Symposium at a Glance

KENTUCKY INTERNATIONAL CONFERENCE CENTER BALLROOMS D&E

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7:00 – 7:45am 7:45 – 8:00am	Registration	1:10 – 1:30 pm	Karyn Esser • University of Florida Health Department of Physiology and Functional Genomics
7.45 – 8.00 am	Opening Remarks Susan Harkema and David Magnuson Kantuala Spiral Cord Injury Passarah Contar	1:30 – 1:40 pm	Exercise and Muscle Clocks; Role for Scheduled Exercise? Q&A with Karyn Esser
8:00 – 8:45 am	Kentucky Spinal Cord Injury Research Center Keynote Speech	1:40 – 2:00 pm	Christopher Cardozo • Icahn School of Medicine at Mount Sinai
0.00 0.43411	Steven Kirshblum • Kessler Institute for Rehabilitation Spinal Cord Injury as a Whole Body System:	0.00	Exercise Corrects Perturbation of the Hepatokine-adipokine Axis of Spinal Cord Injury Mice
	Biology and the Hope of Neuromodulation	2:00 – 2:10 pm	Q&A with Christopher Cardozo
	Honorary Chair: Natalie Barrett	2:10 – 2:30 pm	Panel Discussion
SESSION ONE 8:45 – 8:55 am	METABOLIC DISEASES Chair: Dana McTigue • Ohio State University College of Medicine	2:30 – 2:45 pm	Break and Posters Review
	Honorary Chair: Marissa Kirkling	SESSION THREE	AUTONOMIC CARDIOVASCULAR DYSFUNCTION IN SCI: PRESENTATION, CONSEQUENCES, TREATMENTS
8:55 – 9:15am	David Gater, Jr. • The Miami Project to Cure Paralysis Neurogenic Obesity after Spinal Cord Injury: Metabolic Melee	2:45 – 2:55 pm	Chair: Jill Wecht • James J Peters VAMC and Icahn School of Medicine, Mount Sinai
9:15 – 9:25 am	Q&A with David Gater, Jr.		Honorary Chair: Rob Wudlick
9:25 – 9:45am	Phillip Popovich • Ohio State University College of Medicine Dysautonomia as a Unifying Neurogenic Feature of	2:55 – 3:15 pm	David Goldstein • NINDS Autonomic Medicine Section The Extended Autonomic System, Homeostasis, and
	Multi-organ Pathology After Spinal Cord Injury		Biocybernetics
9:45 – 9:55am	Q&A with Phillip Popovich	3:15 – 3:25 pm	Q&A with David Goldstein
9:55 – 10:15am	Mark Nash • University of Miami Miller School of Medicine Inhibition of Myostatin Expression as a Countermeasure to Sarcopenic Obesity Following Spinal Cord Injury	3:25 – 3:45 pm	Andrei Krassioukov • University of British Columbia Division of Physical Medicine and Rehabilitation Neuromodulation for Restoration of Autonomic Functions
10:15 – 10:25 am	Q&A with Mark Nash	3:45 – 3:55 pm	After Spinal Cord Injury Q&A with Andrei Krassioukov
10:25 – 10:40 am	Break and Posters Review	3:55 – 4:15 pm	Jill Wecht • James J Peters VAMC and Icahn School of
10:40 – 11:00 am	J. Andrew Taylor • Harvard Medical School Department of Physical Medicine and Rehabilitation	3.33 – 4.13 pm	Medicine, Mount Sinai
	Hybrid-FES Exercise and Erogenic Aids: The Next Step for		Autonomic Cardiovascular Dysfunction in Spinal Cord Injury: Presentation, Consequences, Treatments
11:00 – 11:10 am	High Intensity Exercise in Spinal Cord Injury Q&A with J. Andrew Taylor	4:15 – 4:25 pm	Q&A with Jill Wecht
11:10 – 11:30am	Panel Discussion	4:25 – 4:45 pm	Panel Discussion
11:30am – 12:30pm	Lunch	4:45 – 5:45 pm	Keynote Speech
·			Sten Grillner • Karolinska Institute Department of Neuroscience, Stockholm
SESSION TWO 12:30 – 12:40 pm	MUSCLE AS AN ENDOCRINE ORGAN Chair: David Magnuson • Kentucky Spinal Cord Injury Research Center		The Intrinsic Capacity of the Spinal Cord to Coordinate Movements, and its Control From Brainstem and Forebrain Honorary Chair: Rob Summers
	Honorary Chair: Paul Erway	E://E 6:70nm	
12:40 – 1:00 pm	David Ditor • Brock University Department of Kinesiology High Quality Weight Loss After Spinal Cord Injury:	5:45 – 6:30 pm	Transportation to Dinner
1:00 – 1:10 pm	Can Lean Mass Be Preserved While Fighting Obesity? O&A with David Ditor	6:30 pm	Symposium Dinner • Churchill Downs
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Tuesday, July 26th



11:45am - 12:30pm

12:30-1:30pm

Plenary Lecture

Spinal Cord Injury

Honorary Chair: Trish Taylor

Research and Clinical Practice

Sponsored Lunch: ONWARD • Dave Marver

Grégoire Courtine • Swiss Federal Institute of Technology Mechanism-driven Technologies and Therapies for

ONWARD - Delivering Breakthrough SCI Therapies for

Symposium at a Glance

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Feature-length Documentary Premiere

7:00 – 7:45am	Registration	SESSION FIVE	EPIDURAL STIMULATION: MOTOR SYSTEMS
7:45 – 8:00 am	Opening Remarks	1:30 – 1:40 pm	Chair: Kristin Zhao • Mayo Clinic Department of Physical Medicine and Rehabilitation
8:00 – 8:45am	Keynote Speech		Honorary Chair: Devina Robles
	Karen Minassian • Medical University of Vienna History and Overview of Epidural and Transcutaneous Spinal Cord Stimulation Strategies for Motor Recovery Honorary Chair: Jerod Nieder	1:40 – 2:10 pm	Marco Capogrosso • University of Pittsburgh Department of Neurological Surgery Computer Models in the Understanding of Electrical Epidural Stimulation for the Recovery of Motor Control
SESSION FOUR	TRANSCUTANEOUS STIMULATION: MOTOR SYSTEMS	2:10 – 2:20 pm	Q&A with Marco Capogrosso
8:45 – 8:55 am	Chair: Karen Minassian Honorary Chair: Mike Nichols	2:20 – 2:40 pm	Igor Lavrov • Mayo Clinic Departments of Neurology and Biomedical Engineering
8:55 – 9:25am	Yury Gerasimenko • Kentucky Spinal Cord Injury Research Center and Pavlov Institute Multi-modal Stimulation for the Recovery of Posture and Locomotion	2:40 – 2:50 pm	Merging Neuromodulation and Neuroregeneration Therapy for Spinal Cord Injury Q&A with Igor Lavrov
		2:50 – 3:05 pm	Break and Posters Review
9:25 – 9:45 am	Ursula Hofstötter • Medical University of Vienna Transcutaneous Spinal Cord Stimulation for Enhancing Locomotor Activity and Controlling Spasticity	3:05 – 3:25 pm	Enrico Rejc • Kentucky Spinal Cord Injury Research Center Spinal Cord Epidural Stimulation to Promote Standing Motor Function Recovery After Motor Complete Spinal Cord Injury
9:45 – 9:55 am	Q&A with Ursula Hofstötter	3:25 – 3:35 pm	Q&A with Enrico Rejc
9:55 – 10:15am	Break and Posters Review	3:35 – 3:55 pm	Claudia Angeli • Kentucky Spinal Cord Injury Research Center
10:15 – 10:35 am	Gail Forrest • Kessler Foundation Multi-modal Transcutaneous Stimulation for Upper and	3:55 – 4:05 pm	From Modulation to Recovery: Crossing the Threshold Q&A with Claudia Angeli
10:35 – 10:45 am	Lower Extremity Recovery Q&A with Gail Forrest	4:05 – 4:25 pm	Panel Discussion
10:45 – 11:05am	V. Reggie Edgerton • University of California, Los Angeles It is What We Think We Know Already That Often Prevents Us From Learning	4:25 – 5:25 pm	Panel Discussion: Performance Focused Neuromodulation Megan Gill • Mayo Clinic Clearlin Annulis Kontrolo Grinal Conduction Decease Control
11:05 – 11:15am	Q&A with V. Reggie Edgerton		Claudia Angeli • Kentucky Spinal Cord Injury Research Center
11:15 – 11:45 am	Panel Discussion	5:25 – 7:00 pm	Cocktail Reception and Posters Review
11:45 am 12:70 nm	Diopanyl ceturo	7:00 pm	"Rise Up: Discovering Hope"

Wednesday, July 27th

Symposium at a Glance

KENTUCKY INTERNATIONAL CONFERENCE CENTER BALLROOMS D & E

Thursday,	July	28th
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7:00 – 7:45am	Registration	SESSION SEVEN	INTERSYSTEMS, HEALTH, AND COMMUNITY INTEGRATION OF NEUROMODULATION	
7:45 – 8:55am	SPECIAL PRESENTATION How to Stimulate: Tonic-integrated Network Focused?	11:25 – 11:35 am	Chair: Susan Harkema Honorary Chair: Deanna Laing	
	Spatial Temporal Dorsal Root Focused? Presenters: Claudia Angeli; Grégoire Courtine; V. Reggie Edgerton; Susan Harkema; Igor Lavrov	11:35 – 11:55 am	Aaron Phillips • University of Calgary, Cumming School of Medicine A Mechanism-guided Cardiovascular Stabilizing System	
SESSION SIX	NEUROSURGICAL APPROACHES AND THE CLINICAL FUTURE OF NEUROMODULATION	11:55am – 12:05pm	For Spinal Cord Injury Q&A with Aaron Phillips	
8:55 – 9:05 am	Chair: James Guest • University of Miami Miller School	12:05 – 1:00 pm	Lunch	
	of Medicine Honorary Chair: Henry G. Stifel, III	1:00 – 1:20 pm	Charles Hubscher • Kentucky Spinal Cord Injury Research Center	
9:05 – 9:25 am	James Guest • The Miami Project to Cure Paralysis Combined Neuromodulatory Approaches to Amplify	1:20 – 1:30 pm	Cardiovascular and Bladder Integrated Q&A with Charles Hubscher	
9:25 – 9:35am	Recovery After Spinal Cord Injury Q&A with James Guest	1:30 – 1:50 pm	Ona Bloom • Feinstein Institutes for Medical Research, Northwell Health	
9:35 – 9:55 am	Maxwell Boakye • Kentucky Spinal Cord Injury Research Center Patient Selection, Risk Mitigation and Optimization of	1:50 – 2:00 pm	Immune System Q&A with Ona Bloom	
9:55 – 10:05 am	Surgical Technique and Implant Position Q&A with Maxwell Boakye	2:00 – 2:20 pm	Susan Harkema • Kentucky Spinal Cord Injury Research Center Neuromodulation for Whole Body Systems	
10:05 – 10:25 am	David Darrow • University of Minnesota Medical School	2:20 – 2:30 pm	Q&A with Susan Harkema	
	Patient-in-the-loop Optimization of Spinal Cord Stimulation for Spinal Cord Injury	2:30 – 3:00 pm	Panel Discussion	
10:25 – 10:35 am	Q&A with David Darrow	3:00 – 3:15 pm	Break and Posters Review	
10:35 – 11:05 am	Panel Discussion	SESSION EIGHT	INTEGRATION OF COMMUNITY, INDUSTRY, SCIENCE,	
11:05 – 11:25 am	Break and Posters Review	3:15 – 5:00 pm	AND FUNDERS Stakeholders' Roundtable	