



Doloromics

Innovation at the Neuro-Immune Axis

Series A Fundraising Opportunity

AI engineered monoclonal antibodies

Disease modifying therapeutic focus

Revenue generating large pharma partnerships

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The Doloromics Toolset

Company ready to fully operationalize

Target-Discovery Platform

Largest multiomic atlas of human sensory tissue

Human Tissue Access Access

Partnership(s) secured with network organizations organizations for human tissue sourcing

Bespoke R&D Capabilities

State of the art *ex vivo* human screening systems systems

Large Pharma R&D Collaboration(s)

Collaborations with large pharma for target ID and ID and drug development

Established Pipeline

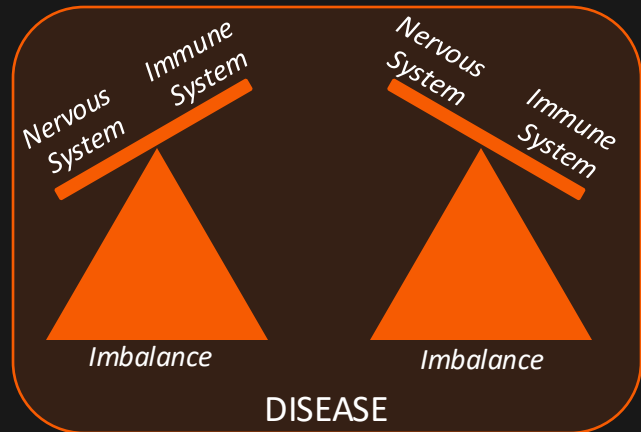
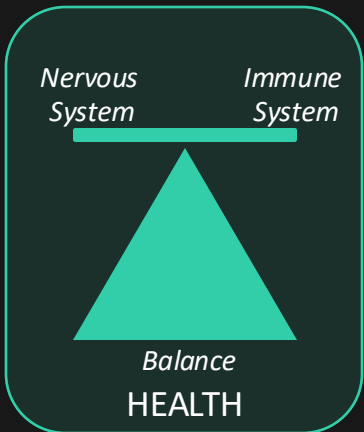
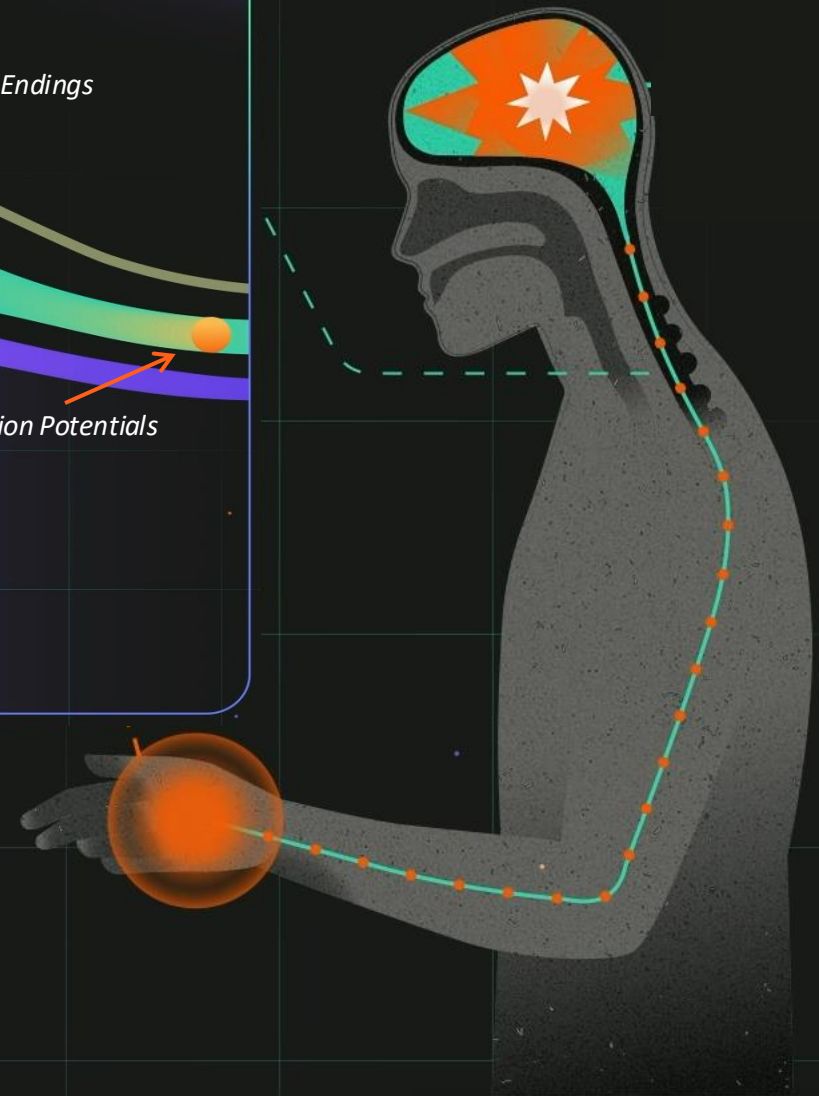
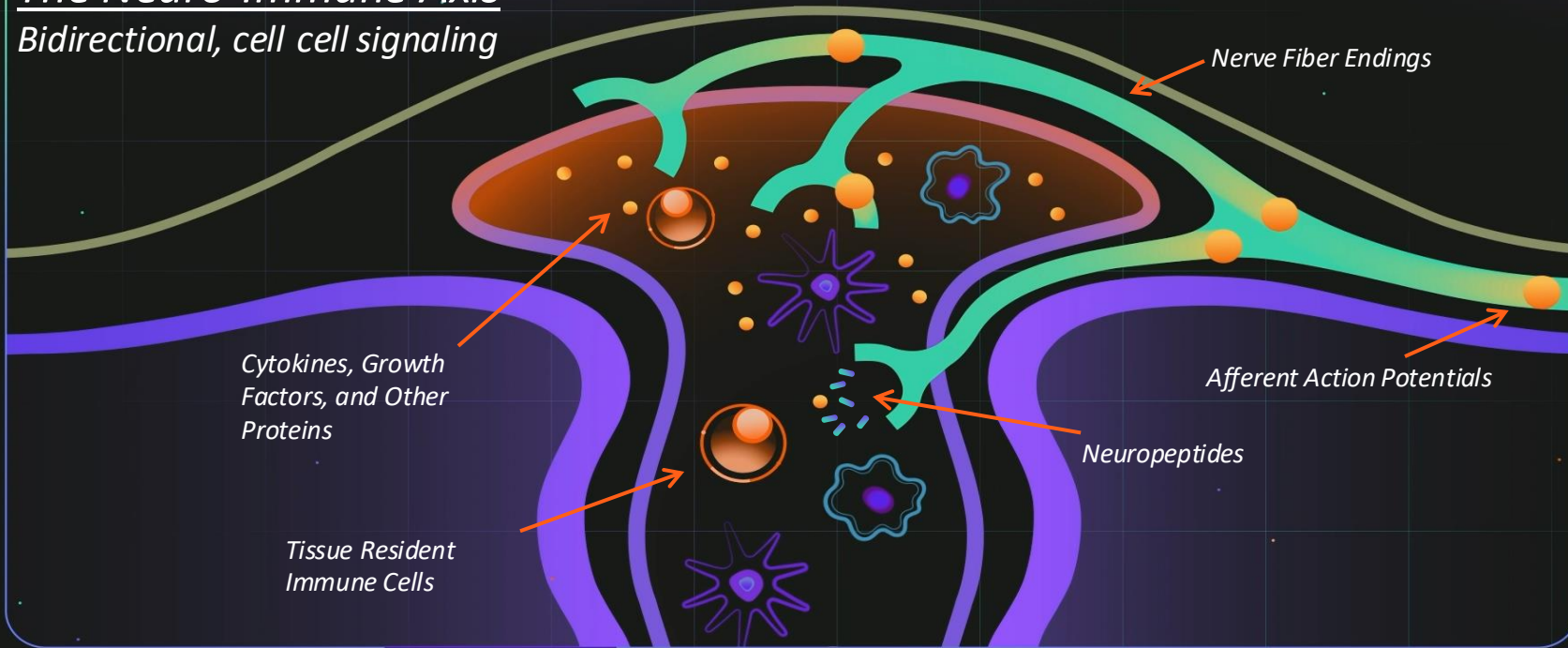
BD and external innovation leveraged to jumpstart validation with internal programs

World-Class Leadership Team

Scientist founded, data driven to deliver cutting edge therapeutics

The Neuro-Immune Axis

Bidirectional, cell cell signaling





Doloromics Drug Discovery and Development

Doloromics



Human Drug
Discovery

Access to human
neuronal tissues



Gene Correlation
Networks

Rodents



Non human
primates



Canines



Lead Optimization in Appropriate
Non-Clinical Species

Doloromics Drug Development



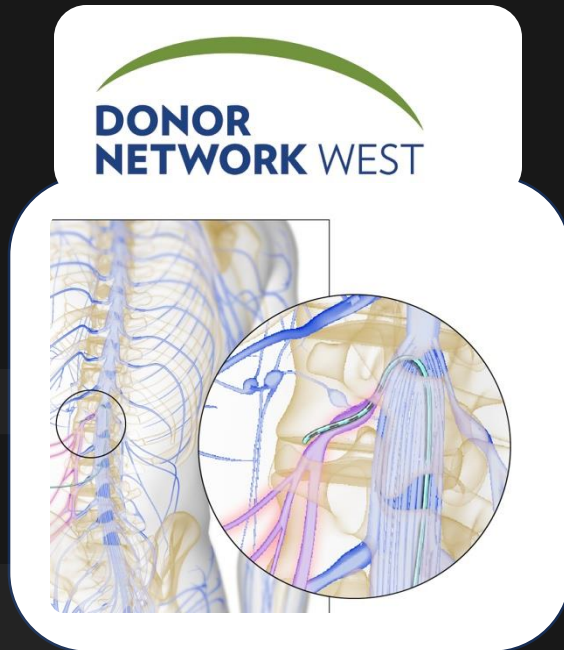
Human Clinical
Testing





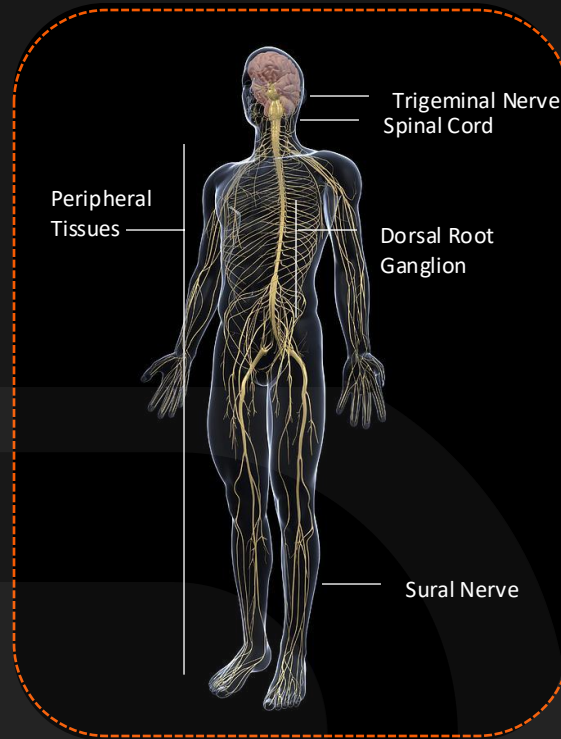
Access to High Quality Human Tissues

Strategic Organ Procurement Organization Partnerships



Tissue Recovery

- Recovery of DRG, SC, sympathetic nerves, and any additional tissue of interest from distinct medical populations with extensive medical histories. Recovered within 3 hours of cross clamp. On site within 6 hours.

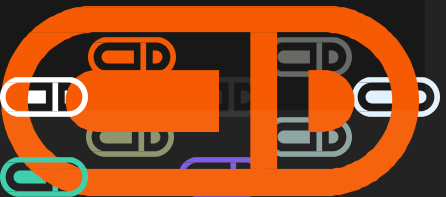


Dissociated and Explant Cultures Onsite: Electrophysiology and Imaging

- Multi well (i.e., MEA or auto patcher) dissociated recordings, or more advanced (i.e., manual patch)
- Single cell LFP needle electrode recordings from within tissue, for development of bespoke patch electrophysiology capabilities
- Process tissue and then allow for ex vivo imaging (i.e., Ca^{2+} imaging) or gene/protein expression studies (i.e., IHC, RNAscope)

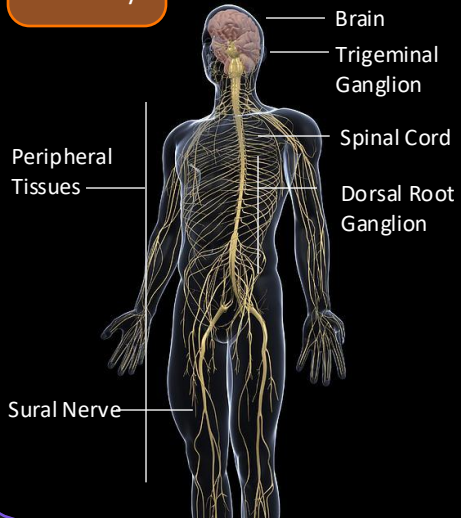


Doloromics



Human-first, algorithmic value creation

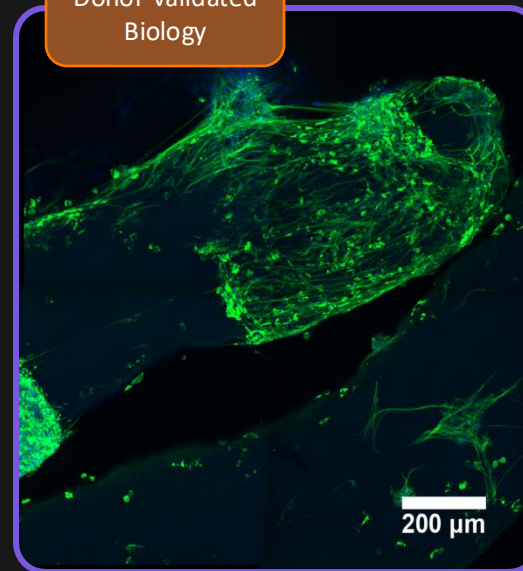
Tissue Recovery



Neuro immune Cartography



Donor validated Biology



In house Drug Discovery



DOLOReS Predicts, and Models Protein-Protein Interactions for Better Drug Discovery

Infer

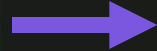
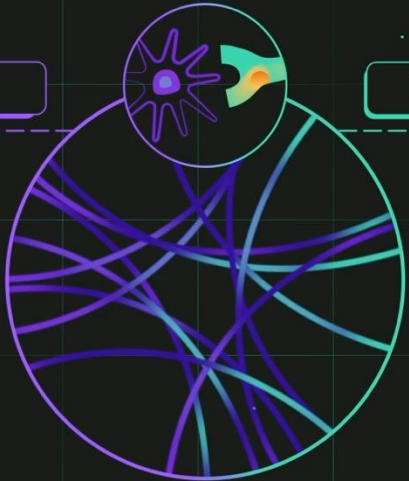
Split

Predict

Transform

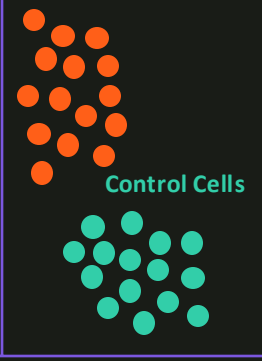
Ligands

Receptors

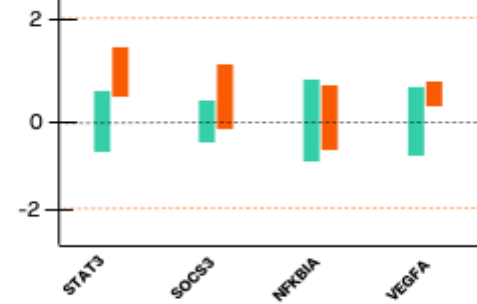


Perturbed Cells

Control Cells



In Silico perturbation
predicting changes in gene expression



Genes \Rightarrow Ranking Factors

Algorithm Ranking Factors

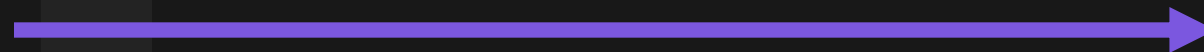
- Reactome & GRN Inference
- Disease Relevancy Datamining
- Gene/Protein Expression

Ranked Output

#1: Oncostatin M

#2: Target B

#3: Target C





Starting in Humans to Treat Humans

Doloromics has developed a proprietary approach of sequencing sensory nervous tissue

Bulk Transcriptomics

Sensory tissue sequenced to ~80-100 million reads

Proteomic Translation

Comprehensive overview of over ~7,000 proteins

SMRT-Seq + Loop-Seq

Comparative long-read transcriptomics of the DRG

miRNA-Seq

Deeply sequenced miRNA from DRG and Sural Nerve

scRNA-Seq

Over 1 million cells sequenced from DRG and SC

Spatial ATAC

Mapping of epigenetic regulation at the cellular level

Neuro-Immune Cartography

