

# Enhancing the CLSA research platform: Updates on new initiatives, data availability and data access

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McMaster University

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*on behalf of the CLSA Research Team*

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# Overview

- CLSA Research Platform
- Platform enhancements
- Data Availability
- Data Access

# CLSA Leads



**Christina Wolfson**  
**Principal Investigator**  
McGill University



**Parminder Raina**  
**Lead Principal Investigator**  
McMaster University



**Susan Kirkland**  
**Principal Investigator**  
Dalhousie University

# CLSA Leads



**Lauren Griffith**  
**Co-principal**  
**Investigator**  
McMaster University



**Cynthia Balion**  
**Co-principal**  
**Investigator**  
McMaster University

# What is the Canadian Longitudinal Study on Aging (CLSA)?

**A research platform –**  
Infrastructure to enable  
state-of-the-art, interdisciplinary  
population-based **research**  
and **evidenced-based**  
decision-making that will lead  
to better health and quality of  
life for Canadians.



# CLSA Network of Collaborating Institutions



Canadian Longitudinal Study on Aging  
Étude longitudinale canadienne sur le vieillissement



# Terminology

- **Tracking Cohort**

- Target - 20,000 participants from all 10 provinces, followed through Computer-Assisted Telephone Interviews (60 minutes at baseline)
- 21,241 recruited

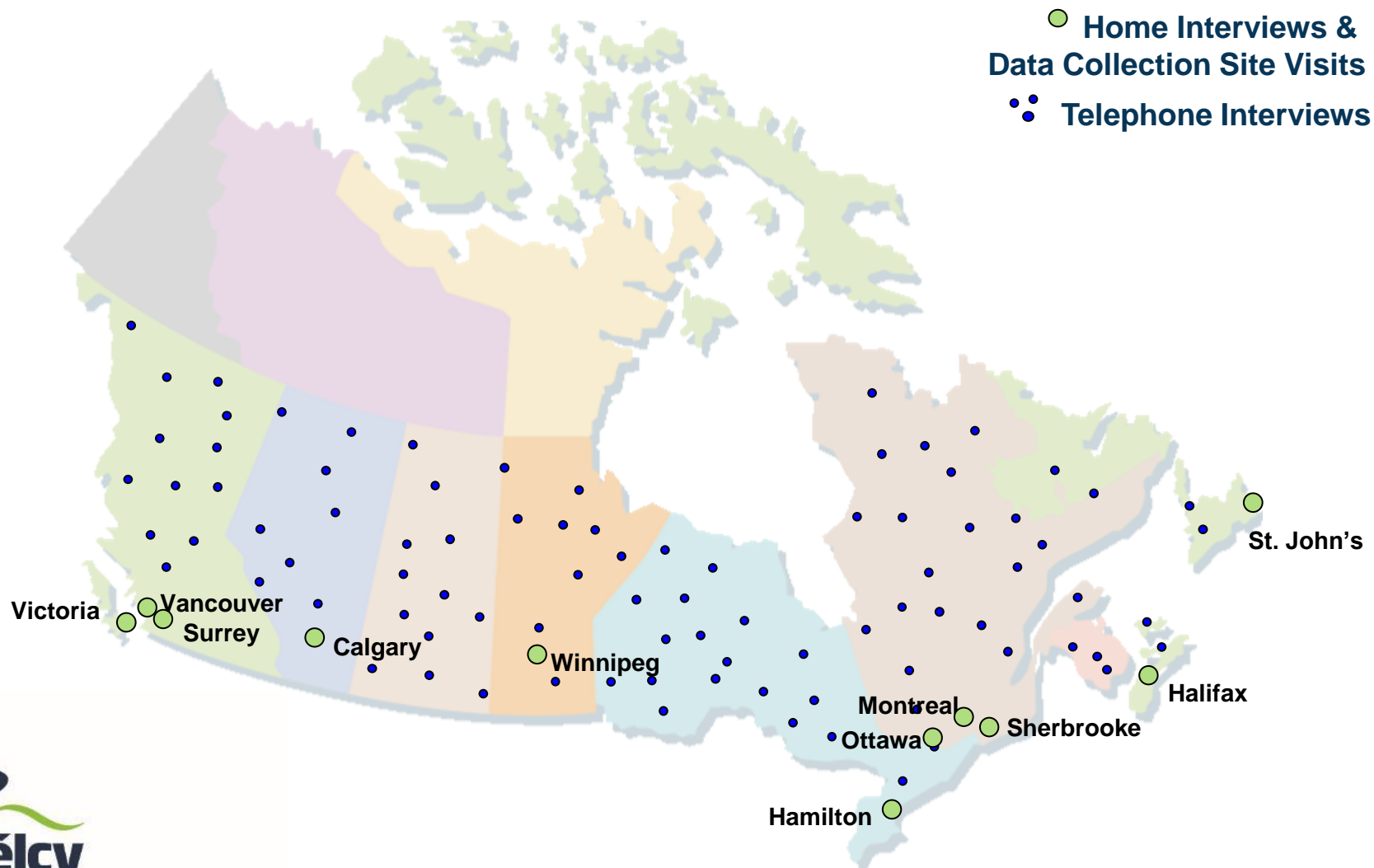
- **Comprehensive Cohort**

- Target - 30,000 participants living within 25 km (or 50 km) of a CLSA Data Collection Site (DCS)
- Followed through in-home interviews (60 minutes) and physical assessments (2-3 hours) at a DCS
- 30,097 recruited

# Exclusion Criteria

- Residents in the three territories
- Persons living on federal First Nations reserves
- Full-time members of the Canadian Armed Forces
- Individuals living in institutions
- Individuals unable to respond in English or French
- Individuals with cognitive impairment

# National Scope



# CLSA Research Platform

50,000 participants aged 45 - 85 at baseline

Target: 20,000  
Actual: 21,241  
Randomly selected within  
provinces

Target: 30,000  
Actual: 30,097  
Randomly selected  
within 25-50 km of 11 sites

Questionnaire  
By telephone (CATI)

Questionnaire  
In person, in home (CAPI)

**2010 - 2015**

**2015**

**2018**

**2021**

Clinical/physical tests  
Blood, urine  
@ Data Collection Site

**2033**

Participants  
aged 45 to 85  
at baseline  
(51,338)

TIME

20 Years

Baseline

FUP-1

FUP-2

FUP-3

FUP-4

FUP-5

FUP-6

Active follow-up (FUP) every 3 years

# Questionnaire-based & passive data collection in CLSA

## HEALTH INFORMATION

- Chronic disease symptoms (disease algorithm), Pain and General Health
- Medication and supplements intake
- Women's health
- Self-reported health service use
- Oral health
- Preventative health (Baseline)
- Mood, psychological distress
- PTSD (Baseline)
- Injuries and consumer products
- Mobility-lifespaces

## LIFESTYLE

- Smoking
- Alcohol consumption
- Physical activity (PASE)
- Nutrition (nutritional risk and food frequency)

## SOCIODEMOGRAPHIC & PSYCHOSOCIAL

- Birth location
- Ethnicity/race/gender
- Marital status
- Education
- Social participation
- Social networks and support
- Caregiving and care receiving
- Coping, adaptation
- Work-to-retirement transitions
- Retirement planning
- Social inequalities
- Elder Abuse (FUP1)
- Adverse Childhood Experiences (FUP1)
- Intimate Partner Violence (FUP2)
- Built environments
- Income, Wealth and Assets

- Administrative data linkage health services & drugs & other administrative databases (Planned)

# Linkage with Contextual and Environmental Data: Collaboration with The Canadian Urban Environment Health Research Consortium (CANUE)

Social & Material  
Deprivation Indices



Can-ALE Data



Weather & Climate



Air Quality



Nighttime Light

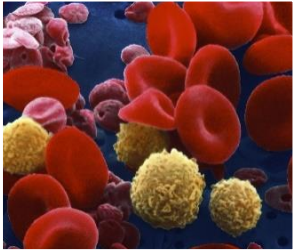


Greenness



# Biomarkers and Omics in the CLSA

## HEMATOLOGY



13 Parameters  
Beckman AcT

Baseline = 24,425  
FUP1 = 22,144

## CHEMISTRY



15<sup>1</sup> Analytes  
Roche Cobas

Baseline = 27,170<sup>2</sup>  
FUP1 = 23,156  
Including hs  
Troponin, NT-  
prBNP, IL6, TN  
Alpha\*

## GENETICS



Genotyping  
820K UK Biobank  
Axiom Array  
Affymetrix  
N1 = 26,884

Whole  
Exome  
Sequencing  
Baseline =  
30,000 (In  
Progress)

Epigenetics  
850K Infinium  
MethylationEPIC  
BeadChip  
Illumina  
N1 = 1,500

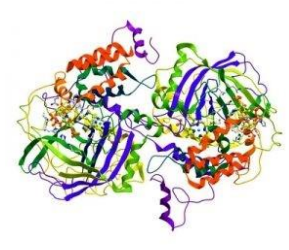
## METABOLOMICS



1000<sup>3</sup> Metabolites  
UHPLC/MS/MS  
Metabolon

Baseline = 10,000  
In progress  
remaining 20,000  
from the baseline,  
FUP1, FUP2 and  
FUP3

## PROTEOMICS



92  
Proteins  
Neurology Panel  
Immunoassay  
Olink

Baseline = 3,000\*

<sup>1</sup> Varies with follow-up  
<sup>2</sup> HbA1c, n = 26,961  
<sup>3</sup> Approximate number  
\* In discussions

# CLSA Data Collection

## Data Collection Site Assessments

### Physical Assessments

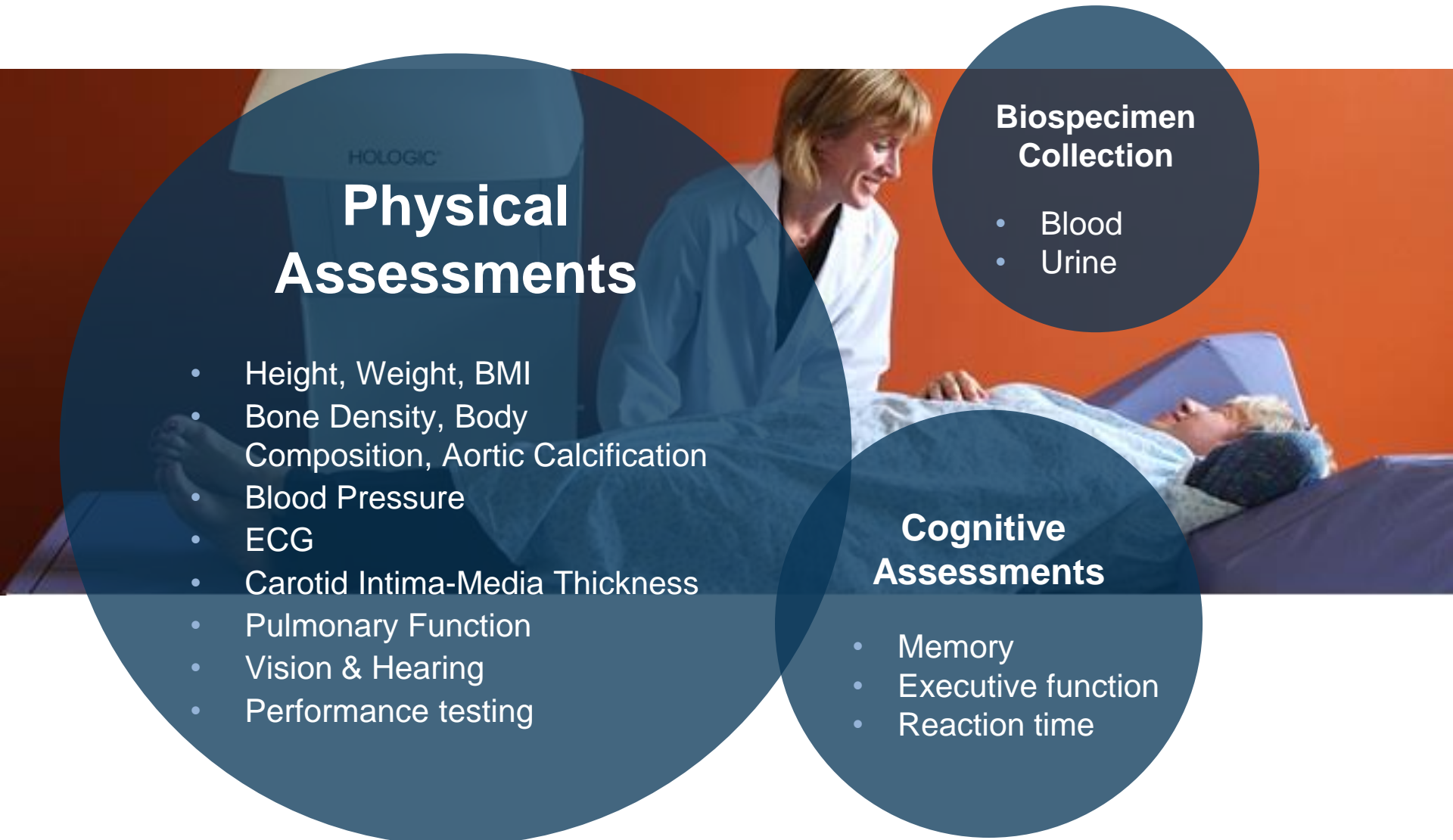
- Height, Weight, BMI
- Bone Density, Body Composition, Aortic Calcification
- Blood Pressure
- ECG
- Carotid Intima-Media Thickness
- Pulmonary Function
- Vision & Hearing
- Performance testing

### Biospecimen Collection

- Blood
- Urine

### Cognitive Assessments

- Memory
- Executive function
- Reaction time



# New FUP3 Measures

## Questionnaires

- Quality of life
- Sleep chronotype
- Nutrition chronotype
- Healthcare utilization
- Sexual health\*
- Family history of disease\*

## Physical Assessments

- Wearables (PA Chronotype)
- Vision contrast sensitivity
- Optoelectronic motion capture
- Olfactory function
- Body Temperature (*Comprehensive*)

## Biomarkers

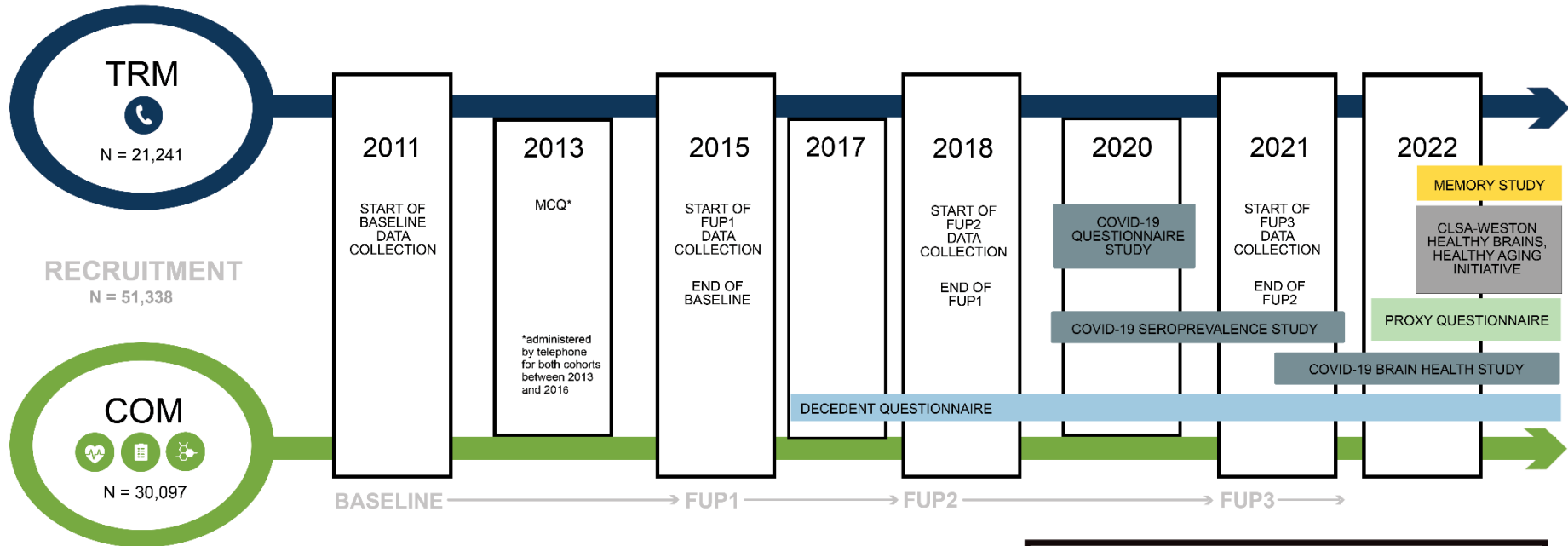
- Proteomics
- Repeat metabolomics
- Repeat core biochemistry
- Urine biomarkers (Clinitek)

## Reintroduction of Measures

- Elder Abuse
- Preventative Health Behaviors

# Platform Enhancements

# CLSA Data Collection



TRM - Tracking Cohort  
 COM - Comprehensive Cohort  
 MCQ - Maintaining Contact Questionnaire  
 FUP1 - Follow-Up 1  
 FUP2 - Follow-Up 2  
 FUP3 - Follow-Up 3

**TRACKING (N = 21 241)**

— Refers to data collected from the Tracking cohort via Computer Assisted Telephone Interviews (CATI)

**COMPREHENSIVE (N = 30 097)**

— Refers to data collected from the Comprehensive cohort via in-home interviews and assessments completed at CLSA Data Collection Sites (DCS)

# CLSA Research Platform



COVID-19  
Questionnaire Study

- April 2020 – Dec 2020
- Web and telephone surveys
- Weekly, biweekly, monthly
- 28,565 participants
- COVID-19 Data Dashboard:  
[clsa-elcv.ca/covid-study-results](https://clsa-elcv.ca/covid-study-results)



COVID-19  
Seroprevalence Study

- October 2020 – July 2021
- 19,334 participants:
  - Dried blood spots samples (self-collection)
  - Venous blood sample collection (Data Collection Sites)



COVID-19 Brain  
Health Study

- Launched Summer 2021
- Impact of COVID-19 on cognition & brain health
- MRI, phone assessment

2010-2015 Baseline

2015-2018 Follow-up 1

2018-2021 Follow-up 2

2021-2024 Follow-up 3



Canadian Longitudinal Study on Aging  
Étude longitudinale canadienne sur le vieillissement

# CLSA-Weston Healthy Brains, Healthy Aging Initiative (HBHA)

- \$12M brain health initiative funded by the Weston Family Foundation
- Comprehensive participants
- HBHA Cohort (N=6,000)
- To advance our understanding of the impact of lifestyle behaviours on successful cognitive aging:
  - Physical activity
  - Sedentary behaviour
  - Sleep



Canadian Longitudinal Study on Aging  
Étude longitudinale canadienne sur le vieillissement



# Healthy Brains, Healthy Aging Neuro Cohort

- HBHA Neuro (N=2,630)
  - Brain MRI
  - Gut microbiome (fecal sample)
  - Cognitive assessment – Cambridge Neuropsychological Test Automated Battery (CANTAB)
    - Match to Sample Visual Search (MTS)
    - Paired Associates Learning (PAL)
    - Rapid Visual Information Processing (RVP)
  - Mobility trackers
  - Sleep trackers

# Healthy Brains, Healthy Aging Microbiome Cohort

- HBHA Microbiome
  - N=6,000 (3,370 + 2,630 HBHA Neuro)
  - Stool sample collection kit
  - At home, returned to Data Collection Site
  - Metagenomics and metabolomics analyses
  - Mobility trackers



# Sleep Trackers

- Sleep quality (e.g., duration, fragmentation, efficiency)
- EEG for sleep architecture
- Muse
- ActiGraph (wrist)
- HBHA Neuro (N=2,630)



# Mobility Trackers

- GPS and triaxial accelerometer devices:
  - TicWatch
  - ActiGraph (thigh)
- Physical activity and sedentary behaviour
- Community mobility (e.g., driving)
- All Comprehensive participants

# Decedent Questionnaire

- Launched in April 2017
- Occurs three months after the participant's death, or after learning the participant is deceased if the exact date is unknown
- A letter is sent to the alternate contact on file
- Decedent interview takes approximately 20 minutes, by phone or web

# Decedent Questionnaire

## Interview Questions

- Details surrounding death (e.g., primary and secondary causes of death)
- Living arrangements prior to death
- Cognitive and physical function at one month before death
- Information about the main caregiver
- Participant's health care preferences and decisions
- Quality of the participant's death and how they died

# Proxy Questionnaire

- Launched in January 2022
- Participants over 70 years of age are asked to designate a proxy decision maker and a proxy information provider
- Proxy decision maker acts on participant's behalf if they are no longer able to make decisions for themselves about their participation (e.g., power of attorney)
- Proxy information provider answers interview questions on a participant's behalf (e.g., a family member, friend or caregiver)
- Participants may change proxy decision maker or proxy information provider

# Proxy Questionnaire

- Proxy information provider answers questions through telephone interviews
- Interviews take place every three years, on the same schedule as the main data collection event (e.g., Follow-up 3, Follow-up 4, etc.)

# CLSA Dementia Ascertainment (Memory) Study



- \$1M study funded through PHAC's Enhanced Dementia Surveillance Program
- Estimate of undiagnosed dementia in Canada by:
  - Developing an algorithm to identify dementia cases using CLSA data
  - Validate CLSA algorithm with clinical diagnosis
  - Linking CLSA data with provincial health-care databases
- Conduct an analysis of known and emerging risk factors associated with dementia
- Determine the feasibility of adding additional measures to enhance the CLSA as a dementia platform

# CLSA Dementia Ascertainment (Memory) Study



## How will the algorithm be developed?

- 600 participants with a range of cognitive ability
- Complete a one-hour medical assessment with a study clinician
  - Medical history and brief cognitive test
  - A neurocognitive examination
- Identify a family member or friend for a 20-minute telephone interview

# CLSA Research Team

Principal Investigators, Site Investigators,  
Working Group Leads, Key Co-investigators

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**UVic:** Scott Hoffer, Theone Paterson, Olave Krigolson

**UBC:** Teresa Liu-Ambrose, Michael Kobor

**SFU:** Andrew Wister, Theodore Cosco

**UCalgary:** David Hogan, Jacqueline McMillan, Eric Smith

**USask:** Megan O'Connell

**UManitoba:** Verena Menec, Philip St. John

**McMaster:** Parminder Raina, Cynthia Balion, Lauren Griffith, Andrew Costa, Guillaume Paré, Laura Anderson, Marla Beauchamp

**UofT:** Andrew Lim

**UWaterloo:** Mary Thompson, Changbao Wu, Mark Oremus, Bill McIlroy, Karen van Ooteghem

**UOttawa/Bruyere:** Vanessa Taler, Patrick Davidson

**McGill:** Christina Wolfson, Brent Richards, Mark Lathrop, Nicole Basta

**USherbrooke:** Benoît Cossette, Isabelle Dionne, Mélanie Levasseur, Karina Lebel

**Dalhousie:** Susan Kirkland

**Memorial:** Gerry Mugford, Zhiwei Gao

**Eindhoven University of Technology:** Edwin van den Heuvel

+ Scientific working group members and co-investigators

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# Data Availability

# Core CLSA Data

	Baseline	FUP1	FUP2
Questionnaire Data	✓	✓	✓
Physical Assessments	✓	✓	Expected Summer 2023
Blood Biomarkers			To be determined
Hematology	✓	✓	
Chemistry	✓	✓	
Genomics	✓	-	-
Epigenetics	✓	-	-
Metabolomics	✓	-	-

# Core CLSA Data – Questionnaire Data

	Baseline	FUP1	FUP2
<b>Questionnaire Data</b>			
Socio-demographics	✓	✓	✓
Lifestyle & Behaviour	✓	✓	✓
Labour Force	✓	✓	✓
Physical Health	✓	✓	✓
Psychological Health	✓	✓	✓
Social Health	✓	✓	✓
Medications	✓	March 2023	To be determined
Cognition	✓	✓	Expected summer 2023

## NEW at FUP2

- Weight perception
- Resiliency scale
- Aortic Valve Stenosis

- Generalized Anxiety Disorder
- Positive Mental Health
- Intimate Partner Violence



# Questionnaire Data

## Cognition

### Cognition Measures

- Full Cognitive Battery\*:
  - Miami Prospective Memory Test (event- & time-based)
  - Stroop – Victoria Version
  - Controlled Oral Word Association Test
  - Choice Reaction Time
  - Meta Memory
  - Subjective Cognitive Decline
- Cognitive Norms

- Baseline & FUP1
- Baseline only
- FUP1 only



\*Includes Rey, Mental Alternation, Animal Fluency Tests, Meta Memory

# Physical Assessments

## Baseline & Follow-up 1



- Contraindications
- Weight and Height
- Body Mass Index
- Hip and Waist
- 4-Metre Walk
- Timed Get Up and Go
- Standing Balance
- Chair Rise: Balance and Coordination
- Grip Strength
- Pulse Rate and Blood Pressure
- Body Composition
- Basic Activities of Daily Living
- Instrumental Activities of Daily Living
- Functional Status
- Life Space Index
- Spirometry
- Hearing
- Visual Acuity
- Tonometry
- Electrocardiogram
- Carotid Intima Media Thickness
- Bone Density by DEXA:
  - Dual Hip
  - Forearm
  - Whole Body

Physical assessment data from Follow-up 2 are not yet available



# Core Biomarkers: Baseline & FUP1

	Category	N*	Biomarkers
Baseline & FUP1	<b>HEMATOLOGY</b> Data Collection Sites (DCS)	25,427	<ul style="list-style-type: none"><li>Erythrocytes</li><li>Granulocytes</li><li>Hematocrit</li><li>Hemoglobin</li><li>Lymphocytes</li><li>Platelets</li><li>MCV</li><li>MCH</li><li>MCHC</li><li>MPV</li><li>RBC</li><li>RDW</li></ul>
	<b>CHEMISTRY</b> Calgary Laboratory Services (CLS) (Analysis repeated every 3 years)	27,012	<ul style="list-style-type: none"><li>Albumin</li><li>Alanine aminotransferase (ALT)</li><li>C-reactive protein (CRP)</li><li>Creatinine</li><li>Cholesterol</li><li>Ferritin</li><li>Free T4</li><li>Hemoglobin A1c (n = 26,961)</li><li>HDL</li><li>LDL</li><li>Non-HDL</li><li>Triglycerides</li><li>25-Hydroxyvitamin D</li><li>eGFR</li><li>Thyroid stimulating hormone (TSH)</li></ul>
FUP1	<b>CHEMISTRY</b>	~22,900	<ul style="list-style-type: none"><li>High-Sensitivity Troponin T (hsTnT)</li><li>NT-proBNP</li></ul>
Baseline only	<b>CHEMISTRY</b>	~9,500	<ul style="list-style-type: none"><li>IL-6</li><li>TNF-alpha</li></ul>
	<b>GENETICS</b> Genetic and Epigenetic Centre (GEC)	26,622	<ul style="list-style-type: none"><li>Genotypes (Affymetrix Axiom array, 794k SNPs)</li><li>Imputation (Haplotype Reference Consortium release 1.1, 39.2M SNPs)</li></ul>
	<b>EPIGENETICS</b> Epigenetic Centre (EC)	1,479	<ul style="list-style-type: none"><li>DNA methylation</li><li>DNA extracted from PBMCs</li><li>850K Infinium MethylationEPIC BeadChip (Illumina)</li></ul>
	<b>METABOLOMICS</b> Metabolon	~9,500	<ul style="list-style-type: none"><li>LC-MS/MS systems</li><li>~1,300 metabolites</li></ul>

\*N represents Baseline only. Biomarkers from Follow-up 2 are not yet available.

# Linked Data

	Baseline	FUP1	FUP2
<b>Environmental Indicators</b> (CANUE & Health Canada datasets)	✓	✓	To be determined

Social & Material  
Deprivation Indices



Greenness



Can-ALE Data



Weather &  
Climate



Air Quality



Noise



Nighttime Light



Access to  
Employment



# Images & Raw Data

	Baseline	FUP1	FUP2
Images and raw data (cIMT, DXA, ECG, Retinal scans, Spirometry, Tonometry, Raw cognition)	✓	✓	To be determined

- To request these data: you need to provide detailed justification explaining how these data will help to achieve proposed objectives and describe how they will be analyzed
- You need to have the experience and resources to work with these types of data
- The request for images and raw data usually incurs additional costs beyond the current data access fee
- It may take longer to receive these data

# COVID-19 Data



## COVID-19 Questionnaire Study

Collected longitudinal data from  
April 2020 to December 2020.  
(N = 28,565)



## COVID-19 Seroprevalence Study

Collected blood samples and  
questionnaire data from  
October 2020 to July 2021  
(N = 19,334)

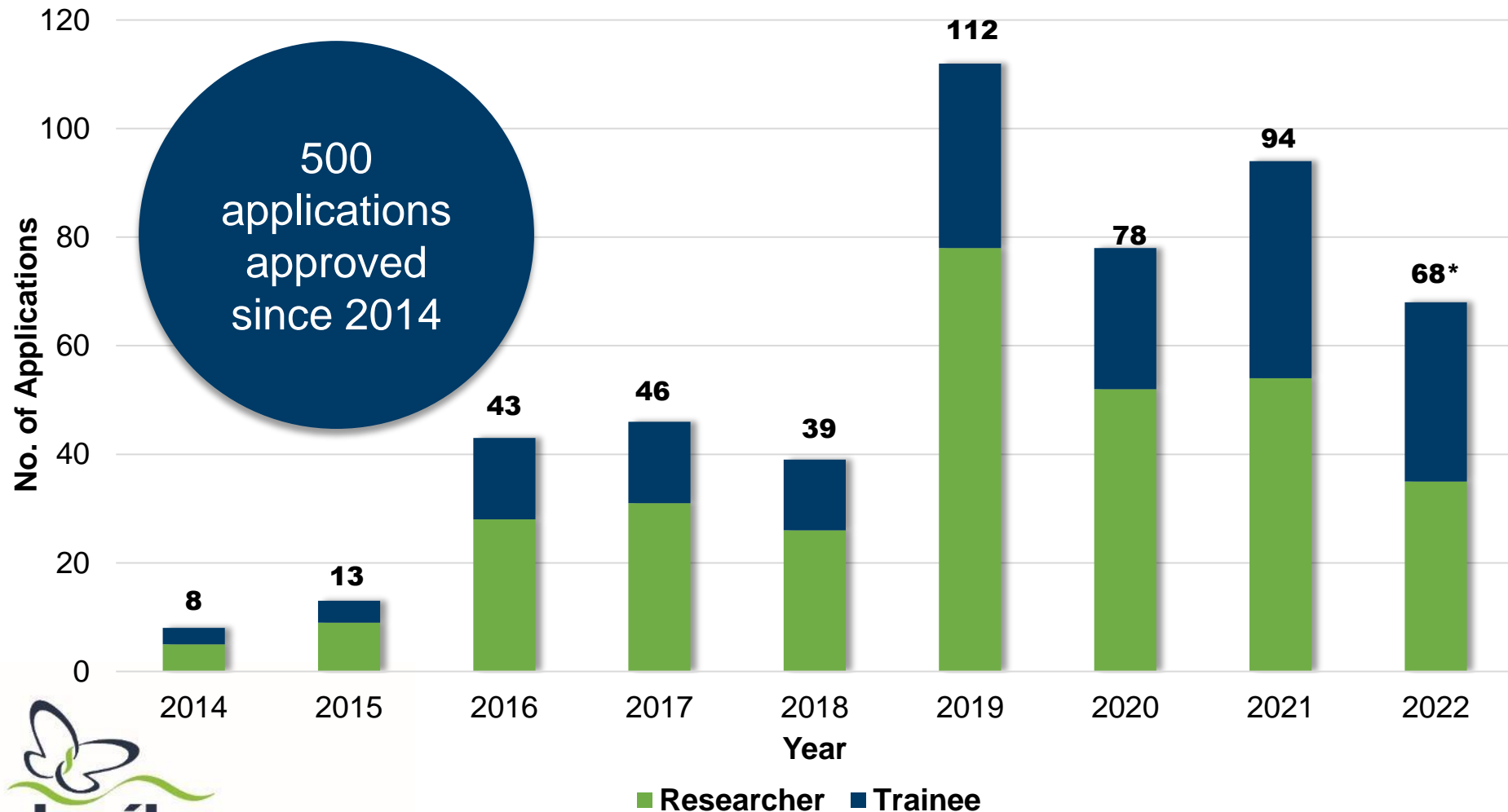
# Mortality Data

Information collected by March 2022

- **Participant status** (Vital and withdrawal status)
- **Decedent questionnaire data** (Details Surrounding Death, Living Arrangements Prior to Death, Function at 1 Month Before Death, About the Main Caregiver, Participant's Health Care Preferences and Decisions, and Quality of Death and Dying)

# Data Access

# Approved Applications



# Approved Applications Summary

Year	Researcher	Trainee	Total
2014	5	3	8
2015	9	4	13
2016	28	15	43
2017	31	15	46
2018	26	13	39
2019	78	34	112
2020	52	26	78
2021	54	40	94
2022	35	33	68
<b>Total</b>	<b>318</b>	<b>183</b>	<b>501</b>

# Applying for data access

**Step 1:** Request an account

**Step 2:** Log-in and start an application

**Step 3:** Complete the form

**Step 4:** Submit your application

# Step 1: Request an account

- The Primary Applicant should email [access@clsa-elcv.ca](mailto:access@clsa-elcv.ca) to request a Magnolia\* user account. Provide your full name, institutional email, position title and institution
- 2-3 working days to receive login information

# Step 1: Request an account - Trainee

- The **supervisor** (Primary Applicant) on behalf of the trainee must email [access@clsa-elcv.ca](mailto:access@clsa-elcv.ca) to request a Magnolia\* user account. Please include the trainee name, institutional email and program.

# Step 2: Log-in and start an application

Magnolia / Login



**clsa élcV**

Canadian Longitudinal Study on Aging  
Étude longitudinale canadienne sur le vieillissement

## Login Required

You must log in to access the application.

Username

Password

Login

For trainee application:  
Trainee should sign in

To learn more about applying for CLSA data, [click here](#).

Pour en savoir plus sur le processus de demande d'accès aux données de l'ÉLCV, cliquez [ici](#).

Please contact [access@clsa-elcv.ca](mailto:access@clsa-elcv.ca) if you require assistance logging in.



Canadian Longitudinal Study on Aging  
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# Step 2: Log-in and start an application

The screenshot shows the Magnolia application portal. At the top is a navigation bar with the Magnolia logo, a home icon, and the text 'Applicant @ NCC' and '15:13 EDT'. Below this is a consent banner for a monthly email newsletter. The main content area has two sections: 'Instructions' and 'Messages'. The 'Instructions' section explains the application process. The 'Messages' section contains a 'Note to Applicant' with a 'SPECIAL NOTE' about the Catalyst Grant and a list of requirements for data access applications. At the bottom is a 'Requisitions List' table. The table has columns for Identifier, Type, Trainee, Designate, Deadline, Ethics Expiry, Agreement Start, Agreement End, and Status. The table is currently empty, showing 'There are no requisitions found.' and '0 requisitions total'. A blue arrow points to the '+ Add' button in the bottom right corner of the table.

← → ↺ magnolia.clsa-elcv.ca/live/gl/ 🔍 📄 ☆ 🗑️ 👤 Update

Magnolia / 📧 Home Applicant @ NCC 15:13 EDT

I consent to receiving a monthly email newsletter from the Canadian Longitudinal Study on Aging.  
J'accepte de recevoir le bulletin électronique mensuel de l'Étude longitudinale canadienne sur le vieillissement: ☐

### Instructions

To begin the online process, please click on the "+ Add" button on the lower right to create a new requisition (Data and Biospecimen Access Application). The information you enter in Magnolia will be auto-saved. You may come back and edit your application at any time. Only once it is finalized and you are ready to submit your application, should you click on 'Submit'. Once you have submitted, you will receive a confirmation email of your submission. Completed but unsubmitted applications will not be reviewed.

Pour commencer le processus de demande en ligne, veuillez cliquer sur le bouton « + Ajouter » en bas à droite pour créer une nouvelle demande (Demande d'accès aux données et aux échantillons biologiques). Les informations que vous entrez dans Magnolia seront sauvegardées automatiquement. Vous pouvez modifier votre demande à tout moment. Lorsque la demande est finalisée et que vous êtes prêt à la soumettre, cliquez sur le bouton « Soumettre ». Une fois la demande soumise, vous recevrez un courriel de confirmation de votre soumission. Les demandes complètes, mais qui n'ont pas été soumises ne seront pas évaluées.

### Messages

📧 Note to Applicant

**SPECIAL NOTE: Catalyst Grant: Analysis of Canadian Longitudinal Study on Aging (CLSA) Data (2022)**

\*\* Researchers applying for this funding opportunity are only required to submit the supplemental CLSA form as part of the ResearchNet application process. Separate online CLSA applications will only be required by successful applicants following the CIHR Notice of Decision in 2023. \*\*

For ALL data access applications:

- The primary applicant must hold an eligible appointment (continuing or term appointment) at an eligible institution (that is able to uphold the conditions of the data access agreement, administer grant funds, and provide Research Ethics Board approval).
- Failure to provide the level of detail sufficient to assess the study feasibility could lead to the application being not approved.
- Once you have begun the application process, it is your responsibility to check your email (including your folders for junk, spam, etc.) for notifications from Magnolia (access@clsa-elcv.ca).

### Requisitions List

Identifier	Type	Trainee	Designate	Deadline	Ethics Expiry	Agreement Start	Agreement End	Status
There are no requisitions found.								
0 requisitions total								

+ Add

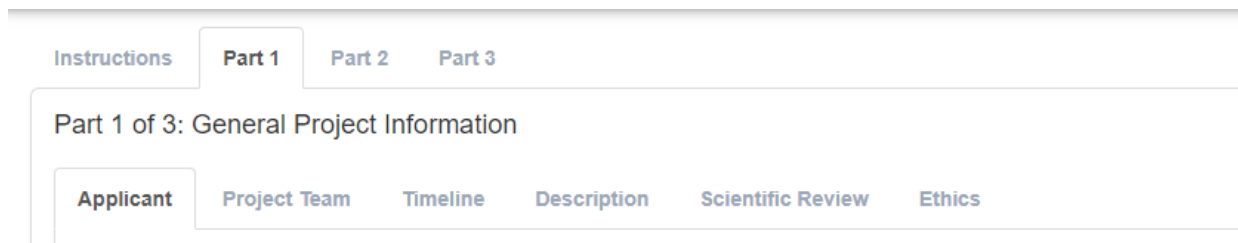
**Trainees must initiate the project in Magnolia. If the supervisor initiates the application, the trainee cannot be added.**

**Trainee must click add and start the application**



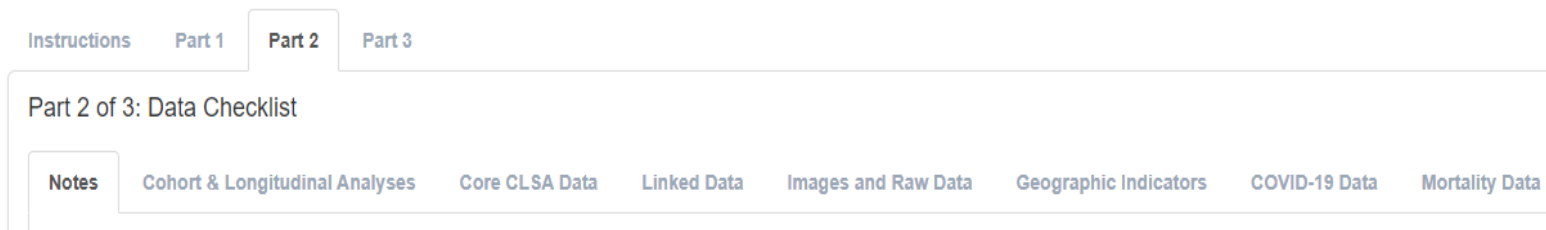
# Step 3: Complete the form

- Read carefully the instructions included in Magnolia
- Fill out part 1



The screenshot shows a web form interface with a top navigation bar containing four tabs: "Instructions", "Part 1", "Part 2", and "Part 3". The "Part 1" tab is selected. Below the tabs, the text "Part 1 of 3: General Project Information" is displayed. Underneath this, there is a second row of tabs: "Applicant", "Project Team", "Timeline", "Description", "Scientific Review", and "Ethics". The "Applicant" tab is selected.

- Fill out part 2



The screenshot shows the same web form interface as before, but now the "Part 2" tab is selected. The text "Part 2 of 3: Data Checklist" is displayed. The second row of tabs now includes "Notes", "Cohort & Longitudinal Analyses", "Core CLSA Data", "Linked Data", "Images and Raw Data", "Geographic Indicators", "COVID-19 Data", and "Mortality Data". The "Notes" tab is selected.

# Step 3: Complete the form – Part 1

Instructions **Part 1** Part 2 Part 3

Part 1 of 3: General Project Information

**Applicant** Project Team Timeline Description Scientific Review Ethics

Complete this section if this is a Trainee application (Master's, PhD and Postdoctoral Fellow).

Name


Degree and Program of Study

Institution of Enrollment

Institution Country

Current Mailing Address

Phone

 E-mail

Students (Master's or PhD) who wish to obtain the CLSA data for the sole purpose of their thesis, and postdoctoral fellows (limit 1 waiver per postdoc) who wish to obtain the CLSA data for the sole purpose of their postdoctoral project who are Canadian institutions for their graduate degree or postdoc, can apply for a fee waiver. Canadian trainees working outside Canada but funded through a Canadian source are also eligible for a fee waiver. The CIHR Catalyst Grants for the use of CLSA data are not eligible for Trainee Fee Waivers.

Fee Waiver Type

[← Return to the previous section](#) [Proceed to the next section →](#)

## Trainee projects:

- Supervisor is the main applicant
- specify the fee waiver

# Step 3: Complete the form – Part 1

[Delete](#)[Download](#)[Submit](#)

[Instructions](#)[Part 1](#)[Part 2](#)[Part 3](#)

Total fees: \$3000


Part 1 of 3: General Project Information

[Applicant](#)[Project Team](#)[Timeline](#)[Description](#)[Scientific Review](#)[Ethics](#)

All Co-Applicants and Other Personnel must be listed below. You must inform your collaborators that you have included them on this application. Please note that changes to the project team, including change of Primary Applicant and addition or removal of Co-Applicants and Support Personnel **require an amendment**. To submit an Amendment request, please click on "Create Amendment" in the upper-right corner of your screen and follow the instructions.

No co-applicants have been added.

Include all project team members

Name	<input type="text"/>
Position	<input type="text"/>
Institution	<input type="text"/>
 E-mail	<input type="text"/>
Role	<input type="text"/>
Requires Access to Data	<div>Yes</div>

Add Co-Applicant

# Step 3: Complete the form – Part 1

Part 1 of 3: General Project Information

Applicant Project Team Timeline **Description** Scientific Review Ethics

Provide the level of detail you would normally provide in a grant application. Failure to provide adequate detail to assess feasibility will result in rejection of the application. Please adhere to character count limits.

Project Title

Keywords

Please provide a lay language summary of your project (maximum 1000 characters) suitable for posting on the CLSA website if your application is approved.

Lay Summary

Please provide a description of the proposed project. The proposal should be informative and specific and no more than 4500 characters per section. Non-compliant applications will be returned.

Background and Study Relevance

Study Objectives and/or Hypotheses

Study Design and Methodology

Data Analysis

Please include a list of the most relevant references (maximum 20)

- Lay summary written in lay language
- Objectives are clear and concise
- Use of requested CLSA data is described
- Enough information to assess feasibility

# Step 3: Complete the form – Part 2

Instructions Part 1 **Part 2** Part 3

## Part 2 of 3: Data Checklist

### Notes

Cohort & Longitudinal Analyses

Core CLSA Data

Linked Data

Images and Raw Data

Geographic Indicators

COVID-19 Data

Mortality Data

Please mark the sections containing the modules in the CLSA dataset that you are requesting.

#### Included in all datasets

- Sampling weights

#### Not included in datasets

- Identifiable information collected (e.g. name, contact information, date of birth, health insurance number, and full postal code)

For more information on these data, consult the CLSA Data Availability Table on our website.

**Ensure application is for data that are available at the time of submission:**  
**[www.clsa-elcv.ca/data-availability](http://www.clsa-elcv.ca/data-availability)**



Canadian Longitudinal Study on Aging  
Étude longitudinale canadienne sur le vieillissement



### CLSA Data Availability Table / Disponibilité des données de l'ÉLCV

This table summarizes the data that may be requested as part of the Data and Biospecimen Access Application online. **Please note that the table includes data that may still be in the data preparation stage, however, we anticipate that they will be ready for the next Data Release Update. The CLSA only accepts applications for data that are included in this table at the time of submission.** Applications proposing the use of data that are not included in this table will not be considered for review, and you will need to re-apply once those data become available. / Ce tableau présente les données pouvant être demandées dans le cadre d'une demande d'accès aux données et aux échantillons biologiques en ligne. **Veuillez noter que le tableau inclut des données qui pourraient encore être en préparation. Toutefois, nous prévoyons qu'elles seront prêtes pour la prochaine mise à jour des données. L'ÉLCV accepte uniquement les demandes pour les données figurant dans ce tableau au moment de la soumission.** Les demandes d'accès à des données qui ne figurent pas dans ce tableau au moment de la soumission ne seront pas examinées et il faudra présenter une nouvelle demande dès que ces données seront disponibles.

### CORE CLSA DATA / DONNÉES DE BASE DE L'ÉLCV

QUESTIONNAIRE DATA / DONNÉES DU QUESTIONNAIRE	
Socio-Demographic Characteristics / Caractéristiques socio-démographiques	
Included in Baseline, Follow-up 1 and Follow-up 2 / Inclus dans la vague de départ, le 1 <sup>er</sup> suivi et le 2 <sup>e</sup> suivi	Age / Age (AGE); Education / Éducation (ED); Province of residence / Province de résidence (WGHTS); Urban / Rural Classification <sup>1</sup> / Classement des zones urbaines / rurales <sup>1</sup> (SDC); Religion / Religion (SDC); Marital status / État matrimonial (SDC); Sexual orientation / Orientation sexuelle (SDC); Income / Revenu (INC); Wealth / Patrimoine (WEA); Home Ownership / Propriétaires (OWN); Population Centre / Centre de Population (SDC); Population Density / Densité de Population (SDC)
Included in Baseline only / Inclus dans la vague de départ seulement	Sex / Sexe (SEX); Country of birth / Pays de naissance (SDC); Ethnicity / Ethnicité (SDC); Culture / Culture (SDC); Language / Langue (SDC); Veteran Identifiers / Anciens combattants (VET)
Included in Follow-up 1 and Follow-up 2 only / Inclus dans le 1 <sup>er</sup> suivi et le 2 <sup>e</sup> suivi	Gender Identity / Identité de genre (SDC)

# Step 3: Complete the form – Part 2

No physical assessments, medications, and biomarker data

**Delete**

Instructions Part 1 **Part 2** Part 3

Part 2 of 3: Data Checklist

Notes **Cohort & Longitudinal Analyses** Core CLSA Data Linked Data Images and Raw Data Geographic Indicators COVID-19 Data Mortality Data

Please select the cohort (Tracking and/or Comprehensive - YOU MUST SELECT "YES" FOR AT LEAST ONE COHORT) for which you are requesting data:

① Tracking Cohort (Telephone Interview)  
(choose)

② Comprehensive Cohort (In-home Interview & DCS visit)  
(choose)

You will be able to make your selection of the wave of data collection (Baseline and/or Follow-up 1) within the Data Checklist.

Is this project part of longitudinal or integrative analyses involving previously approved project using CLSA data?  
(choose)

← Return to the previous section

Proc

Describe in the proposal what are you adding to the previous approved project

# Step 3: Complete the form – Part 2

Delete Download Submit

Instructions Part 1 **Part 2** Part 3 Total fees: \$3000

Part 2 of 3: Data Checklist

Notes Cohort & Longitudinal Analyses **Core CLSA Data** Linked Data Images and Raw Data Geographic Indicators COVID-19 Data Mortality Data

	CLSA - Baseline	CLSA - Follow-up 1	CLSA - Follow-up 2
① Questionnaire Data	(click to select)	(click to select)	(click to select)
① Physical Assessment	(click to select)	(click to select)	(not yet available)
① Blood Biomarkers (Hematology and Coagulation)	(click to select)	(click to select)	(not yet available)
Genomics (N = 26,622)	(click to select)	(not applicable)	(not applicable)
Epigenetics (N = 1,479)	(click to select)	(not applicable)	(not applicable)
① Metabolomics (N = ~9,500)	(click to select)	(not applicable)	(not applicable)

Comments

- Select only the modules needed for your project
- Make sure they are described in your proposal

**Note: cognition and medications data are included in the Questionnaire module**

# Step 3: Complete the form – Part 2

Please note that images output data are included in the Physical Assessments module

- Select only if images are needed
- Describe how they can help to achieve proposed objectives and how they will be analyzed

Instructions Part 1 **Part 2** Part 3 Total fees: \$3000

Part 2 of 3: Data Checklist

Notes Cohort & Longitudinal Analyses Core CLSA Data Linked Data **Images and Raw Data** Geographic Indicators COVID-19 Data Mortality Data

Images and raw data (e.g. Spirometry, ECG, Cognition) are available for some modules of the CLSA, as described in the CLSA Data Availability Table on our website. To request these data, please check the corresponding field

Explaining how these data will help to achieve proposed objectives

Do you have the experience and resources to work with these types of data (i.e. references of publications)

Images and raw data usually incurs additional costs beyond the current data access fee, and these are outlined in the Fees section of our website. Requests for images and raw data may prolong the processing time of your request to receive these data than the 6 months to receive alphanumeric data. For more information, please contact [access@clsa-elcv.ca](mailto:access@clsa-elcv.ca).

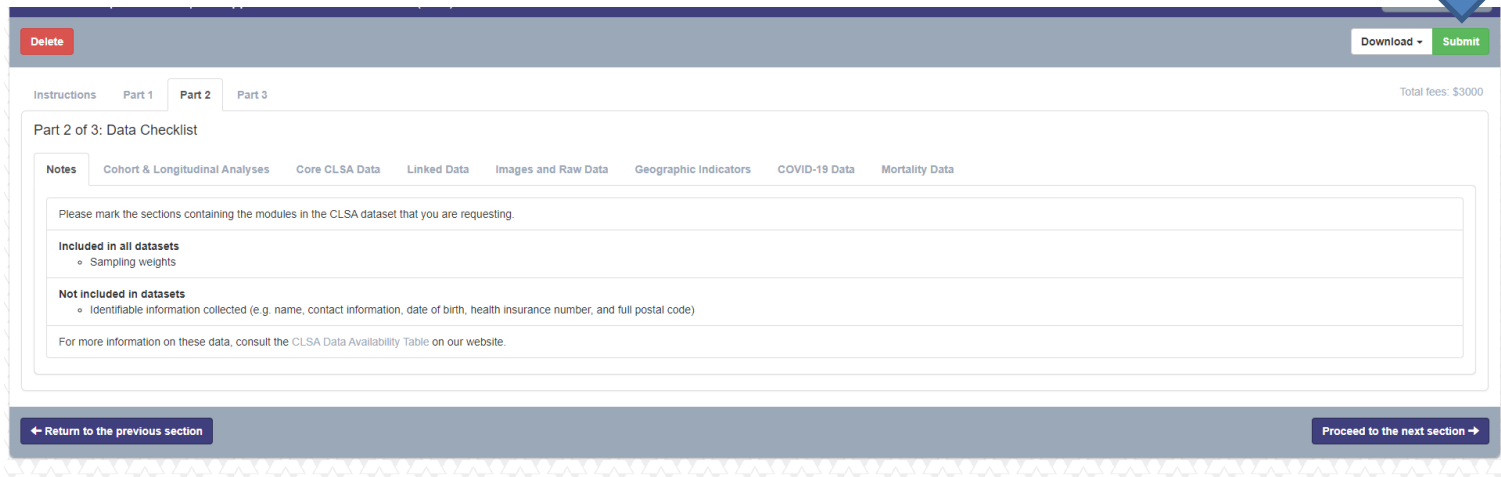
	CLSA - Baseline	CLSA - Follow-up 1	CLSA - Follow-up 2
<a href="#">cIMT Still image</a>	<input type="text" value="(click to select)"/>	<input type="text" value="(click to select)"/>	(not yet available)
<a href="#">cIMT Cine-loops</a>	<input type="text" value="(click to select)"/>	<input type="text" value="(click to select)"/>	(not yet available)
<a href="#">DXA Forearm</a>	<input type="text" value="(click to select)"/>	<input type="text" value="(click to select)"/>	(not yet available)
<a href="#">DXA Hip</a>	<input type="text" value="(click to select)"/>	<input type="text" value="(click to select)"/>	(not yet available)
<a href="#">DXA Whole Body</a>	<input type="text" value="(click to select)"/>	(not yet available)	(not yet available)
<a href="#">DXA IVA Lateral Spine</a>	<input type="text" value="(click to select)"/>	<input type="text" value="(click to select)"/>	(not yet available)
<a href="#">ECG RAW+</a>	<input type="text" value="(click to select)"/>	<input type="text" value="(click to select)"/>	(not yet available)

Additional costs \$\$\$

# Step 4: Submit your application

**The primary applicant is responsible for the content of the application.**

**Only the primary applicant will be able to submit the application – this also applies to trainee applications.**



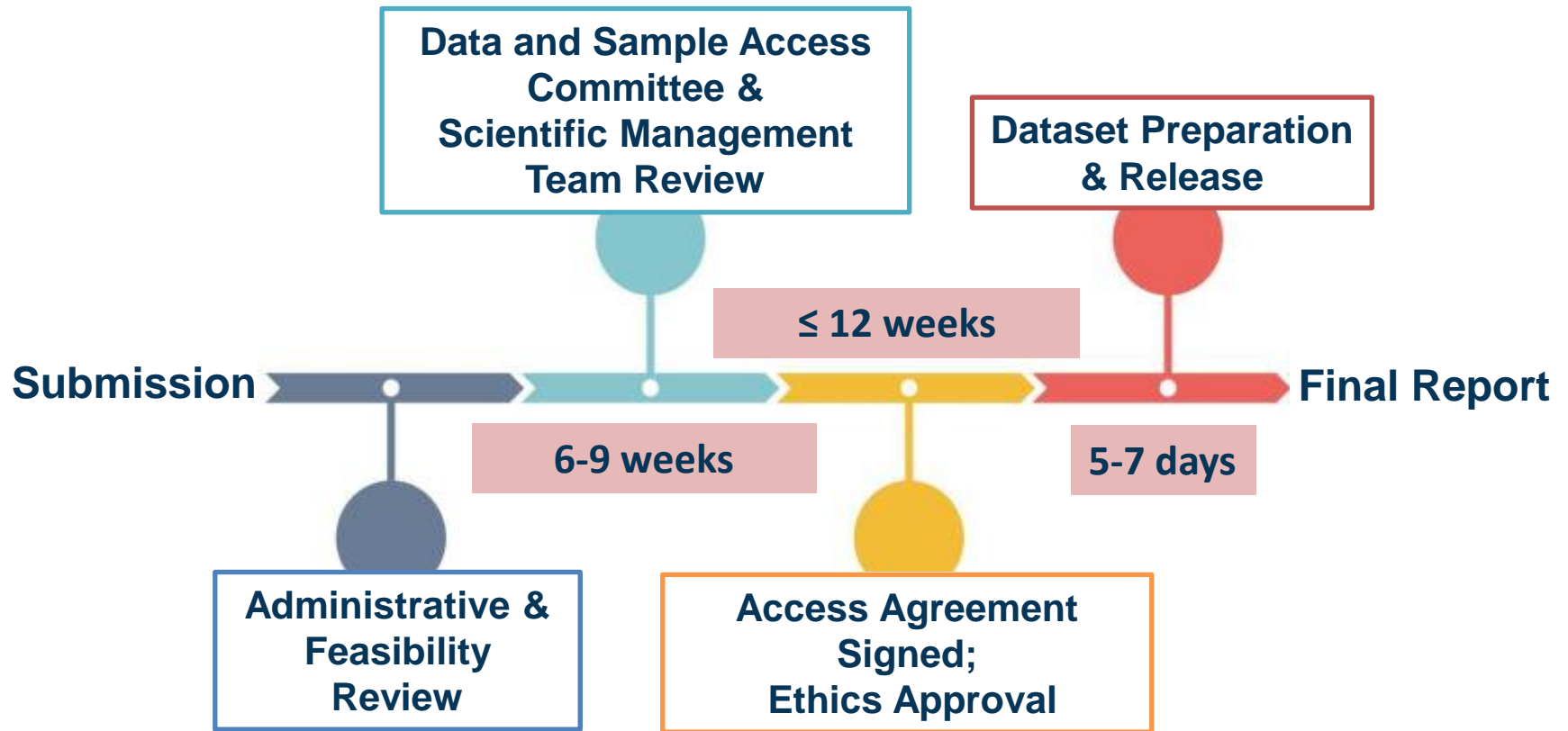
The screenshot shows the 'Part 2 of 3: Data Checklist' section of the CLSA application form. The interface includes a top navigation bar with 'Delete', 'Download', and 'Submit' buttons. The main content area has tabs for 'Instructions', 'Part 1', 'Part 2' (active), and 'Part 3'. Below the tabs, there are sections for 'Notes', 'Cohort & Longitudinal Analyses', 'Core CLSA Data', 'Linked Data', 'Images and Raw Data', 'Geographic Indicators', 'COVID-19 Data', and 'Mortality Data'. The 'Notes' section contains instructions to mark sections containing modules in the CLSA dataset. Below this, there are two sections: 'Included in all datasets' (with a bullet point for 'Sampling weights') and 'Not included in datasets' (with a bullet point for 'Identifiable information collected (e.g. name, contact information, date of birth, health insurance number, and full postal code)'). A link to the 'CLSA Data Availability Table' is provided. At the bottom, there are buttons for 'Return to the previous section' and 'Proceed to the next section'.

- Applications must be received by 5 p.m. ET on the submission deadline

# 2023 Application Deadlines

- January 18, 2023
- April 12, 2023
- July 12, 2023
- October 4, 2023

# Data Access Timeline



Applicants advised to plan on receiving data six months after submission deadline

# Review Process

1. Administrative review
2. Feasibility review
3. Data and Sample Access Committee (DSAC) review
4. CLSA Executive Committee review

## Review outcomes:

**Approved**

**Minor revision (7 days)**

**Major revision (21 days)**

**Not approved**

# Data and Sample Access Committee

- **Chair:** Mark Oremus (University of Waterloo)
- **Members:**
  - Truls Ostbye (Duke University)
  - Robert Tate (UManitoba)
  - Andrea Gruneir (UAlberta)
  - Megan O'Connell (USask)
  - Danielle Bouchard (UNB)
  - Danilo Bzdok (McGill)
  - Theodore Cosco (SFU)
  - Zhiwei Gao (Memorial)
  - Marie Pigeyre (McMaster)
  - Despoina Manousaki (UMontreal)
  - Mark Keezer (UMontreal)
  - Plinio Morita (UWaterloo)
  - Theone Paterson (UVic)
  - Olga Theo (Dalhousie University)
  - Suzanne Tyas (Waterloo)
  - Parminder Raina (CLSA Representative, McMaster)
  - Matilda Saliba (CLSA Data Access Officer, RI-MUHC)
- *Ex-officio*
  - Advisor (CIHR)



# Main reasons for minor revisions

- Writing the lay summary in a language that is not suitable for the general public.
- Selecting a cohort that does not include the data needed for the proposed project
- Selecting data modules that are not described in the proposal
- Requesting images although only images output data are needed (included in Physical assessment module).

# Main reasons for major revisions

- Research objectives are not clear and concise enough
- The use of requested data is not adequately described
- Proposed methods are not clearly described

# Main reasons for rejection

- Requested data are not available at the time of submission
- Failure to provide the level of detail sufficient to assess the study feasibility
- Not applying requested revisions

# Data Access Fees

- **Partial Cost Recovery Model**

- **Alphanumeric data**

- CAD \$3,000 for researchers based in Canada
    - CAD \$5,000 for researchers based at institutions outside of Canada
    - **Graduate students** using data solely for thesis research & **postdoctoral and clinical research fellows** using data solely for the fellowship project are eligible for a **fee waiver** (once as a fellow)
    - **Fee waivers** only apply to trainees enrolled at a Canadian institution or supported by Canadian funds if working outside Canada

- **Images & Complex data**

- Additional fees apply for access to image files, raw data and datasets that require more complex customization



**Contact:**

**Data inquiries: [access@clsa-elcv.ca](mailto:access@clsa-elcv.ca)**

**General inquiries: [info@clsa-elcv.ca](mailto:info@clsa-elcv.ca)**

CLSA is funded by the Government of Canada through CIHR and CFI, and provincial governments and universities. COVID-19 research funding is provided by the Weston Family Foundation, COVID-19 Immunity Task Force, Juravinski Research Institute, McMaster University, McMaster Institute for Research on Aging, Nova Scotia COVID-19 Health Research Coalition and the Public Health Agency of Canada.



Canadian Longitudinal Study on Aging  
Étude longitudinale canadienne sur le vieillissement



[www.clsa-elcv.ca](http://www.clsa-elcv.ca)

# Questions?



Canadian Longitudinal Study on Aging  
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