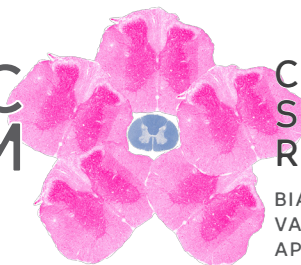


# SCIENTIFIC PROGRAM



# CANADIAN SPINAL CORD INJURY RESEARCH

BIANNUAL MEETING  
VANCOUVER  
APRIL 8-9 2019

## Monday April 8

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### 08:20-10:00 **BASIC SCIENCE OF THE NORMAL AND INJURED SPINAL CORD**

Lecture Hall

**Wolfram Tetzlaff and Karim Fouad:** Welcome and opening remarks

**Victor Rafuse:** Muscle fibre-type susceptibility in ALS is associated with macrophage-mediated terminal schwann cell pathology

**Patrick Whelan:** Descending neuromodulation of locomotor circuits.

**Katinka Stecina:** Fictive locomotion evoked by DREADDs?

**Jeremy Chopek:** Reticular formation microcircuits in movement selection

**James Fawcett:** Understanding the contribution of cerebellar interneurons in controlling gait

**Ying Zhang:** The locomotor task-dependent spinal modular circuits

### 10:00-10:30 **MORNING BREAK** | Atrium

### 10:30-12:00 **INFLAMMATION** | Lecture Hall

**Jason Plemel:** The microglia response to demyelination

**Steve Lacroix:** The microglial scar: microglia are an important component of the protective scar that forms after SCI

**Eftekhar Eftekhapour:** Targeting excessive lysosomal activity for treatment of oxidative stress

### **PLENARY LECTURE**

**Phil Horner:** Spinal neuromodulation to enhance transplant integration and forelimb recovery

### 12:00-13:15 **LUNCH** | Atrium

### 13:15-15:00 **REGENERATION AND REPAIR**

Lecture Hall

**Valerie Verge:** Comparing electrical stimulation to acute intermittent hypoxia in promotion of nerve repair

**Andrea Tedeschi:** Cellular and molecular mechanisms of axon growth and regeneration failure

**Arthur Brown:** R & D for small molecule inhibitors of SOX9 for nervous system repair

**Soheila Karimi:** Neuregulin-1, an emerging regulator of spinal cord injury and repair

**Michael Fehlings:** Translational regenerative strategies for cervical spinal cord injury

**Karim Fouad:** Open data commons—SCI

### 15:00-15:30 **AFTERNOON BREAK** | Atrium

### 15:30 - 16:40 **SELECTED TRAINEE TALKS**

Lecture Hall

**Mohammed Khazaei:** Rescuing the fate of neural progenitor transplants in the injured spinal cord niche via attenuation of Notch signaling with GDNF.

**Narjes Shahsavani:** Neuregulin-1 fosters immunomodulation & neuroprotection in traumatic SCI

**Rahul Sachdeva:** A non-invasive neuroprosthesis for cardiovascular recovery after SCI

**Sohrab Manesh:** Locomotor recovery following contusive SCI does not require oligodendrocyte remyelination

**Priscilla Chan:** Self-tracing human neural stem cells to map transplant integration

**Emma Schmidt:** Fecal microbiota transplant attenuates dysbiosis and anxiety in a rat model of SCI

**Navid Khosravi-Hashemi:** SCI recovery pattern dependency of functional independence

### 16:45-21:00 **POSTERS, DINNER, TOURS**

Atrium

**16:45 to 18:00** formal poster session (with judging)

**18:00 to 19:00** dinner

**19:00 to 21:00** informal poster presentations, small group tours of the BSCC, networking/socializing (sign up for tours at the registration desk before 18:45)

GENEROUSLY SUPPORTED BY:



# Tuesday April 9

## 08:30-10:00 PLASTICITY

Lecture Hall

**Frederic Bretzner:** Control and plasticity of the midbrain after SCI

**Marina Martinez:** Fostering recovery of locomotion with neuroprosthetics after SCI

**David Magnuson:** Inactivity is toxic: setting the trajectory for recovery.

**David Bennett:** Chronic spinal cord hypoxia induced by pericytes after spinal cord injury.

**Karim Fouad:** Preventing microbiome changes prevents anxiety like behavior in rats with SCI

**Matt Ramer:** An AFT3-CreERT2 knock-in mouse for axotomy-induced genetic editing: proof of principle

## 10:00-10:30 MORNING BREAK | Atrium

## 10:30-12:00 REHABILITATION

Lecture Hall

**Kristine Cowley:** Using propriospinal circuitry to increase function and decrease musculoskeletal deterioration after SCI.

**Vivian Mushahwar:** The role of the cervico-lumbar spinal network in improving walking after SCI in humans

**Kristin Musselman:** Perturbation-based balance training after SCI: findings from a randomized clinical trial

**Laurent Bouyer:** Using a complex locomotor task to stimulate the corticospinal pathway after SCI

**Catherine Mercier:** Use of robotics and virtual reality to assess and improve upper limbs sensorimotor performance

**Cathy Craven:** Bone health conundrums after SCI

## 12:00-13:15 LUNCH | Atrium

## 13:15-14:00 REHABILITATION, CONTINUED

Lecture Hall

**Jaynie Yang:** Retraining walking in the ReWalk exoskeleton after SCI: functional gains and neuroplasticity

**Krista Best:** Influence of a peer-led smartphone-delivered physical activity program for individuals with SCI.

**Vanessa Noonan:** Understanding the needs and priorities following SCI to inform care and improve quality of life

## 14:00-14:45 CLINICAL SCI

Lecture Hall

**Eve Tsai:** Improving the translation of spinal cord therapies from animals to humans

**Brian Kwon:** Acute SCI: translational considerations

## 14:45-15:15 POSTER PRIZES, CLOSING REMARKS

