa Michaluk, DO





## **POSTERS**

### **TUESDAY, MAY 21, 2024**

#### **ACCESSIBILITY/PUBLIC HEALTH**

- 15 Management of Durable Medical Equipment in Latin America: the Healthcare Provider's Experience Melina Longonl, MD
- 16 Flooding and SCI: Characterizing Weather Effects on the SCI Community in South Florida Danielle Bass, MPH
- 17 Does Participating In A National Research Registry Impact Patient Outcomes Following Traumatic Spinal Cord Injury? A Population-Based Study From the Rick Hansen Spinal Cord Injury Registry Andréane Richard-Denis, MD-MSc
- 18 How Does Extreme Heat Impact SCI Daily Living? Perspectives and Considerations from Southestern Floridians Living with Spinal Cord Injury Daniel Samano, MD, MPH, MSCHc
- 19 Preliminary Results of Participants Engagement In the Peer-Led Workout on Wheels Internet Intervention Program Katherine Froelich Grobe, PhD

#### **ACUTE CARE**

20 Is There an Optimal Mobility Pattern For Preventing Pressure Injuries During Acute Care After SCI: A Prospective Cohort Study to objectively monitor Nighttime Mobility using Actigraphy Islam Krazdi, MSc

#### **ADVOCACY**

21 The Impact of the Educational Interventions by the Americas Committee of ASIA In Latin America Melina Longonl, MD

#### **ASSISTIVE TECHNOLOGY**

- 22 Developing A Functional Electrical Stimulation Garment for the Upper Limbs
  - Eugene Eunoia Brukhman
- 23 Deep Learning Classification of Pediatric Spinal Cord Injury from Diffusion Tensor Imaging Measurements Laura Krisa, PhD

24 Unlocking Independence: Exploring Assistive Technology Use Among Individuals with Tetraplegia and Its Impact on Psychosocial Well-Being Kimberley R. Monden, PhD

#### **BASIC SCIENCE/ANIMAL MODELS**

- 25 Investigating the Influence of Spinal Cord Injury on Sympathetic Ganglionic Control of the Heart Alissa Taki, BSc
- 26 Overexpression of Sox11 Restores Embryonic, Pro-Regenerative Gene Transcription In Adult Corticospinal Tract Neurons after Spinal Injury Elizabeth Batsel, BS

#### **CARDIOVASCULAR**

- 27 Effect of Two Different Training Programs on Cardiovascular Response and Functional Activity In Individuals with Chronic Spinal Cord Injury Zoila Rosa Oliveros Ribero, MD
- **28** Effects of a Feedback-Controlled Heated Vest on Core Temperature in Persons with Spinal Cord Injury during Cool Exposure Ian Paez, BA
- 29 Mild Intermittent Hypoxia Acutely Exacerbates Autonomic Dysreflexia, but Orthostatic Hypotension Fei Zhao, MPT, PhD
- 30 Cardio-Vagal Responses to the Cold-Face Challenge In People with SCI: Effects of Cholinergic Agonist and Antagonist Jacob A. Goldsmith, MS, PhD
- **31** Vascular Dysfunction Following Spinal Cord Injury: A Systematic Review and Meta-Analysis
  Ali Hosseinzadeh, BSc
- 32 The Effect of Transcutaneous Spinal Cord Stimulation on Peripheral Vascular Responses During Urodynamic Assessment Ali Hosseinzadeh, BSc



# SCIENTIFIC MEETING

## **POSTERS**

**TUESDAY, MAY 21, 2024** 

#### **CASE STUDY**

- 33 When Paresthesias Are More Than Skin Deep: A Case Report Michiko Paschall, MD
- 34 Surfer'S Myelopathy: An Unusual Cause of Acute Spinal Cord Ischemia Juan Jose Calvillo Ruiz, MD
- **35** The Importance of Spilling Their Guts: An Uncommon Case of Anemia In SCI

Lauren E. Shuda, MD

36 Psychological Intervention Model Aimed to Inpatient Rehabilitation Spinal Cord Injury Individuals

Sandra R. Hernández-Sandoval, BA Psychology; Psy. M.

#### **CHRONIC CARE**

- 37 Skipping Leg Day isn't always Bad: Complications Found in Heavy Lifters who Experience Paralysis Samantha Mendelson, DO
- 38 Complexities of Bowel and Bladder Management In Cancer-Associated Spinal Cord Injury: A Mixed-Methods Study Andrea Leyton-Mange, MD
- 39 The Impact of Pain on Function After Spinal Cord Injury Suresh Subramanian, MBBS, MS, FAFRM
- 40 Prevalence of Current Pregnancy In Women with Traumatic Spinal Cord Injury: Findings from the National SCIms Database 2000-2023 Yuying Chen MD, PhD

#### CLINICAL TRIAL UPDATES

- 41 Effect of Vibrotherapy on Spasticity In the Lower Limbs in Patients with Traumatic Spinal Cord Injury Hernan Kolly, PhD
- 42 A Phase 1b/2a Study of NVG-291 In Individuals with Subacute Or Chronic Spinal Cord Injury Daniel Mikol, MD, PhD
- 43 Segmental Motor Recovery After Cervical Spinal Cord Injury Gustavo Balbinot, PhD

#### **COMMUNITY RE-INTEGRATION AND PARTICIPATION**

- **44** Returning to Work After a Spinal Cord Injury In Latin America Melina Longoni, MD
- 45 A Clinical Research Registry: The Power of Connection Carolyn Ostrowski, PTA, CEAS
- 46 Working Conditions in Patients with Spinal Cord Injury at the National Rehabilitation Institute, Mexico City Aldo Rafael Montes Ugalde, MD
- 47 Sexuality in Patients with Spinal Cord Injury: Satisfaction Reported About the Intervention Received During Rehabilitation Program Mariana Bonetto, OT
- 48 Group Tele-Exercise Impact on Physical Activity Determinants and Behavior In Individuals with Spinal Cord Injury Laura Baehr, PT, DPT, PhD
- 49 Predicting Complete vs. Incomplete Long-Term Functional Independence Early After Acute Motor-Incomplete AIS D Spinal Cord Injury to Optimize the Care Pathway. A Prospective Cohort Study Antoine Dionne, MS4

#### **COVID 19**

- 50 Results of Telepsychology Intervention In People with Spinal Cord Injuries In Argentina During the Pandemic and Beyond Melina Longonl, MD
- 51 Autoimmune Cervicothoracic Myelopathy following Covid-19 Infection: A Variable Presentation Ton La, Jr., MD JD

#### **ELECTROPHYSIOLOGY**

52 Transcutaneous Electrical Spinal Stimulation Attenuates Ankle Clonus in Humans with Chronic Spinal Cord Injury Alex Benedetto

#### **IMAGING**

- 53 Measurement of Magnetization Transfer Ratio In Normal Pediatric Cervical Spinal Cord: Clinical Feasibility, Assessment of Normative Data and Age Correlation Laura Krisa, LK, PhD
- 54 Metal Reduction Around Cervical Spine Implant Using Diffusion Tensor Imaging at 3T MRI: Preliminary Results Slimane Tounekti, PhD



## **POSTERS**

### **TUESDAY, MAY 21, 2024**

#### **LOWER EXTREMITY FUNCTION/GAIT**

55 Data-Driven Characterisation of Lower-Limb Kinematics During Breaststroke Swimming In Patients with Spinal Cord Injury Melina Giagiozis, MSc

#### **MEASUREMENT AND OUTCOMES INSTRUMENTS**

- 56 Longitudinal Functional Recovery after Spinal Cord Injury Using the Neuromuscular Recovery Scale Doug Griffin, PT
- 57 Novel Superconditioning Transcranial Magnetic Stimulation (TMSsc) As a Sensitive Biomarker In Amyotrophic Lateral Sclerosis (ALS) Diagnosis Ramza Malik, DO
- Use of Motor Score "5*" In the European Multicenter Study About Spinal Cord Injury (EMSCI) Christian Schuld, MSc
- 59 Not Testable ISNCSCI Motor and Sensory Scores In the European Multicenter Study about Spinal Cord Injury (EMSCI): Occurrence Patterns and Consequences on Classification Christian Schuld, MSc
- 60 Biomarkers for Recovery Following Severe Spinal Cord Injury Dalia De Santis, PhD
- 61 Differences in Common Prehension Relevant Outcome Measures in Tetraplegia
  Nilanjana Datta, MD
- **62** Establishment of Reference Scores For Trunk Control Assessment Using Smartphones In Patients with Spinal Cord Injury Erika Abarca Ortega, MD
- 63 Predicting Bladder Function During Acute Hospitalization with a Qualitative Voluntary Anal Contraction Assessment Following Motor Incomplete Spinal Cord Injury Andréane Richard-Denis, MD-MSc
- 64 A Data-Driven Investigation of Historic Control Matching Miklovana Tuci, MSc
- 65 Knowledge, Comfort, Approach and Attitude towards Sexuality Scale in Spinal Cord injured Population: Adaptation and Validation to Spanish Language Luz Miriam Leiva Pemberthy, MD

#### **METABOLIC/OBESITY**

- The Effects of High-intensity Interval Training on Fitness and Metabolic Health in Individuals with Acute Spinal Cord Injury Submission Jennifer Maher, PhD
- 67 Treatment of Neurogenic Obesity in Spinal Cord Injury with Tirzepatide: A Case Report Michael Juszczak, MD

#### **MOTOR CONTROL**

- 68 Quantifying Volitional Leg Movement In the E-Stand Clinical Trial Using Surface Electromyography Emily Haaq, B.S.
- 69 Mild Intermittent Hypoxia Improves Hand Function In Individuals with Motor Incomplete Spinal Cord Injury Megan Hofman, OTS

#### **NEURAL PLASTICITY**

70 Peripheral Plasticity of Nociceptive Afferents Following Spinal Cord Injury Morgan Sharp-Forston, B.S.

#### **NEUROMODULATION**

- 71 Transcutaneous Spinal Cord Stimulation Combined with Activity-Based Therapy Leads to Sensorimotor Improvements In Chronic, Thoracic Spinal Cord Injuries Jenny Suggitt, MSc, OTR/L
- 72 Restoring Function after Chronic Spinal Cord Injury from Electrophysiology to Kinematics

  Tara Nash, CNP
- 73 Autonomic and Motor Recovery with Non-Invasive Lumbosacral Spinal Cord Stimulation Following Cervical Motor-Complete Spinal Cord Injury: A Case Study
  Ali Hosseinzadeh, BSc
- 74 Modulation of Spinal Cord Excitability and Motor Performance in Individuals with Chronic Cervical SCI Following a Single Spinal Cord Transcutaneous Stimulation Training Session Pawan Sharma, PhD



### **TUESDAY, MAY 21, 2024**

#### **NEUROMODULATION**

- 75 Transcutaneous Spinal Cord Stimulation to Restore Cardiovascular Function In Chronic SCI Lynda Murray, PhD
- 76 Participants and Caregivers' Perspectives of the Spinal Cord Epidural Stimulation Effect on Bowel Function and Management for Individuals with Spinal Cord Injury: A Qualitative Study Beatrice Ugiliweneza, PhD, MS
- 77 Paired Brain and Cervical Spinal Stimulation Facilitates Hand Muscle Responses In Humans Lynda Murray, PhD

- **78** Identifying Midbrain Locomotor Circuits that Improve Walking In Pigs Following Incomplete SCI

  Brian Noga, PhD
- 79 Enabling Volitional Lower Limb Control with Non-Invasive Spinal Cord Stimulation: Responder vs. Non-Responder Raza N. Malik. PhD

#### **PSYCHOSOCIAL**

80 Barriers to Health Promotion Among Young Adults with Pediatric-onset Spinal Cord Injury Alicia January, PhD

### WEDNESDAY, MAY 22, 2024

#### **EXOSKELETONS**

81 Overground Robotic Exoskeleton Use for Early Mobility After Spinal Cord Injury During Acute Care Hospitalization: A Case Series Jaime Gillespie, PT, DPT

#### **GASTROINTESTINAL**

**82** The Gut Microbiome After SCI: A Preliminary Analysis of the Gut Microbiome to Identify Molecular Mechanisms of GI Dysfunction Mark Nash, PhD, FACSM, FASIA

#### **GENOMICS**

**83** Genetic Variability and DVT After Spinal Cord Injury (SCI): A Negative Pilot Study Highlights Barriers and Opportunities To Exploring Gene Association in SCI Outcomes Lauren Hall, MD

#### **IMAGING**

84 Characterization of Chronic incomplete Cervical Spinal Cord Injury with Magnetic Resonance Imaging and Assessments of Sensory and Motor Functions: Case Reports Allison Lewis, DPT, PhD

#### PAIN

- 85 Effectiveness of Hydrotherapy on Neuropathic Pain and Pain Catastrophization in Patients with Spinal Cord Injury: Protocol for a Pilot Trial Study
  - Luz Miriam Leiva Pemberthy, MD
- 86 Factors Associated with Neuropathic Pain in Colombian Patients with Spinal Cord Injury of Traumatic Origin: Case-Control Study Luz Miriam Leiva Pemberthy, MD
- 87 Perceived Effectiveness and use of Seven Active Pain Management
  Tools By individuals with Paraplegia Participating in A 9-Week Chronic
  Neuropathic Pain Management Program
  Lisa Lighthall Haubert, MPT, DPT, KEMG
- 88 Battlefield Acupuncture in Action : Our Centers Experience with Battlefield Acupuncture for SCI Related Pain Samantha Mendelson, DO
- 89 The Impact of SCI and SCI-Related Neuropathic Pain on Multisensory Integration Roberta Vastano, PhD
- **90** Determinants of Days with Manageable Pain After SCI Eva Widerstrom-Noga, DDS, PhD
- **91** Balance Between Spinothalamic and Lemniscal Tract Preservation as a Crucial Aspect in Neuropathic Pain Development after Spinal Cord Injury

Laura Heutehaus, MSc



## **POSTERS**

### WEDNESDAY, MAY 22, 2024

- 92 The Synergistic Effect of Acute TBI and SCI on the Development of Chronic Pain: A Populational Cohort Study on 2389 Patients in Québec, Canada
  - Antoine Dionne, MS4
- 93 Trial of Early Intervention with Transcutaneous Electrical Nerve Stimulation for the Prevention of Neuropathic Pain After Spinal Cord Injury Elizabeth Felix, PhD
- 94 Changes of Pain Cortices in Chronic Adults with SCI: The Underpinnings of the Resting State BOLD fMRI Abdulaziz Alhussein, BA
- 95 Neuropathic Pain in Patients with Spinal Cord Injury Johnny Barona Velez, MD

#### PATIENT/CAREGIVER EDUCATION

- **96** Empowering Parental Caregivers: An Investigation of a Pilot Program Elena Martino, OTD, OTR/L
- 97 Development of a Mobile Application for Patients with Spinal Cord Injury Johnny Barona Vélez, MD

#### **PREVENTION**

- 98 Perceptions of Photovoice as a Virtual Fall Prevention and Management intervention after Spinal Cord Injury Katherine Chan, MSc, RKin
- 99 Effects of Lactobacillus Rhamnosusgg Bladder Wash Versus Saline Bladder Wash on Urinary Function and Bladder Symptom Burden in intermittent Catheter Users: Preliminary Results Emily Leonard, PhD
- **100** Passive Heat Therapy to Improve Cardiometabolic Health in Persons with A Spinal Cord Injury A Case Series Hannah Uhlig-Reche, MD, MPH

#### **PSYCHOSOCIAL**

- 101 Understanding The Impact of Screening Location on Depressive Symptom Scores Among Acute Traumatic and Non-Traumatic Patients with Spinal Cord Injury Ramya Gopalan, MS, MPH
- 102 Bladder and Bowel Dysfunction, Cognitive Appraisals of Disability, and Life Satisfaction in individuals with Pediatric-onset Spinal Cord Injury Olivia Clark, MA

- 103 A Qualitative Study on The Impact of Oral Health on Quality of Life: The Lived Experience of People with SCI Jennifer Coker, PhD, MPH
- 104 Longitudinal Satisfaction with Life Among individuals with Spinal Cord injury: A Multilevel Multiple indicator Multiple Cause Model Elizabeth Pasipanodya, PhD
- **105** Depression in Patients with Spinal Cord Injury Lina María Rodríguez Vélez

#### **REHABILITATION**

- 106 Rehab in Rehab: A Prospective Analysis of The Effect of Substance Use Disorders on inpatient Rehabilitation for Traumatic Spinal Cord Injury Shane Stone, MD
- **107** Comparative Analysis Between Acute Phase and 30 Years of Evolution in People with Tetraplegia Due to Spinal Cord Injury: Clinical Cases Diego Uberti, Neurorehabilitador
- **108** Challenges in Virtual Healthcare for Patients with Disabilities Joann Pan, BA
- 109 Safety and Feasibility of Transcutaneous Spinal Cord Stimulation to Stabilize Blood Pressure for Acute inpatients with Spinal Cord Injury Jorge Chavez, BS
- 110 Changes in Cough Effectiveness Following 5-Days of Therapeutic Acute intermittent Hypoxia in Chronic SCI Michela Mir, PhD CCC-SLP
- 111 Title: Viral Myelopathy: A Rare Subset of Non-Traumatic Spinal Cord Dysfunction Lisa Beck, APRN, CNS, MS
- 112 Does Race/Ethnicity influence Epidemiology, Survival and Neurological Outcomes After Acute Traumatic Spinal Cord Injury? Julio Furlan, MD, LLB, MBA, PhD, MSc, FRCPC, FAAN
- 113 Presence, Descriptors, and Perceived Locations of SCI Related Painful Sensations During The First-Year Post-Injury
  Laiba Afzal. MS



# SCIENTIFIC MEETING

## **POSTERS**

### WEDNESDAY, MAY 22, 2024

#### **REHABILITATION THERAPY**

**114** Variability in The Risk of Elbow Flexor Tendon Retraction in Tetraplegia Due to Spinal Cord Injury At C5, C6 and C7 Levels. Clinical Evidence of Neuromuscular Response to FES Stimulation.

Diego Uberti, Neurorehabilitador

115 Reviving intimacy After Spinal Injury: Unveiling A Novel Approach to Enhance Sexual Participation in A Male Patient with Incomplete Spinal Injury

Jane Alkhazov, PT, DPT, NCS

116 Walking Outcomes Enhanced By Use of A Novel Electrode Array for Transcutaneous Spinal Cord Stimulation and Gait-Based Therapies in Patients with Incomplete Spinal Cord Injury Elizabeth Neighbors, PT, DPT

117 Bladder, Bowel and Sexual Function Outcomes within A Specialist Pelvic Health Physiotherapy Clinic at a Spinal Cord Injury Centre, UK Natalia Vasquez, BSc, MSc

#### RESPIRATORY

**118** Comparing Indirect Ventilatory Drive Outcomes in Chronic Spinal Cord Injury

Tommy Sutor, MS, PhD

**119** Mild intermittent Hypoxia Elicits Ventilatory Plasticity without Changes in Resting Blood Pressure

Lexi Soltesz, Undergraduate Researcher

**120** Improving Breathing After Spinal Cord Injury By Electrical Stimulation of Locomotor Circuits

Ian Walling, BS

## SCI KNOWLEDGE DISSEMINATION/IMPLEMENTATION INTO THE COMMUNITY

**121** Case Report: Spinal Cord Injury Due to Ligamentum Flavum Buckling in a Transgender Elhers-Danlos Patient

Adam Haniff, MD

**122** Bladder and Bowel Function in Adult Subjects with Spinal Cord Injury in Argentina

Diego Uberti, Neurorehabilitador

- **123** What is the Status of Research Spinal Cord Injury in Latin America? Florencia Fernández, PhD
- 124 Healthcare Utilization in Veterans with Cervical Spinal Cord Injury: Defining The Opportunities for Dissemination of Treatment information Michael Berger MD, PhD

#### **SENSORY STUDIES**

**125** Body Composition and Muscle Mass and Its Effect on Functional Activities of Males in Comparison to Females with Chronic Spinal Cord Injury

Marjorie Morgan PTA; CLT

#### **SEX/FERTILITY**

126 Knowledge, Comfort, Approach and Attitude towards Sexuality Scale in Spinal Cord injured Population: Adaptation and Validation to Spanish Language

Laura Ramirez Abadia, MD

127 Promoting Reproductive Health Equity After Spinal Cord Injury: Identifying Needs for Health Professional Training and Continuing Education

Lauren Hall, MD / Chinenye Nnoromele MD

#### **SKIN**

- 128 Staged Chronic Wound Therapy with Use of Medical Maggot Therapy and Human Placental Extracellular Matrix injectate: A Case Study Colton Sauer, MD
- **129** The Feasibility of Admitting Patients to Acute Rehabilitation with Severe Pressure injuries

Elizabeth Twist, MD

#### **SPASTICITY**

**130** Development of a Virtual Teaching Tool for Support in The Application of Botulinum Toxin

Daisy Falla Ramirez, PhD

#### **SPINE SURGERY**

- **131** The Surgical Enigma: Tracing Post-Surgical Guillain-Barré Syndrome Alwin David, MD
- 132 Efficacy of Postoperative Spine Orthosis in The Prevention of Fixation Failure after Surgery for Unstable Thoracolumbar Fractures Mark Prasarn, MD
- **133** Is Routine Use of External Spinal Orthoses Necessary after Operative Stabilization of Cervical Spine injuries?

  Mark Prasarn, MD
- **134** Utility of Augmented Reality and Virtual Reality in Spine Surgery Hasan Sumdani, MD



## **POSTERS**

## WEDNESDAY, MAY 22, 2024

#### TRANSLATIONAL RESEARCH

- **135** Improving Bowel Function in Chronic Spinal Cord Injury with Noninvasive Spinal Cord Neuromodulation: Translational Advances Rahul Sachdeva, PhD
- **136** Targeting intraparenchymal Hemorrhage After SCI Antje Kroner, MD, PhD
- 137 The Concept of Positive Deviance Applied to Spinal Cord Injury Recovery - An Analysis of Medications Received By Patients Exhibiting A Phenomenal Recovery Lucie Bourguignon, MSc
- 138 Ethics, Access and Inclusion: Human Subjects Considerations for Spinal Cord InjuryB. Jenny Kiratli, PhD

#### **UPPER EXTREMITY FUNCTION**

- 139 Isn't It GRANND? Grasp-Release Assessment for A Networked Neuroprosthesis Device – A Clinical Trial Update Anne M. Bryden, PhD, OTR/L
- 140 Pilot Data to Develop A Multivariate Classification System for Upper Extremity Function and Participation Among People with Tetraplegia Ana Valeria Aquirre Guemez, MD
- 141 A Simplified Neuroprosthesis for Lateral Pinch in Cervical Spinal Cord Injury: Proof of Principle Megan Moynahan, MS

#### **UROLOGY**

- 142 Chronic Electrical Stimulation to Reduce Bladder Hyperreflexia Mine Aydan Cenberoglu, MD
- 143 Urinary NADH Levels As A Biomarker for Bacterial Metabolic Activity and Bladder inflammation Among People with NLUTD Abigail Fox, BAc
- 144 Within Individual Urinalysis and Urine Culture Variation with Symptoms Among People with Neurogenic Lower Urinary Tract Dysfunction who use Indwelling Catheterization Christopher Riegner, BA

#### **WHEELCHAIR**

- **145** Are Al-Based Conversational Agents A Reliable Support for Wheelchair Service Providers During The Selection of Appropriate Wheelchairs? Alberto Isaac Perez Sanpablo, DSc
- 146 Rotator Cuff Tendon Pathology Is Associated with Satisfaction with Life in Pediatric and Adult Manual Wheelchair Users with Spinal Cord Injury and Dysfunctions Shubhra Mukherjee, MD, FRCP(C)
- 147 Assessing The Quality of information for Patients on Wheelchair Services Provided By Conversational Agents Based on Artificial intelligence Alberto Isaac Perez Sanpablo, DSc

