

# Clinical-Biological Imaging and Genetic Repository C-BIGR; An Integrated Approach To Biobanking

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#### INTRODUCTION

#### Accelerating Translational Research on Neurological Diseases:

The Neuro's C-BIG Repository is a collection of biological samples, PBMC clinical information, imaging, and genetic data from patients with serum neurological disease as well as from healthy control subjects. This Plasma platform was created to allow patients to actively participate in DNA advancing our understanding of the diseases affecting them, and make RNA reflects the vision of Dr. Penfield when he founded The Neuro. C-BIG Saliva will empower researchers to develop insights into the biology DNA underlying neurological disease, and facilitate the development of new treatments for patients with neurological diseases.

Data and samples at C-BIG Repository will be made available to Cells research teams with scientifically and ethically valid proposals around Supernatant the world, congruent with Open Science principles.

#### **BIOREPOSITORY**

Our Repository consists of samples from donors suffering from various neurological conditions including but not limited to:

- ✓ Parkinson's Disease (PD)
- ✓ Amyotrophic Lateral Sclerosis (ALS)
- ✓ Multiple Sclerosis (MS)
- ✓ Myopathy
- ✓ Healthy Controls and more

The neuro already has key metrics to make this collection unique:

- SOP driven industry trained expert tissue processing team
- TissueMetrix, LIMS for sample storage, tracking and chain of custody
- Excellence in neuroimaging, Brain Imaging Center (BIC)
- Clinical and Translational research activities (MUHC/ MNI / McGill)
- Patients and Healthy Control Participants

# SAMPLE PROCESSING

- Every sample is processed on the basis of Good Laboratory Practices (GLP) guidelines.
- Detailed Standard Operating Procedures (SOPs) are closely followed.
- The Lot numbers and expiration dates of all materials used during the processing is written down for each sample.
- Detailed notes are taken during the processing.
- Quality Control is a must at our facility.
- Our thorough database (LIMS) assigns a barcode and a number to each vial stored.
- Storage location is automatically generated: The vials are placed in the freezers or liquid nitrogen tank accordingly.
- A sample is never lost or misplaced thanks to our labelling and storage system.



# **SPECIMEN COLLECTED and ISOLATED**

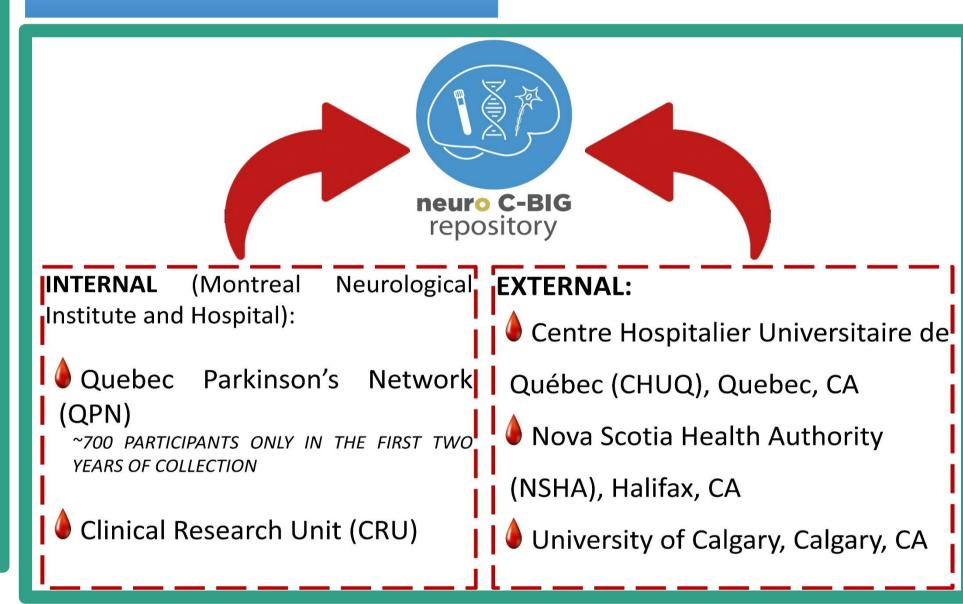
# Whole blood

Cerebrospinal fluid (CSF)

#### Biopsy

- Skin tissue (fibroblasts)
- Muscle tissue

#### **COLLECTION SITES**



#### **PROJECTS**

#### **CURRENT**:

- Collaboration with iPSC group at MNI
- Merck & Co. Pharmaceutical Company
- Takeda Pharmaceutical Company

# **FUTURE:**

- Douglas Mental Health University Institute
- Centre Hospitalier Universitaire (CHU) Ste-Justine
- Canadian Open Parkinson Network (C-OPN)

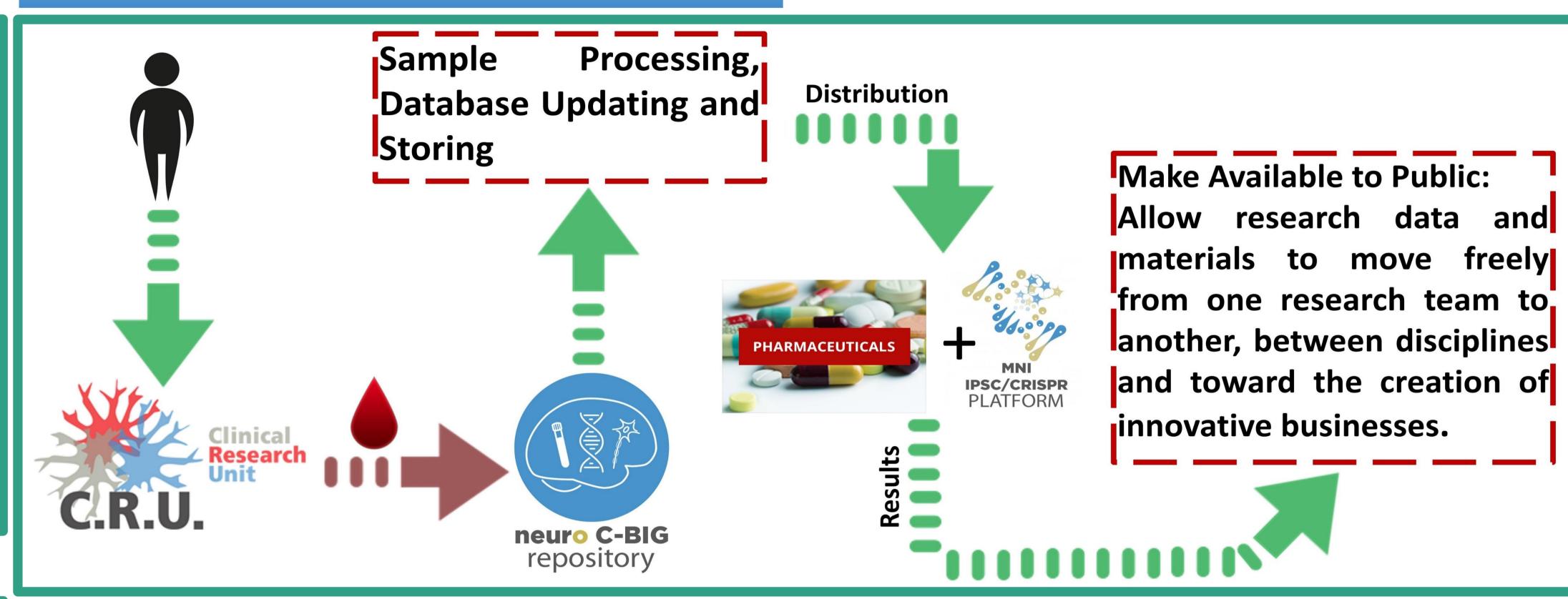
### WANT TO DONATE?

We encourage everyone to join in on our mission of accelerating research on neurodegenerative diseases by participating in our healthy control sample collection. Donate blood and help us on our journey to an Cryostat innovative research approach for better understanding of the human brain diseases.

Send us an email or give us a call for more information:

cbig.mni@mcgill.ca (514) 398-8439 (514) 398-8899

#### **C-BIG IS PART OF OPEN SCIENCE PROGRAM**



# **CORE FACILITY**

C-BIG Repository at the MNI offers fee-for-service PERSONALIZED COLLECTION access to our core facility:

#### **EQUIPMENT:**

- Perkin Elmer Victor 3 Multilabel Reader
- Luminex 100 Multiplex Plate Reader
- Molecular Devices ImageXpress
- NanoDrop Spectrophotometer
- Perkin Elmer EnSpire Multimode Plate Reader
- Cellular Technology Limited ImmunoSpot, The **ELISPOT**
- Z Series Coulter Counter

#### SERVICES:

- Consultation on sample processing
- Training on how to organize your storage facility
- Training on TissueMatrix, database software (LIMS)
- SOP consultation
- Maintenance of equipment offered

# TISSUE TRANSLATIONAL PLATFORM

Under the supervision of Dr. Jason Karamchandani, CBIG now oversees a core facility specialized for Phone: (514) 398-8439 histology related studies.

This recently established facility houses many Monday to Friday: 7:30 -16:00 essential instruments for histological studies and there are many that are to be purchased for the platform such as:

- 2 types of Microtomes
- Embedding Machine
- Tissue Processor Staining station
- Slide Labeler
- Cover-slipping machine
- ♣ And more

For more info visit our website or send us an email at https://mcgill.ca/ttp/

**NEURO TTP**Tissue Translational Platform

ttp.mni@mcgill.ca

# **OTHER SERVICES**

Upon request, you can have your own collection dedicated to only your research group. We will collect, process and store them for you until you need them.

#### MOVE FAST WITH YOUR RESEARCH

Request multiple samples at once, making optimal use of your reagents and kits. Make your experiments time and cost efficient.

# STAY FOCUSED

Don't worry about isolating your material of interest from whole blood, CSF, etc. Tell us what you are looking for and we will isolate it for you.

# STORAGE RENTAL

Give us the information regarding your sample vials, we will give it a barcode and store it for you in one of our backed up freezers or cryo tanks. Our storage facility is continuously monitored even during holidays thus making it possible for us to securely store your precious samples.

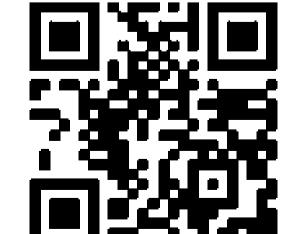
# **CONTACT US**

GIVE US A CALL (514) 398-8899

C-BIG Repository is located at: Montreal Neurological Hospital and Institute, 3801 University Street,

room NWB-140/ NWB-132

Montreal, Quebec, H3A 2B4



Visit our website: https://mcgill.ca/c-bigneuro





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You can find a copy of this poster here: