

# Standardized Testing Research In Vivo Endeavor (STRIVE)

A pre-clinical screening program for spinal cord injury therapeutics  
“bridging the gap in translation together”.

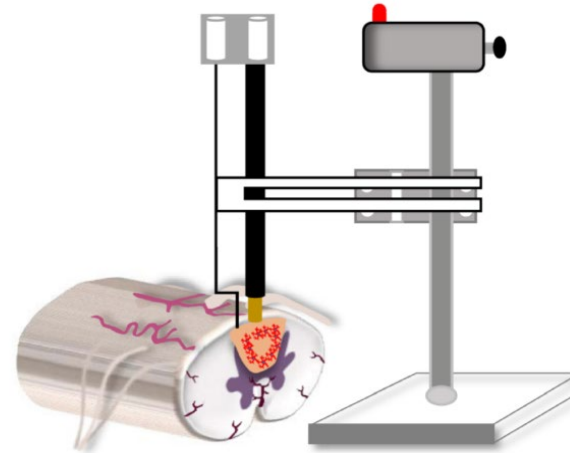


# The Need

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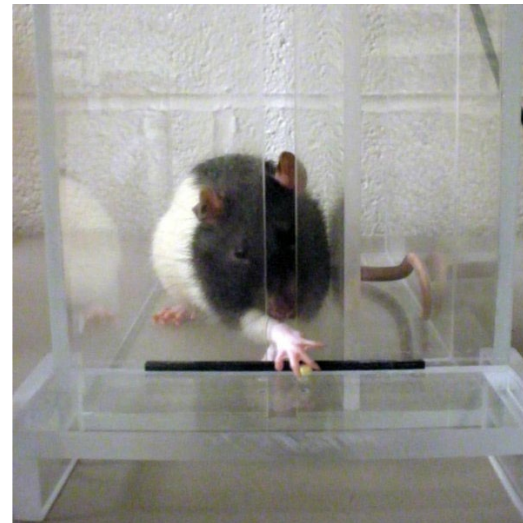
- Investment in SCI
  - Cost of model development and assay evaluation
    - Biotechnology
    - Non-SCI academic labs
    - Academic labs
  - Lack of positive control
  - Even with intended replication, a great deal of variability

# The Opportunity/Objective



## *Initial objective:*

- Identify, train and standardize 1-2 models with key outcome measures
- Publish protocols and reliability
- Fee for service



# SCI Expert Input



Jan Schwab  
OSU



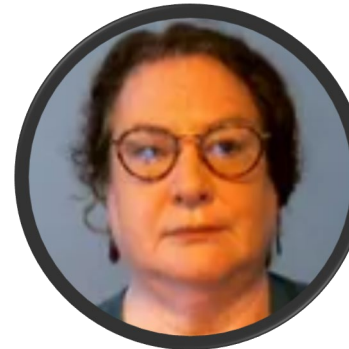
Phil Popovich  
OSU



Dana McTigue  
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Lyn Jakeman  
NINDS



Linda Bambrick  
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Melissa Miller  
DoD



Murray Blackmore  
Marquette University



Liz Bradbury  
Kings College



Lisa McKerracher  
Industry

## Quotes:

“Wild enthusiasm!” “Cool Idea” “Long overdue”  
“Huge need for **chronic** SCI. Almost impossible to run in academic lab”  
“Easier to replicate”  
“Opportunity for combinatorial testing”

## Challenges/Concerns:

- Non- participation
- Disagree on models/ outcomes
- Different goals
- Focus on target engagement first
- Embrace heterogeneity with pre-clinical networks
- Business model

# Pre-clinical Testing Platforms



Epilepsy Therapy Screening Program (ETSP)

Preclinical Screening Platform for Pain (PSPP)



Tuberous sclerosis complex

Private non-profit pre-clinical screening platform

**Include an element of screening and support**

**2/3 use Psychogenics as CRO**

**Biggest challenge is model identification**



# STRIVE Committees

## Expert Committee

Identify and Prioritize models (and assays)



**Megan Detloff, PI**  
Drexel



**Karim Fouad**  
U of Alberta



**Wolf Tetzlaff**  
UBC

Optimize thoracic model  
C5 hemi-contusion

## Steering Committee

Overall Project Oversight



**Naomi Kleitman**  
Craig H. Neilsen  
Foundation



**Lisa McKerracher**  
BioAxone  
BioSciences Inc.



**Dana McTigue**  
OSU



**Dean J. Aguiar**  
TSC Alliance



**Marco Sorani**  
BeiGene

## STRIVE – CROs



- Multiple thoracic SCI contusion models
- Lead surgeon from Miami Project
- Pre-clinical pain screening CRO
- Located in New Jersey
- **Contract Executed in 2023**



- Single thoracic SCI contusion model
- Less experience with SCI
- Located in Finland



- Thoracic contusion model
- Focus on pain
- Located in Israel

# Models and Assays

## Thoracic (T8)

### **Contusion**

170, 200, 250 (+/- dwell) Kdyn

### **Assays**

Basso, Beattie and Bresnahan Locomotor  
Rating Scale

Horizontal ladder

NeuroCube® gait assessment

Von Frey

Hargreaves

Histology

## Cervical (C5)

### **Contusion**

150, 200 Kdyn

### **Assays**

Irvine, Beatties, and Bresnahan Forelimb Recovery  
Scale

Martinez open field locomotion test

Montoya Staircase

Lever pull

Single pellet

Cylinder

Von Frey

Hargreaves

Histology



# Timelines

		2024																															
		January					February					March				April				May				June									
Week of		1/1	1/8	1/15	1/22	1/29	2/5	2/12	2/19	2/26	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24						
Thoracic SCI validation	In Vivo	Equipment acquisition/ Set up					Animal experiments										In vivo Study report																
	Histology													Histology										Final study report									

		2024																														
		April				May				June				July				August				September				October						
Week of		4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28
Cervical SCI validation	Training	Training																														
	In Vivo	Equipment acquisition/ Set up								Animal experiments										In vivo Study report												
	Histology																	Histology				Final study report										

