



V CONGRESO ANUAL DE ICTUS



11 y 12 de junio de 2026

MADRID

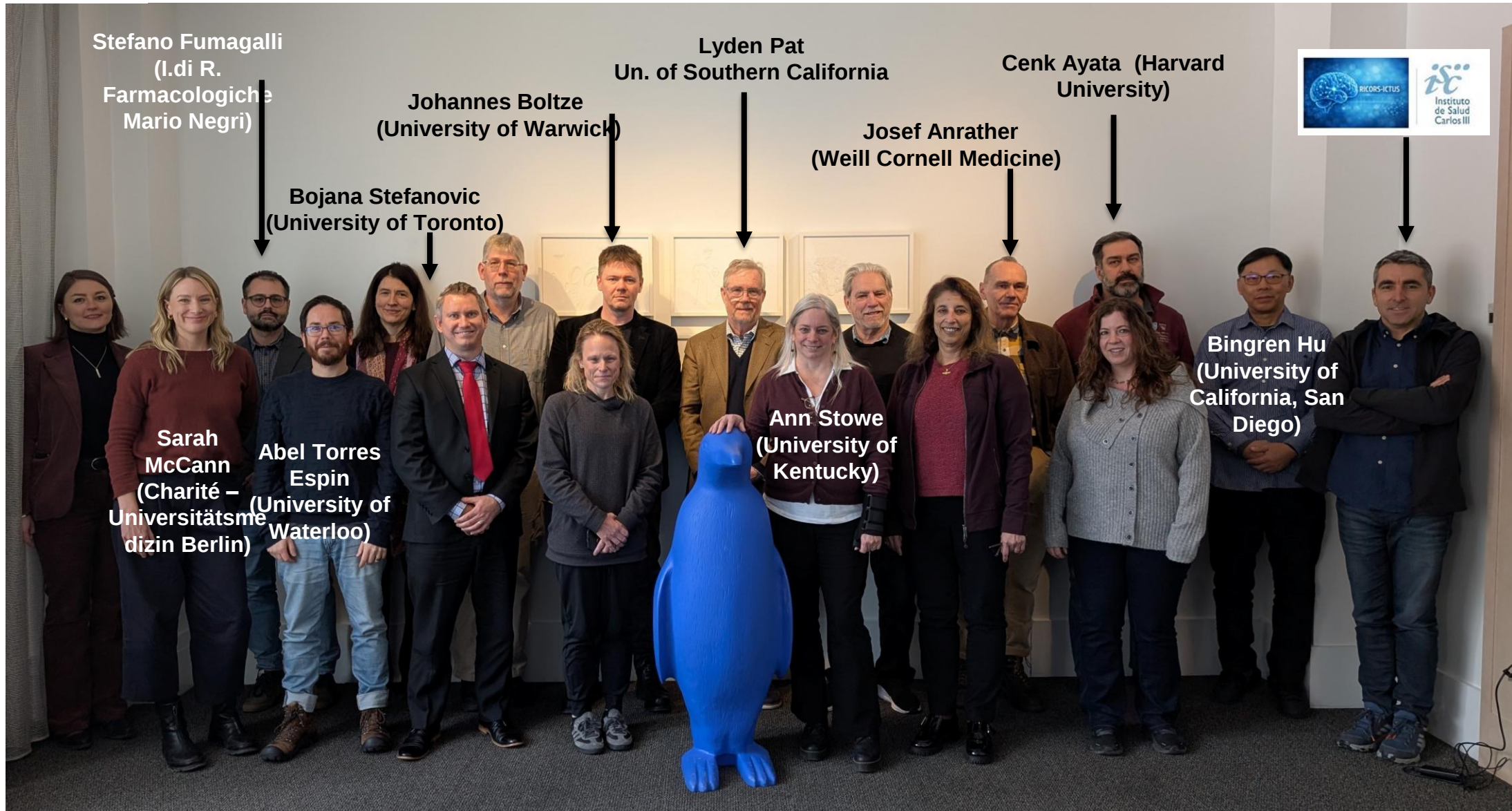
Salón de Actos Ernest Lluch
Instituto de Salud Carlos III



ODC-Stroke Workshop

Lexington, Kentucky, USA

January 30 – February 1, 2026

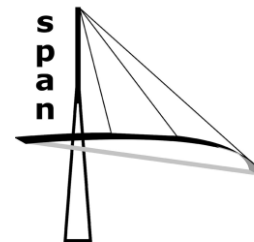
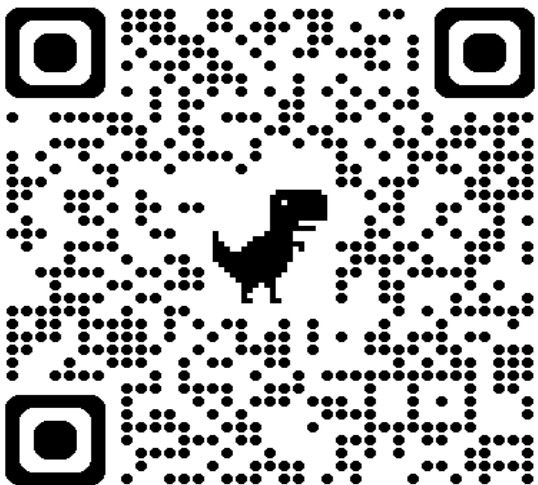




ODC-Stroke

**An Open Data Commons for
the international preclinical
stroke research community**

Sign-up an
volunteer!



What is an ODC for stroke?

Open Data Commons: Un repositorio colaborativo en la nube diseñado para almacenar, compartir y publicar datos **“preclínicos”** de investigación.

Finalidad: Apoyar los principios **FAIR** en la investigación biomédica traslacional **en ictus experimental**.

Existing Open Data Commons:

- Spinal Cord Injury – since 2017 – <https://odc-sci.org/>
- Traumatic Brain Injury – since 2018 – <https://odc-tbi.org/>



• **Localizables (Findable):** los datos y metadatos pueden identificarse de forma única y persistente.

• **Accesibles (Accessible):** los datos pueden ser encontrados y utilizados tanto por personas como por sistemas informáticos.

• **Interoperables (Interoperable):** los datos están estructurados y anotados para permitir su integración con otros conjuntos de datos.

• **Reutilizables (Reusable):** los datos están suficientemente documentados para facilitar su reutilización científica

•

Wilkinson et al, 'The FAIR Guiding Principles scientific data management and stewardship,' Nature Scientific Data, 2016

Generalist repositories



Journals



Domain-specific repositories

Domain-Specific Repositories

Displaying 1 - 1 of 1 results

CLEAR ALL

25 PER PAGE

NAME/DESCRIPTION	ICO	SUBJECT AREA	MODEL SYSTEM	ACCESS TYPE	PROPERTIES	REPOSITORY LINKS
spinal cord injury	All	All	All	All	All	
Open Data Commons for Spinal Cord Injury The Open Data Commons for Spinal Cord Injury (ODC-SCI.org), is a community-based, dedicated data sharing portal and repository for the field of SCI ..More	Common Fund NCATS NHLBI NICHD NIDDK NINDS	Computational biology Neuroscience	human non-human	controlled registered	Open data submission Open timeframe for data deposit NIH funding support Sustained support	DATA ACCESS DATA SUBMISSION

Displaying 1 - 1 of 1 results

PREVIOUS

NEXT

Domain-Specific Repositories

Displaying 1 - 2 of 2 results

CLEAR ALL

25 PER PAGE

NAME/DESCRIPTION	ICO	SUBJECT AREA	MODEL SYSTEM	ACCESS TYPE	PROPERTIES	REPOSITORY LINKS
traumatic brain injury	All	All	All	All	All	
Federal Interagency Traumatic Brain Injury Research (FITBIR) Informatics System The Federal Interagency Traumatic Brain Injury Research (FITBIR) informatics system was developed to share data across the entire TBI research field ..More	CIT NINDS	Clinical research Imaging Neuroscience	human	controlled registered	Open data submission Open timeframe for data deposit NIH funding support Sustained support	DATA ACCESS DATA SUBMISSION
Open Data Commons - Traumatic Brain Injury (ODC-TBI) The Open Data Commons - Traumatic Brain Injury (ODC-TBI) is a dedicated data sharing portal and repository for pre-clinical TBI research. TBI data ..More	NINDS	Neuroscience	non-human	registered	Open data submission Open timeframe for data deposit NIH funding support Sustained support	DATA ACCESS DATA SUBMISSION

Displaying 1 - 2 of 2 results

PREVIOUS

NEXT

What is ODC-Stroke?

Objetivos principales

- Apoyar a la comunidad investigadora en ictus construir una gran base de datos colaborativa.
- Promover el intercambio de datos bajo principios FAIR.
- Crear una infraestructura digital que democratice el acceso a los datos.
- Permitir a los investigadores:
 - Acceder a datos existentes.
 - Compartir sus propios datos.
 - Publicar conjuntos de datos con DOI citable.
- Convertirse en un centro de colaboración científica.
- Facilitar el intercambio de tejidos biológicos entre laboratorios.

Actualmente se centra exclusivamente en **investigación preclínica.**

Why ODC-Stroke?

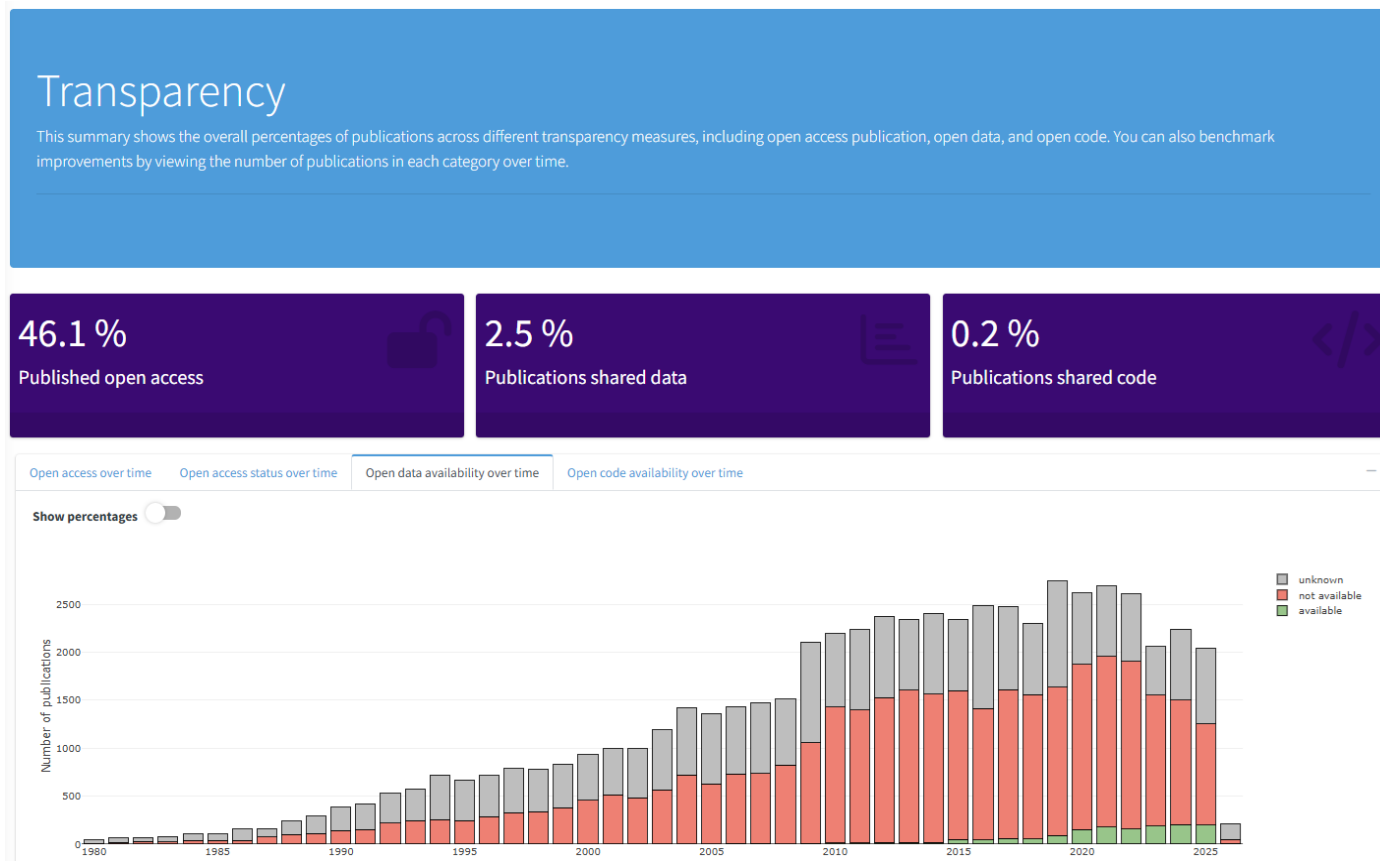
- **Beneficios para los investigadores**
 - Preservar y aumentar el impacto de los datos generados.
 - Incrementar la visibilidad científica.
 - Crear oportunidades de colaboración.
 - Cumplir con requisitos de financiadores y revistas.
- **Beneficios para la comunidad científica**
 - Establecer estándares comunes de datos y metadatos.
 - Facilitar comparaciones entre laboratorios.
 - Impulsar metaanálisis.
 - Permitir análisis a gran escala.

Challenges in stroke research and data sharing

Desafíos actuales en la investigación en ictus

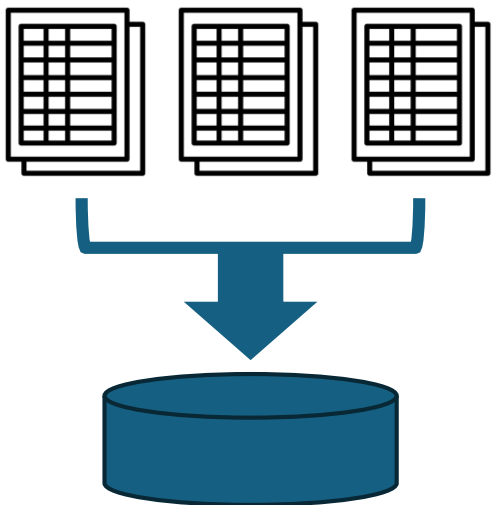
- Más de 59.000 estudios preclínicos identificados.
- Miles de estudios en animales publicados.
- Acceso limitado a los datos originales.
- Dificultades para reproducir resultados.
- Los resultados negativos o inconclusos rara vez se comparten.
- Los datos financiados con fondos públicos suelen utilizarse una sola vez.

DATOS Y ESTUDIOS INFRA-UTILIZADOS!



Stroke-SOLES (Systematic Online Living Evidence Summary;
<https://camarades.shinyapps.io/stroke-soles/>) n = 59,936

ODC-Stroke supports...

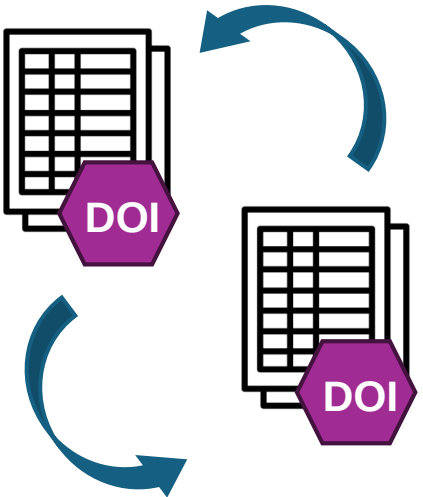


Data collection

- Single laboratory
- Multi-laboratory

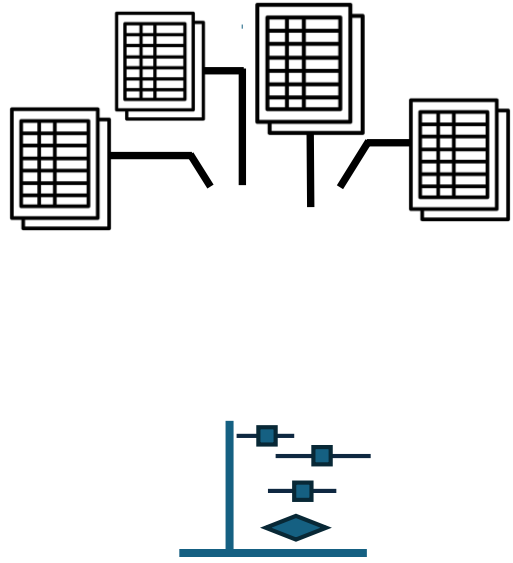
Data analysis

- Mejor gestión de datos.
- Mayor reproducibilidad.
- Conservación de información.



Data sharing

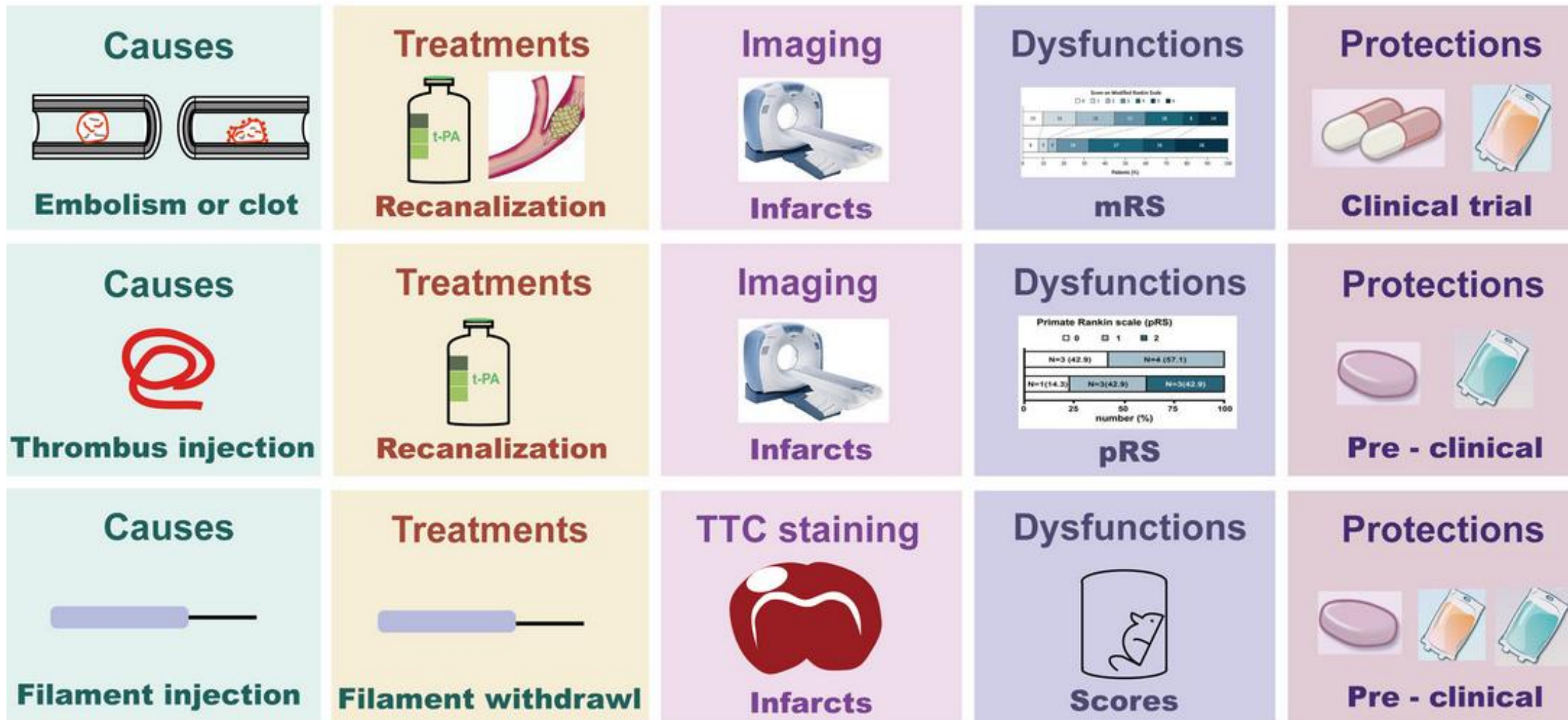
- Colaboraciones entre laboratorios
- Compartición pública de datos.



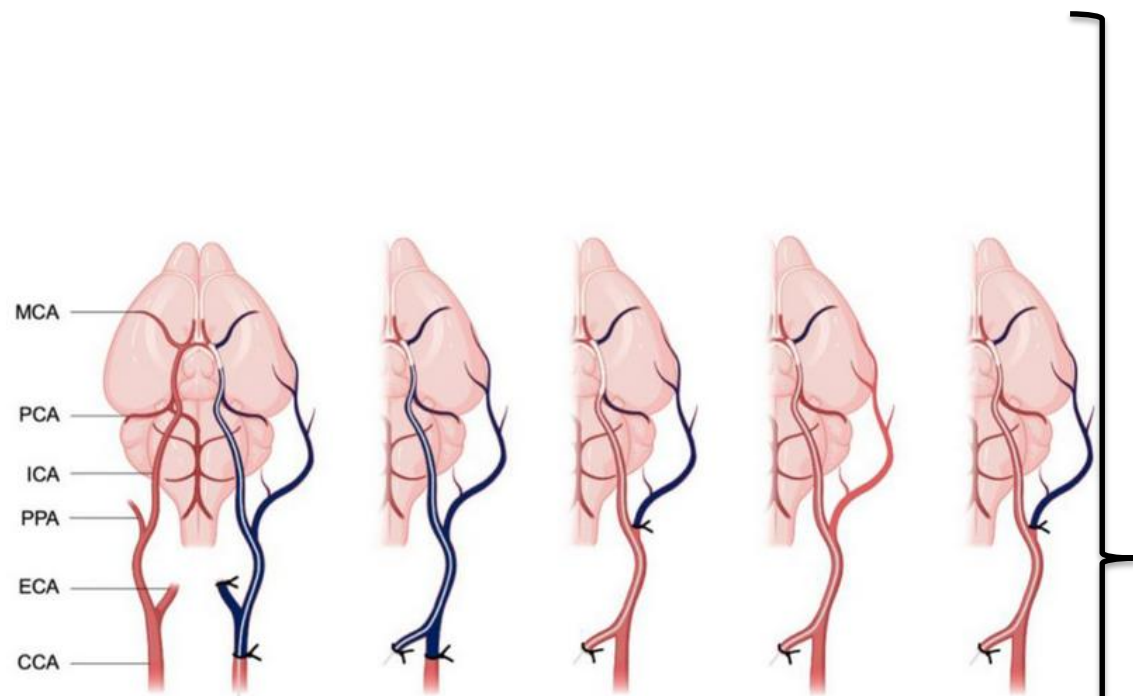
Data synthesis

- Datos curados y revisados.
- Reducción de sesgos

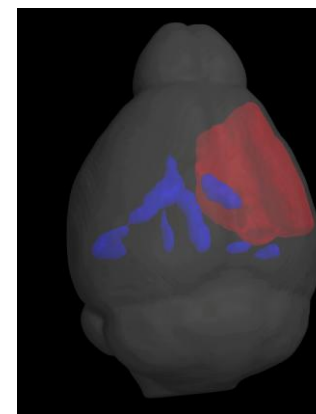
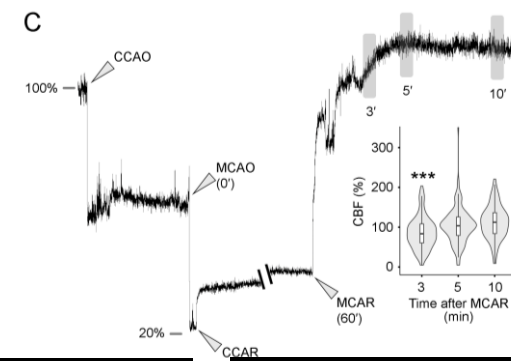
What data are we talking about?



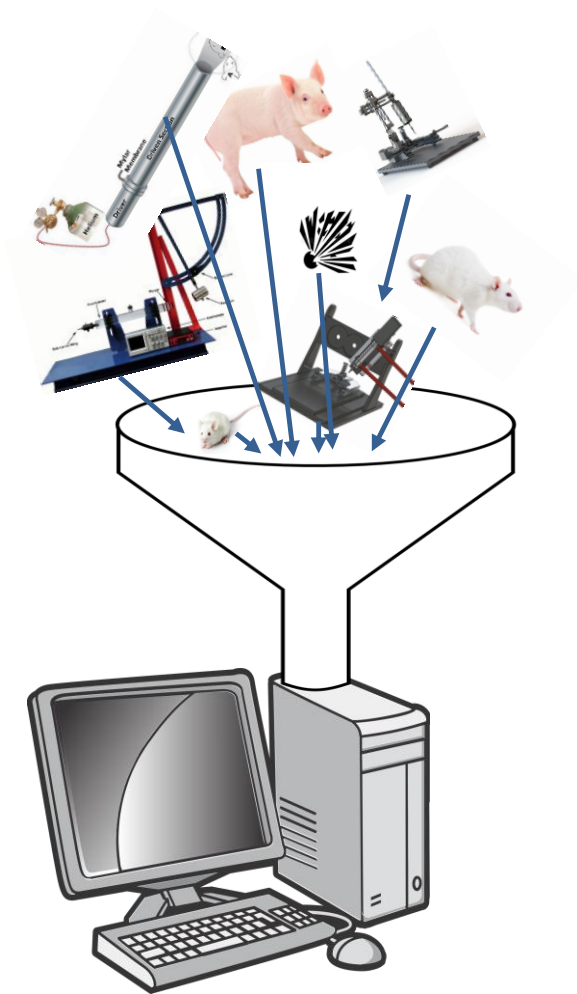
What data are we talking about?



tMCAo

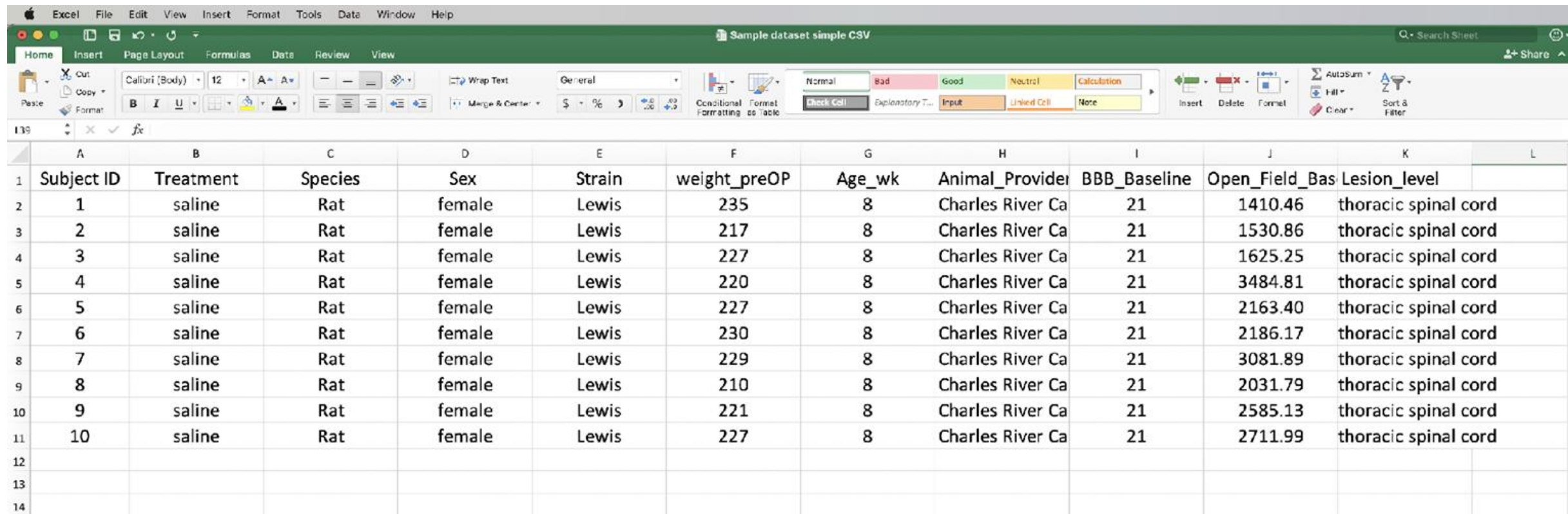


What data are we talking about?



Information needed for reproducibility is often not included in publications

What data are we talking about?



	A	B	C	D	E	F	G	H	I	J	K	L
	Subject ID	Treatment	Species	Sex	Strain	weight_preOP	Age_wk	Animal_Provider	BBB_Baseline	Open_Field_Bas	Lesion_level	
1	1	saline	Rat	female	Lewis	235	8	Charles River Ca	21	1410.46	thoracic spinal cord	
2	2	saline	Rat	female	Lewis	217	8	Charles River Ca	21	1530.86	thoracic spinal cord	
3	3	saline	Rat	female	Lewis	227	8	Charles River Ca	21	1625.25	thoracic spinal cord	
4	4	saline	Rat	female	Lewis	220	8	Charles River Ca	21	3484.81	thoracic spinal cord	
5	5	saline	Rat	female	Lewis	227	8	Charles River Ca	21	2163.40	thoracic spinal cord	
6	6	saline	Rat	female	Lewis	230	8	Charles River Ca	21	2186.17	thoracic spinal cord	
7	7	saline	Rat	female	Lewis	229	8	Charles River Ca	21	3081.89	thoracic spinal cord	
8	8	saline	Rat	female	Lewis	210	8	Charles River Ca	21	2031.79	thoracic spinal cord	
9	9	saline	Rat	female	Lewis	221	8	Charles River Ca	21	2585.13	thoracic spinal cord	
10	10	saline	Rat	female	Lewis	227	8	Charles River Ca	21	2711.99	thoracic spinal cord	
11												
12												
13												
14												

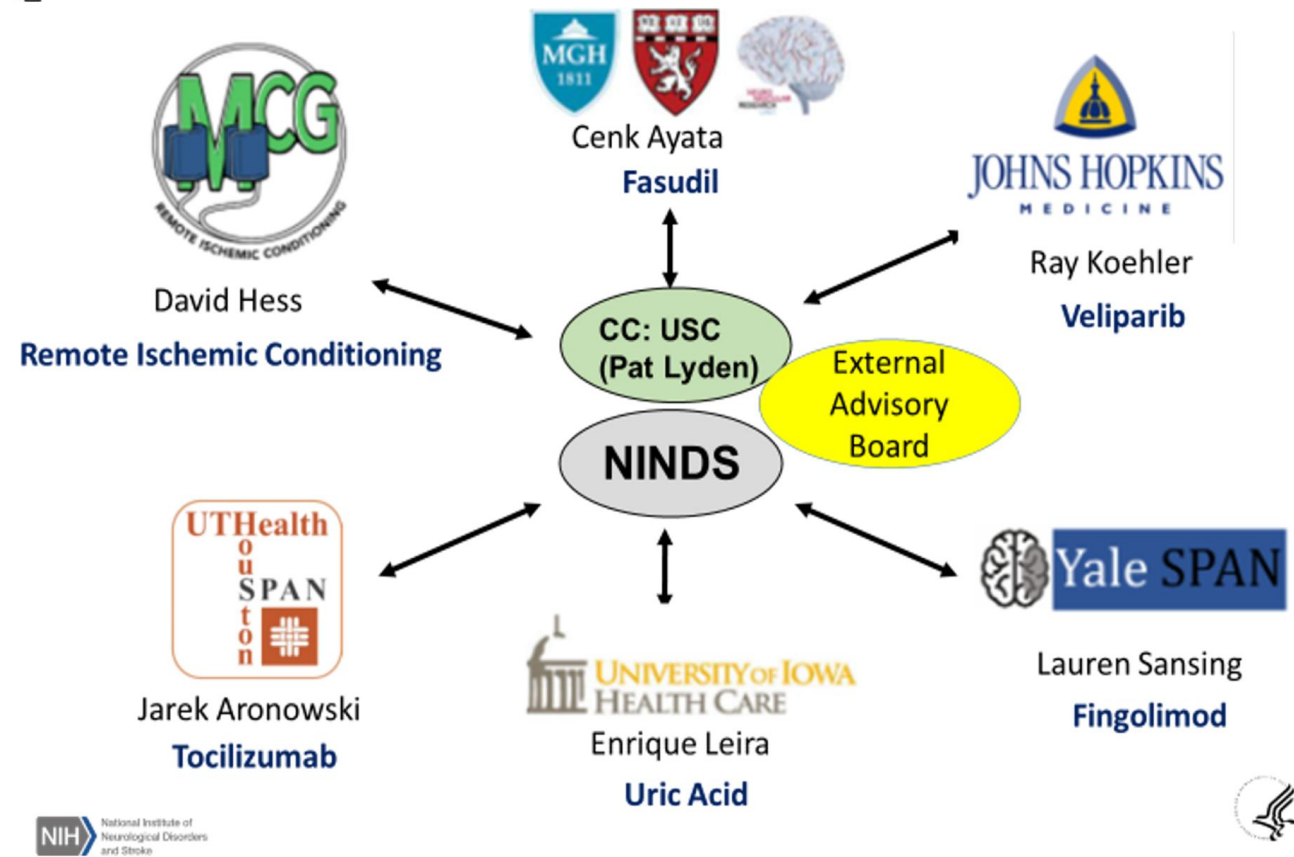
Datos tabulares

- Ómicas
- Conducta
- Variables fisiológicas
- Resultados cuantitativos

Enlaces a otros tipos de datos

- Electrofisiología
- Neuroimagen
- Citometría de flujo
- Otros repositorios especializados

SPAN Infrastructure



REDCap fields per animal:

SPAN 1 Pilot: 575

SPAN 1 Stage 1: 586

SPAN 1 Stage 2: 654

SPAN 1 Stage 3: 570

SPAN 1 Gold Standard: 628

SPAN 1 Stage 4: 725

SPAN 2 Pilot: 790

SPAN 2 : about 652

Tissue Sharing in ODC-Stroke

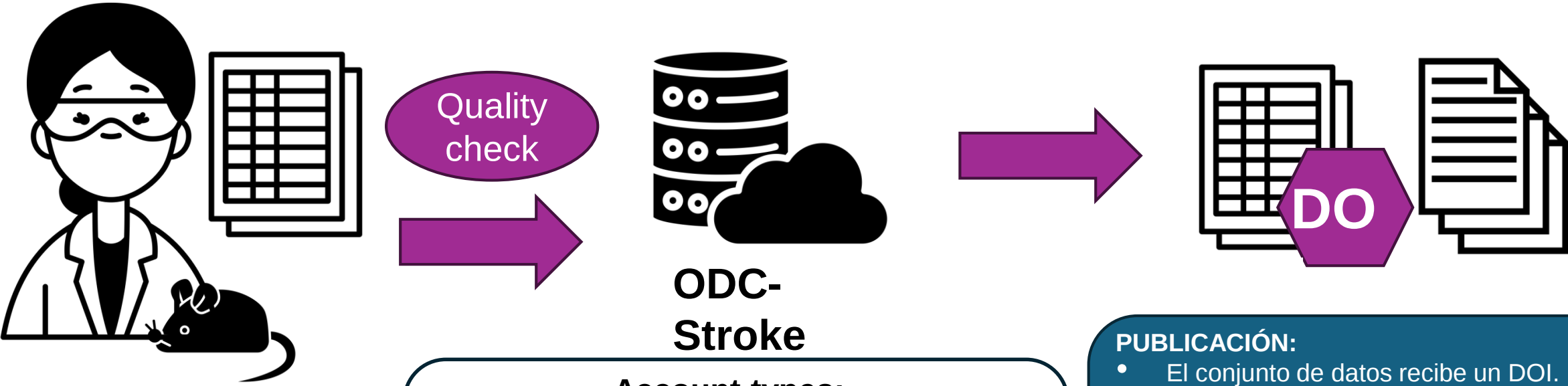


- Can we do this?
- How much value will it add?
- Funding
- Various stroke models
- Co-morbidities models
- Could be great for ECI/trainees



<https://www.labconscious.com/blog/2016/10/12/lab-freezers-and-sustainability>

ODC-Stroke workflow



RECOGIDA DE DATOS
MEDIANTE CDEs
(Common Data Elements)

Account types:

Limited access

↓

Full access

- **No account**
- **Registered user**
- **General member**
- **Lab member**

PUBLICACIÓN:

- El conjunto de datos recibe un DOI.
- Puede citarse como producto científico independiente.

REUTILIZACIÓN:

- Los usuarios reciben atribución cuando sus datos son reutilizados.
- Se fomenta la interoperabilidad y la reutilización.

Common Data Elements (CDEs)

- **Los CDEs son estándares de contenido que permiten:**
 - Recoger datos de manera uniforme.
 - Analizar información de forma comparable.
 - Compartir datos entre laboratorios.
 - Facilitar la integración de estudios.
- **Ventajas**
 - Mejora la calidad de los datos.
 - Facilita la interoperabilidad.
 - Permite combinar estudios independientes.
 - Incrementa la potencia estadística de los análisis.

Website example from ODC-TBI



Open Data Commons for Traumatic Brain Injury



ABOUT ▾

Get help with NIH sharing mandates and our [Sample DMS Plan](#)

Join us Fridays @ 11 AM PDT for office hours to learn how ODC can help with the new NIH Data Management and Sharing Plans

Office Hours



136
Labs



260
Datasets



55
DOIs

HTTP://ODC-SCI.ORG

Welcome to the ODC-TBI

A free community platform to Share Data, Publish Data with a DOI, and get Citations

[Learn more about us](#)

[Explore public data](#)

[Login](#)

Pick the level of free access that works for you



106
Labs



183
Datasets



16
DOIs

Tier 1 - Basic Access

✓ Download public data

[Get Started](#)

Tier 2 - Community Access

✓ Download public data
✓ Access community data

[Get Started](#)

Tier 3 - Full Access

✓ Download public data
✓ Access community data
✓ Share your data
✓ Get a citeable DOI

[Get Started](#)



Tutorials

Learn how to use ODC with our tutorials and guides



Tools and Sandbox

Play with the ODC and use our helping tools



Sample DMS Plan

Sample data management and sharing plan for NIH mandates



By the numbers

A summary interactive dashboard of ODC content and use

HTTP://ODC-TBI.ORG

Chou et al. 2022 *Neurotrauma Reports*

Fran Campos

21

ODC-Stroke – organisational structure

Steering committee



Sarah
McCann
Charite, DE



Ann Stowe
U. Kentucky,
US



Jeff Grethe
U. San Diego,
US



Alex Bannach-
Brown
U. Bern, CH



Monique
Surles-Ziegler
Howard U., US



Pat
Lyden
USC, US



Stefano
Fumagalli
Mario Negri, IT



Cenk
Ayata
MGH, US

ODC-Stroke – dedicated teams

Data team

**Editorial
review
team**

**Publication
team**

**Community
outreach**

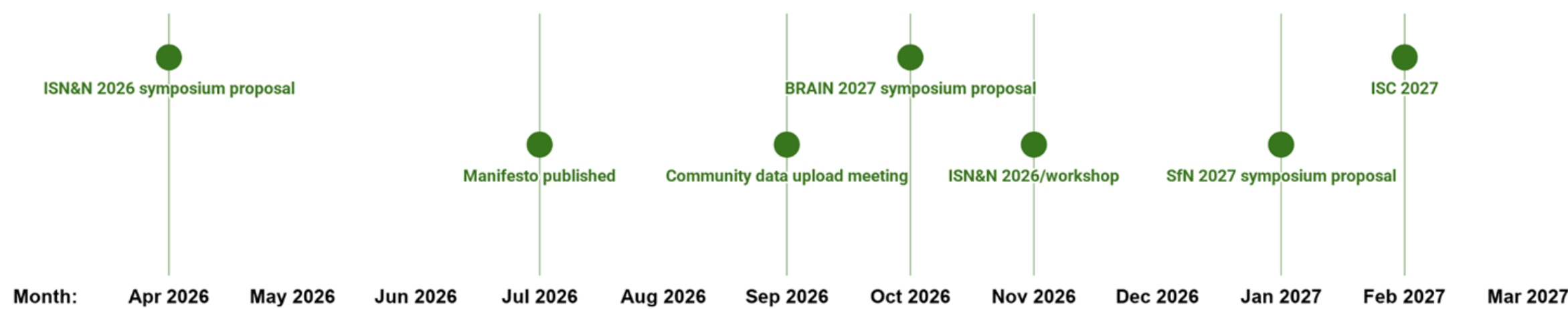
**Community
board**

**Engineering
&
Infrastructu
re**

**Future tissue
sharing team**

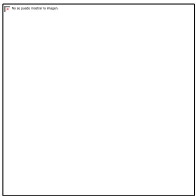
Fran Campos

ODC-Stroke development timeline 2026-27





Limitations



Open Data Commons for Spinal Cord Injury

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[Explore public data](#)

[Login](#)



150
Labs



312
Datasets



66
DOIs

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Tier 1 - Basic Access

✓ Download public data

[Get Started](#)

Tier 2 - Community Access

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✓ Access community data

[Join Community](#)

Tier 3 - Full Access

✓ Download public data
✓ Access community data
✓ Share your data
✓ Get a citeable DOI

[Join Lab](#)



National Institute of
Neurological Disorders
and Stroke



Fran Campos



Data Commons funding “ecosystem”

Visualizing Recovery

Improve clinical translation of basic SCI research findings through the development of a novel integrative toolkit for SCI data-mining and multivariate data visualization. [Funding: Craig H. Neilsen](#)

Data sharing of Prior SCI

Enrich SCI data research with data contributions from the European Union. [Funding: Wings For Life](#)

Harnessing SCI Data

Cross-validate TDA toolkit for SCI in the US and European Union. [Funding: Wings For Life](#)

ODC-SCI Seed Funding (Ferguson, PI)

Establish a secure big-data portal for automated data-curation, data-sharing and user-friendly analytics to accelerate research discoveries and translation in the SCI research community. [Funding: Craig H. Neilsen](#)

Reproducibility of MAP

Develop and test biologically reproducible and translational syndromic patterns between peritraumatic cardiovascular complications in SCI using ML/AI. [Funding: Wings for Life](#)

ODC-SCI.org Public Release and Community Expansion (Fouad, PI)

This project builds on our prior work to build out data-sharing infrastructure for SCI with a production release of the ODC-SCI portal, professional data management operations, engineering support, and dedicated research community engagement. [Funding: Wings for Life/Craig H. Neilsen, Spinal Research \(in-kind\)](#)

CLIMBER

This project combines literature inferences with machine learning-based evidence research to improve reproducibility in SCI research and promote translation. [Funding: Wings for Life](#)

2010 2012 2014 2015 2016 2018 2019 2020 2021 2022 2024 2025 2026 2027

Bioinformatics for Translational SCI Research

This project proposed to build a large database repository of basic spinal cord injury research data to enable multivariate datamining and knowledge discovery with the goal of identifying the best translational metrics for evaluating experimental therapeutics across species. [Funding: NINDS](#)

PDC-SCI

Develop a unified statistical data commons for integrating the full ensemble precision medicine relationships in regeneration and plasticity studies from the California Nonhuman Primate Consortium. [Funding: VA RR&D](#)

TOP-NT

This cooperative agreement focuses on developing new data-driven outcome measures and endpoints for preclinical traumatic brain injury. [Funding: NINDS \(UG3/UH3 + FAIR supp.\)](#)

PANORAUMA

This project brings together data infrastructure efforts in preclinical neurotrauma to enhance stability, sustainability, and reproducibility of data sharing ecosystems to establish a Pan-Neurotrauma Data Commons. [Funding: NINDS \(U24\)](#)

PRECISE-TBI (Floyd, PI)

This interagency center advances common data elements (CDEs) for preclinical TBI and developing a model catalog, community knowledge management in the collaboration with ODC-TBI.org [Funding: VA RR&D \(I50\)](#)



ODC-TBI.org

We will develop a chronic TBI (cTBI) data commons to enable large-scale data-driven discovery and accelerated translation in chronic TBI animal modeling research carried out in the VA and in collaborating sites. [Funding: VA RR&D \(I01\)](#)



PDC-SCI

Continuation of data management and analytical support for the California Nonhuman Primate Consortium. [Funding: VA RR&D \(I01\)](#)

Foundations

Craig H. Neilsen
 Wings for Life
 Multi-funder

Government

NINDS
 VA RR&D

Other support

Neuroscience Information Framework (NIF) (Grethe/Martone)

NIF is a unified discovery environment across diverse biomedical data and resources available through a semantic search and knowledge environment supported by the NIF Ontologies. NIF supports FAIR data projects such as the Open Data Commons, the knowledge management core for the NIH SPARC program, NIH Common Fund Data Ecosystem and the BRAIN initiative. [Funding: NIH Blueprint for Neuroscience](#)

MIASCI/Regenbase (Lemmon/Bixby)

The MIASCI reporting standard was developed at an International meeting in 2012 and later refined with community input from 79 international SCI researchers. The Regenbase project developed an ontology to describe essential concepts and relationships in the SCI domain, serving as a resource for extracting hidden knowledge. [Funding: NICHD\(2012\)/NINDS\(2012-2016\)](#)

TRACK-TBI (Manley)

Develop a high quality multicenter TBI database integrating clinical, imaging, proteomic, genomic, and outcome biomarkers for 3,000 patients enrolled across the spectrum of mild to severe TBI to establish more precise methods for TBI diagnosis and prognosis, improve outcome assessment, and comparative effectiveness. [Funding: NINDS/DOD/DoE](#)

TRACK-SCI (Beattie)

The objective of this proposal is to understand the critical care practices and outcomes for SCI patients and to build a knowledge network for acute SCI incorporating clinical, imaging, and ‘omics data. [Funding: DoD](#)

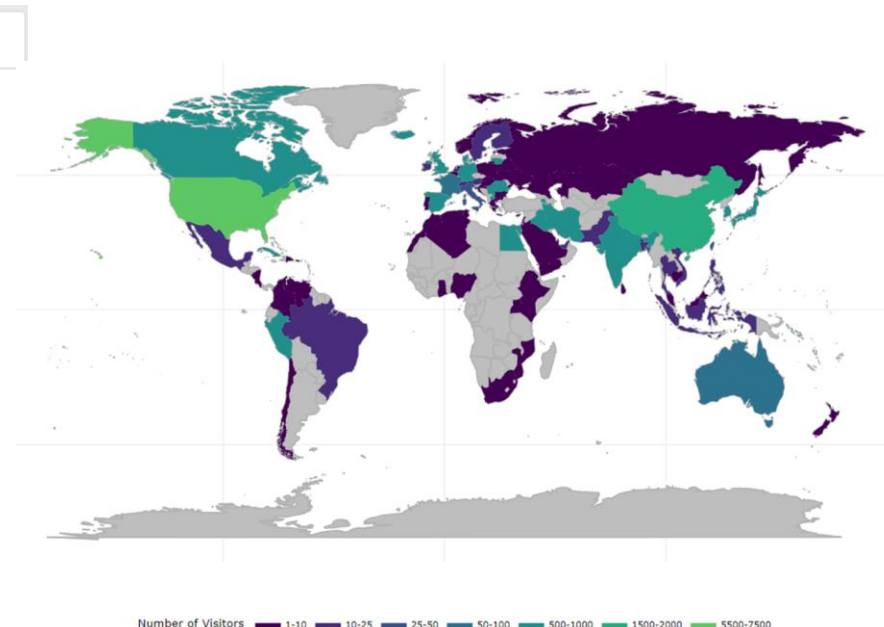
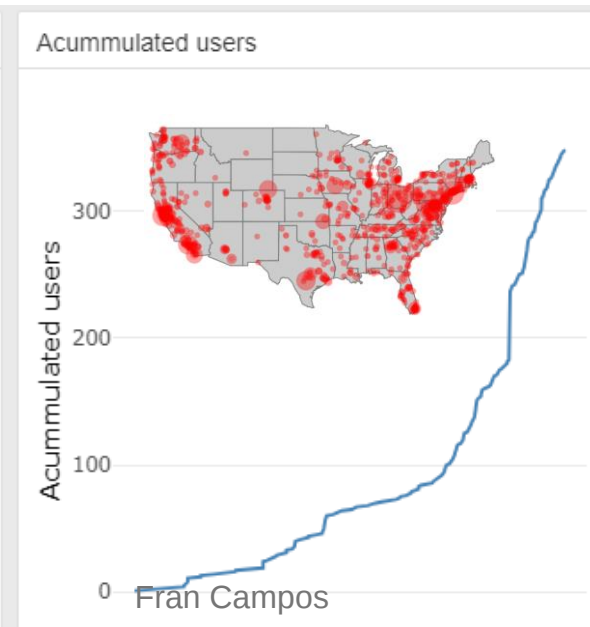
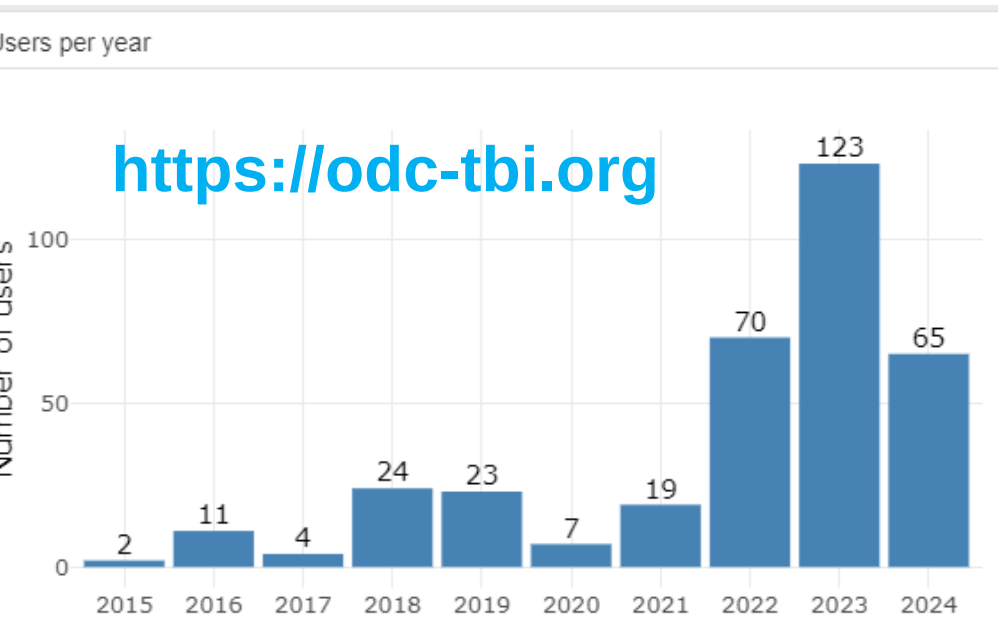
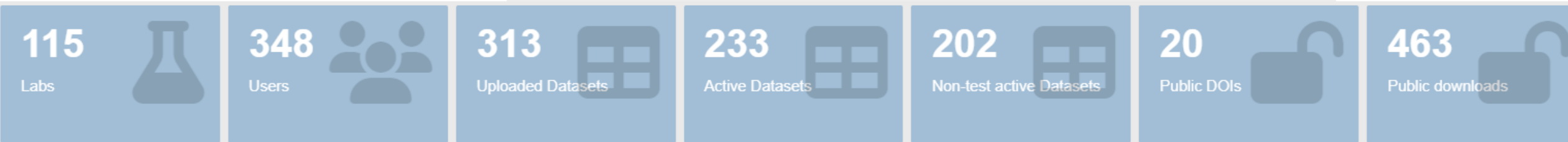
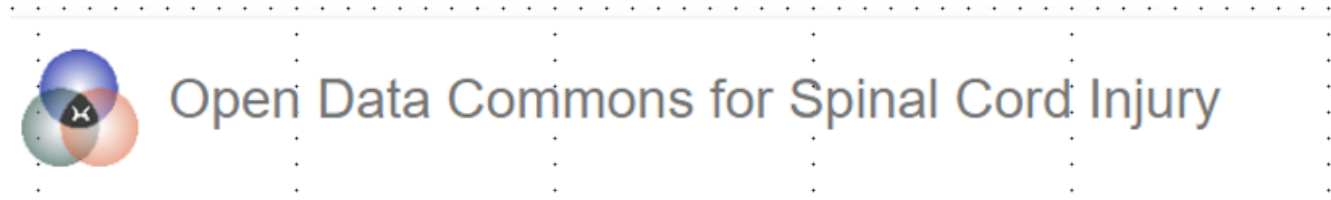
Uno de los conjuntos de datos más importantes asociados a ODC-SCI es **VISION-SCI**, desarrollado por el grupo de Adam Ferguson.

Magnitud del repositorio

- Aproximadamente **60 millones de puntos de datos**.
- Más de **4.000 animales**.
- Información procedente de **13 centros de investigación internacionales**.
- Datos longitudinales de recuperación funcional tras lesión medular.

Importancia

- Machine Learning.
- Modelización predictiva.
- Validación de tratamientos.
- Estudios de reproducibilidad.



What can we reuse (SCI) data for?

Descubrimiento de la relación entre presión arterial y recuperación neurológica

Uno de los trabajos más influyentes derivados de estos datos identificó una asociación entre:

- **Presión arterial media (MAP) durante la cirugía y Recuperación neurológica posterior**
- **El hallazgo surgió mediante análisis retrospectivos y técnicas de aprendizaje automático aplicadas a miles de animales.**

Excavating FAIR Data: the Case of the Multicenter Animal Spinal Cord Injury Study (MASCIS), Blood Pressure, and Neuro-Recovery

[Carlos A. Almeida](#), [Abel Torres-Espin](#), [J. Russell Huie](#), [Dongming Sun](#), [Linda J. Noble-Haeusslein](#), [Wise Young](#), [Michael S. Beattie](#), [Jacqueline C. Bresnahan](#), [Jessica L. Nielson](#) & [Adam R. Ferguson](#)

[Neuroinformatics](#) 20, 39–52 (2022) | [Cite this article](#)

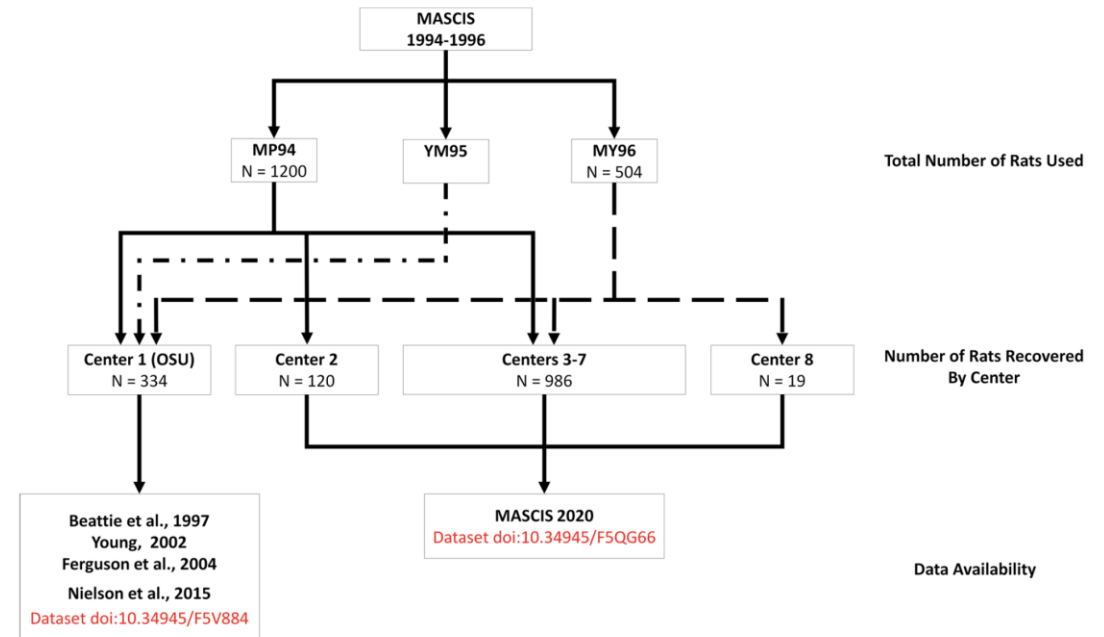


RESEARCH ARTICLE



Topological network analysis of patient similarity for precision management of acute blood pressure in spinal cord injury

Abel Torres-Espin^{1†}, Jenny Haefeli^{1†}, Reza Ehsanian², Dolores Torres¹, Carlos A Almeida¹, J Russell Huie^{1,3}, Austin Chou¹, Dmitriy Morozov⁴, Nicole Sanderson⁵, Benjamin Dirlikov⁶, Catherine G Suen¹, Jessica L Nielson^{7,8}, Nikos Kyritsis¹, Debra D Hemmerle¹, Jason F Talbott⁹, Geoffrey T Manley¹, Sanjay S Dhall¹, William D Whetstone¹⁰, Jacqueline C Bresnahan^{1,3}, Michael S Beattie^{1,3}, Stephen L McKenna^{11,12}, Jonathan Z Pan^{13*}, Adam R Ferguson^{1,3*}, The TRACK-SCI Investigators¹

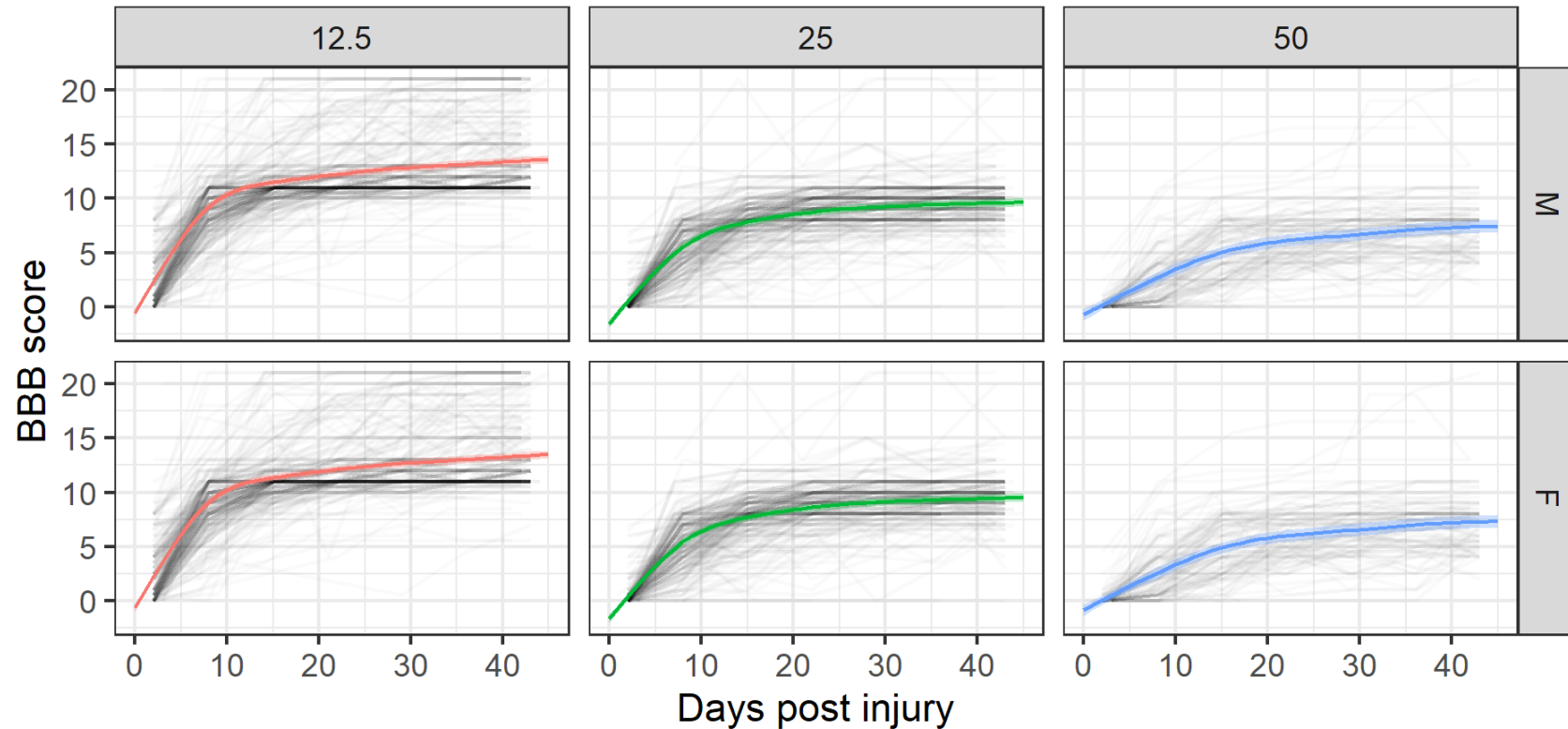


What can we reuse (SCI) data for?

Modelos matemáticos de recuperación funcional

Utilizando cientos de animales y medidas repetidas del BBB Score (escala locomotora de Basso, Beattie y Bresnahan), se desarrollaron modelos capaces de:

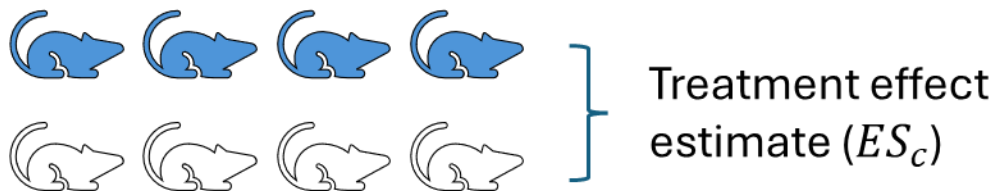
- Describir la recuperación a lo largo del tiempo.
- Predecir trayectorias funcionales.
- Simular experimentos futuros.
- Generar datos sintéticos para planificación experimental.



What can we reuse (SCI) data for?

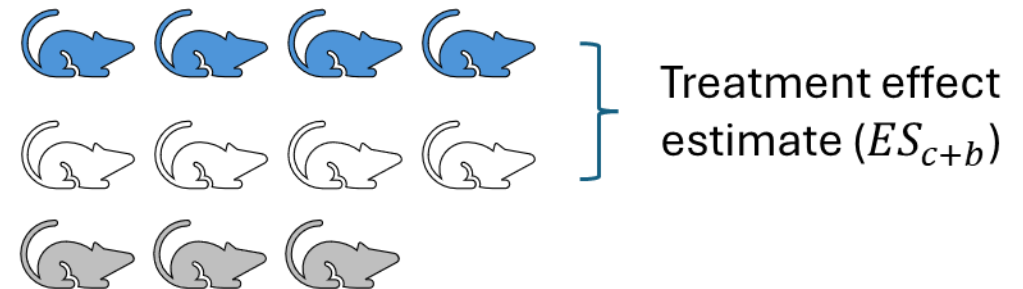
Simulación de ensayos y cálculo de potencia.

Uno de los resultados más relevantes fue demostrar que muchos estudios preclínicos en lesión medular tienen una potencia estadística insuficiente. Los análisis mostraron que: Muchos experimentos tienen menos del 30% de potencia. Existe un elevado riesgo de falsos negativos..



 Concurrent treatment

 Concurrent control



 historical control

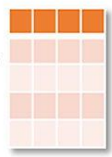
$$\text{Var}(ES_c) > \text{Var}(ES_{c+b})$$

What can we reuse (SCI) data for?

Meta-análisis con datos individuales (IPD Meta-analysis)

Literature-Extracted Data (LED)

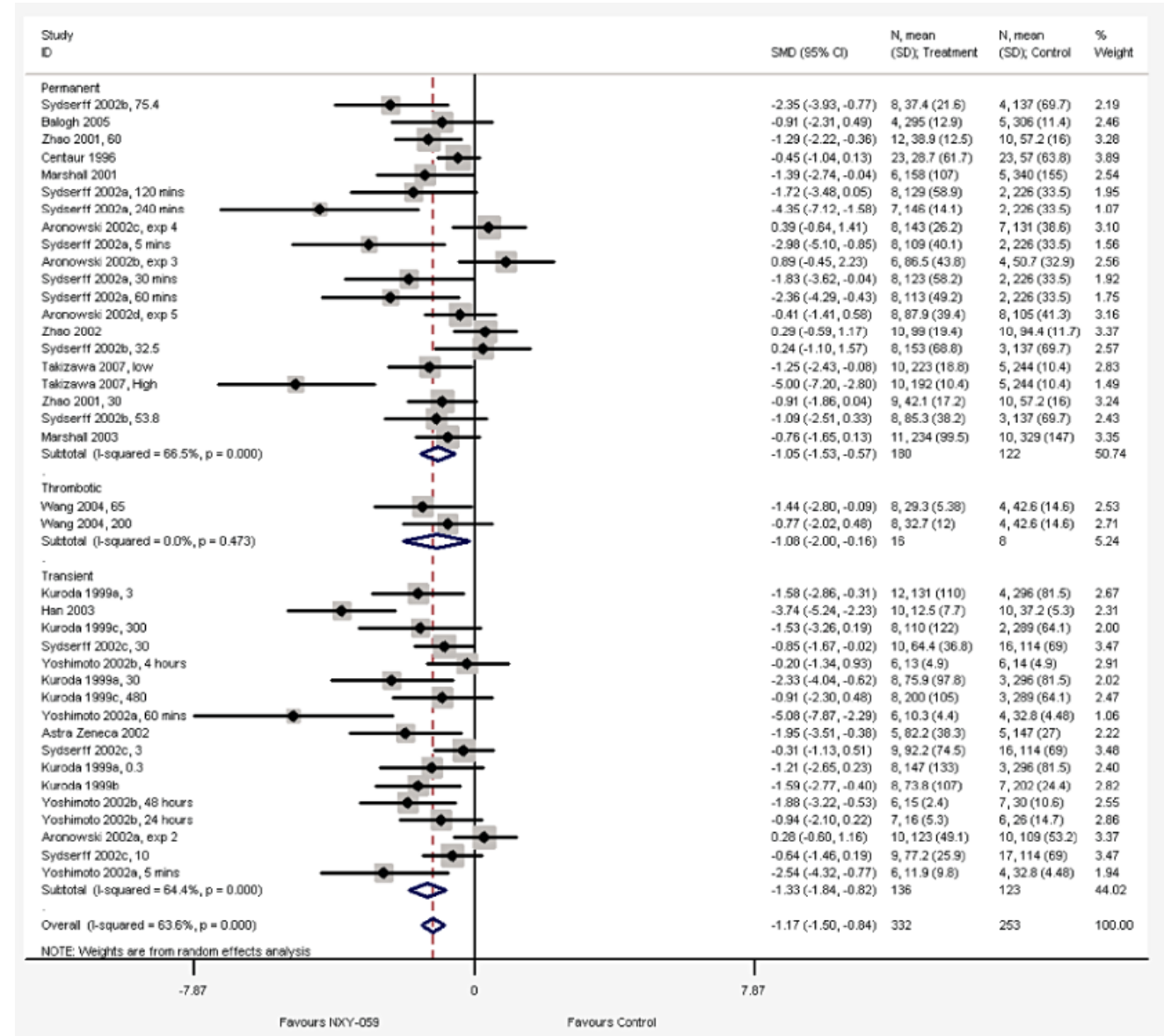
Scientific articles



Individual Animal Data (IAD)



odc-sci.org
Public data repository



Conclusiones

ODC-Stroke busca transformar la investigación preclínica en ictus mediante:

- Ciencia abierta.
- Compartición FAIR de datos.
- Reproducibilidad.
- Colaboración internacional.
- Estandarización mediante CDEs.
- Reconocimiento de los investigadores a través de DOI.

Su visión es crear una comunidad global donde los datos sean un recurso compartido que acelere el descubrimiento científico y la traslación clínica en el ictus. REPOSITORIO PARA DATOS PRECLÍNICOS DE ICTUS



OPEN DATA COMMONS
FOR STROKE



COMPARTIR DATOS • IMPULSAR DESCUBRIMIENTOS • MEJORAR RESULTADOS



COMPARTIR

Deposite y comparte
datos de investigación
sobre ictus



ESTANDARIZAR

Datos FAIR y
armonizados para
facilitar su reutilización



DESCUBRIR

Encuentre y explore
datos para generar
nuevos conocimientos



COLABORAR

Conecte con
investigadores, clínicos
y científicos de datos



MEJORAR

Contribuya a mejorar la
prevención, el tratamiento
y la recuperación del ictus

DATOS ABIERTOS. CIENCIA ABIERTA. UN FUTURO SIN ICTUS.



ODC-Stroke

Sign-up and
volunteer!

