Advancing Opportunities for Research on Health and Aging: An Update on the Canadian Longitudinal Study on Aging

Susan Kirkland, PhD
Dalhousie University, Halifax

on behalf of
Parminder Raina, PhD, McMaster University, Hamilton
Christina Wolfson, PhD, McGill University, Montreal

and the CLSA Research Team

June 21, 2016
Overview

- CLSA Research Platform
- Study Design
- Study Content
- Data Collection
- First Follow-up
- Data Availability
- Data Access
Canadian Longitudinal Study on Aging (CLSA)

- Strategic initiative of CIHR
- More than 160 researchers and collaborators – 26 institutions
- Multidisciplinary – biology, genetics, medicine, psychology, sociology, demography, economics, epidemiology, nutrition, health services
- Largest research platform of its kind in Canada
Design Overview

50,000 women and men aged 45 – 85 community dwelling at baseline

Tracking (20,000)
Randomly selected
10 provinces

Comprehensive (30,000)
Randomly selected
25-50 km of 11 sites in 7 provinces

Questionnaire
• By telephone (CATI)

Questionnaire
• In person, in home (CAPI)

Physical Assessments
Blood, Urine
• At Data Collection Site

20 year study: Full follow up every 3 years, maintaining contact in between

Data Linkage
Participants aged 45 to 85 at baseline (51,388)

Enrolled

Baseline

FU-1

FU-2

FU-3

FU-4

FU-5

FU-6

2010 - 2015

2015

2018

TIME

20 Years

Questionnaire data (telephone and in-person interviews) (51,338)

Physical assessments and biological specimens (30,097)

Active follow-up (FU) every 3 years

- Questionnaire
- Physical assessments
- Biological specimens
- Health-care utilization
- Disease registries
- Mortality databases

Data and Biological Sample Repositories

Researchers
Recruitment Sampling Frame

- Partnered with Statistics Canada
  - CCHS 4.2 Healthy Aging Survey
  - 2006 census as an area frame to select households
  - Agreed to share contact information

- Partnered with provincial Ministries of Health
  - Health Card Registration databases
  - Mailouts, return Consent to Contact form

- Supplemented with Random Digit Dialing
  - Pre-recruitment, agree to recontact
National Scope
Representative Sampling Frame

- Winnipeg
- Vancouver
- Victoria
- Surrey
- Calgary
- Hamilton
- Ottawa
- Montreal
- Sherbrooke
- Halifax
- St. John’s

• Telephone Interviews
○ Home Interviews & Data Collection Site Visits
Participants Consent to Participate in CLSA

Participants Provide Questionnaire Data (n=50,338)

Pre-recruits Sent Study Information

Biological Data Processing
- Blood
- Urine

Data dissemination to researchers

Stored at Biorepository and Bioanalysis Centre

DATA COLLECTION SITE VISIT
Physical/Neuropsychological Data

n=30,097
Telephone Interview
n=20,241
Home Interview

Stored at Statistical Analysis Centre

Questionnaire data processing
CLSA Depth and Breadth
Questionnaire Modules

- Age & Sex
- Socio-Demographic Characteristics
- Home Ownership
- Education
- Veteran Identifiers
- Height & Weight
- Smoking & Alcohol Use
- General Health
- Women’s Health
- Vision
- Hearing
- Instrumental Activities of Daily Living
- Basic Activities of Daily Living
- Chronic Conditions
- Functional Status
- Cognition
- Depression
- Satisfaction with Life
- Post-traumatic Stress Disorder
- Social Networks

- Social Support – Availability
- Social Participation
- Care Receiving – Formal & Informal
- Caregiving
- Injuries
- Falls and Consumer Products (e.g. assistive devices)
- Retirement Status
- Retirement Planning
- Pre-Retirement Labour Force Participation
- Labour Force
- Income
Physical Assessments:
- Height, Weight, BMI
- Bone Density, Body Composition, Aortic Calcification
- Blood Pressure
- ECG
- Carotid Intimal-Medial Thickness
- Pulmonary Function
- Vision & Hearing
- Performance testing

Biospecimen Collection:
- Blood
- Urine

Cognitive Assessments:
- Neuropsychological Battery
  - Memory
  - Executive function
  - Reaction time
Bio specimen processing 42 aliquots per participant

- Basic hematologic tests done on site
- Remainder processed, frozen within 2 hours
- Shipped weekly
- Stored in Nitrogen tanks at BBC McMaster
Participants aged 45 to 85 at baseline (51,388)

Enrolled

Baseline

FU-1

FU-2

FU-3

FU-4

FU-5

FU-6

Data and Biological Sample Repositories

Researchers

Questionnaire data (telephone and in-person interviews) (51,338)

Physical assessments and biological specimens (30,097)

Active follow-up (FU) every 3 years

- Questionnaire
- Physical assessments
- Biological specimens
- Health-care utilization
- Disease registries
- Mortality databases

CLSA Overview

2010 - 2015

2015

2018

TIME

20 Years
First Follow-Up: New Content

- Child maltreatment
- Elder abuse
- Epilepsy
- Arterial stiffness
- Unmet health-care needs
- Workability
- Preventive health behaviours
- Enhanced hearing, oral health and transportation
- Sexual orientation and gender identity
- Subjective cognitive decline
- Loneliness
- Decedent information
First Follow-Up: Accommodation Strategies

- Changing circumstances
  - Migration out of area
  - Cognitive impairment
  - Physical impairment
  - Sensory impairment
  - Institutionalization

- Accommodation strategies to maintain long-term participation
  - Allows for flexible participation
  - Baseline exclusion criteria no longer apply
Data and Biospecimen Access

**Fundamental tenets:**
- The rights, privacy and consent of *participants* must be protected and respected at all times
- The confidentiality and security of *data and biospecimens* must be safeguarded at all times
- CLSA data and biospecimens are resources that will be used optimally to support research to benefit all Canadians
- No preferential or exclusive access
Who can apply?

- Researchers based in academic settings and research institutes in Canada
- International researchers may choose to collaborate with Canadian researchers to access data or biospecimens as long as the data and/or biospecimens are analyzed in Canada*
- Graduate students and postdoctoral fellows based at Canadian institutions

* Currently under review
What data are available?

- Data from 51,338 participants are available to the research community this spring including:
  - Baseline questionnaire data from all 51,338 participants
  - Physical assessment data and hematological biomarker data from 30,097 participants who visited Data Collection Sites
60-minute Telephone Interviews
(21,241 Tracking participants)

**Questionnaire:**
- Age & Sex
- Socio-Demographic Characteristics
- Home Ownership
- Education
- Veteran Identifiers
- Height & Weight
- Smoking & Alcohol Use
- General Health
- Women’s Health
- Vision
- Hearing
- Instrumental Activities of Daily Living
- Basic Activities of Daily Living
- Chronic Conditions
- Functional Status
- Cognition
- Depression
- Satisfaction with Life
- Post-traumatic Stress Disorder
- Social Networks
- Social Support – Availability
- Social Participation
- Care Receiving – Formal & Informal
- Caregiving
- Injuries
- Falls and Consumer Products (e.g. assistive devices)
- Retirement Status
- Retirement Planning
- Pre-Retirement Labour Force Participation
- Labour Force
- Income
In-Home Face-to-Face Interviews
(30,097 Comprehensive participants)

Questionnaire:
- Age & Sex
- Socio-Demographic Characteristics
- Home Ownership
- Education
- Veteran Identifiers
- Smoking & Alcohol Use
- Nutrition: Short Diet Questionnaire
- General Health
- Women’s Health
- Vision
- Hearing
- Basic Activities of Daily Living
- Instrumental Activities of Daily Living
- Life Space Index
- Sleep
- Satisfaction with Life
- Post-traumatic Stress Disorder
- Care Receiving – Formal & Informal
- Caregiving
- Injuries
- Falls and Consumer Products (e.g. assistive devices)
- Retirement Status
- Pre-Retirement Labour Force Participation
- Labour Force
- Retirement Planning
- Income
Data Collection Site Visits
(30,097 Comprehensive participants)

**Physical Assessments:**
- Height
- Weight
- Waist-Hip Ratio
- Blood Pressure
- ECG
- Spirometry
- Hearing
- 4m Walk
- Timed Up and Go
- Standing Balance
- Chair Rise
- Visual Acuity
- Tonometry
- Grip Strength

**Biomarkers:**
- Hematology

**Questionnaire:**
- Social Networks
- Social Support – Availability
- Social Participation
- Disease Symptoms
- Contraindications

**Neuropsych Assessments:**
- Rey Auditory Verbal Learning
  - Immediate and delayed
- Animal Naming Fluency Test
- Mental Alternation Test
Hematology Data
(30,097 Comprehensive participants)

- White blood cells
- Lymphocytes
- Monocytes
- Granulocytes
- Red blood cells
- Hemoglobin
- Hematocrit
- Mean corpuscular volume
- Mean corpuscular hemoglobin
- Mean corpuscular hemoglobin concentration
- Red blood cell distribution width
- Platelets
- Mean platelet volume
30-minute Telephone Interviews
(51,388 Tracking and Comprehensive participants)

Questionnaire:

- Falls
- Pain and Discomfort
- Oral Health
- Snoring
- Parkinsonism
- Health Care Utilization
- Medication Use
- Dietary Supplement Use
- Nutritional Risk
- Physical Activities
- Psychological Distress
- Personality Traits
- Social Inequality
- Online Social Networking
- Transportation, Mobility, Migration
- Built Environments
- Wealth
## Summary of Data Available Now

<table>
<thead>
<tr>
<th>Dataset</th>
<th>N</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracking – Baseline 60-minute telephone interview (Version 3.0)</td>
<td>21,241</td>
<td>Alphanumeric questionnaire data + cognition data + open text data</td>
</tr>
<tr>
<td>Tracking Maintaining Contact Questionnaire - Baseline 30-minute telephone interview (Version 1.0)</td>
<td>21,241</td>
<td>Alphanumeric questionnaire data</td>
</tr>
<tr>
<td>Comprehensive Baseline in-home interview and Data Collection Site visit (Version 1.0)</td>
<td>30,097</td>
<td>Alphanumeric data: • Questionnaires • Physical assessments • Hematological biomarkers</td>
</tr>
<tr>
<td>Comprehensive Maintaining Contact Questionnaire - Baseline 30-minute telephone interview (Version 1.0)</td>
<td>30,097</td>
<td>Alphanumeric questionnaire data</td>
</tr>
</tbody>
</table>
Preparing an Application for Data Access

- Consult the Data and Sample Access Policy and Guiding Principles
- Review the pertinent sections of the CLSA protocol and the CLSA questionnaires
- Visit the DataPreview Portal to search datasets
- Complete the Data and/or Biospecimen Request Application
- Identifiable information will not be shared (e.g. six-digit postal codes, names, contact information)
- Queries should be sent to access@clsa-elcv.ca
- Queries related to biospecimens should be sent to bbc@clsa-elcv.ca
Step 1– Review the Application Process

Data Access Application Process

- All data access requests to the Canadian Longitudinal Study on Aging must be reviewed by the Data and Sample Access Committee (DSAC).

- The CLSA welcomes applications from graduate students and postdoctoral fellows based at Canadian institutions who wish to use data for their thesis research or as part of their postdoctoral work.

- International researchers may choose to collaborate with Canadian researchers to access data or biospecimens as long as the data and/or biospecimens are analyzed in Canada.

We strongly advise potential applicants to review all of the information on this page before applying to use the CLSA platform.

Preparing an Application

- Please consult the Data and Sample Access Policy and Guiding Principles, the pertinent
Data Application Documents

Application:

Checklist:

CLSA Data and Biospecimen Request Application
(last updated April 26, 2016)

Demande d’accès aux données et aux échantillons de l’ELCV
(dernière mise à jour le 26 avril 2016)

Instructions / Consignes

Completing an application / Remplir une demande

- Please consult the CLISA website for instructions, and policies and procedures for CLISA data and biospecimen access: www.clsag-calvis.ca (Data Access). Applicants are also encouraged to review the pertinent sections of the relevant CLISA protocol(s), Data Collection Tools and Physical Assessments in advance of completing the application. Additional information on the variables in the CLISA dataset is on the CLISA Data Preview portal / Veuillez consulter les consignes, les politiques et la procédure de demande d’accès aux données et aux échantillons sur le site Web de l’ELCV : www.clsag-calvis.ca (Accès aux données). Nous encourageons les demandeurs à consulter les sections pertinentes du protocole de l’ELCV (en anglais seulement), les outils de collecte de données et les tests physiques avant de remplir une demande d’accès. Des informations supplémentaires sur les variables contenues dans l’ensemble de données de l’ELCV sont disponibles sur le Portail de données de l’ELCV.

- Consult us for any questions regarding your application at access@clsag-calvis.ca / Veuillez adresser toute question relative aux demandes d’accès aux données de l’ELCV à access@clsag-calvis.ca.

- The application is comprised of 3 parts. Part 1: General Project Information; Part 2: Data Checklist; Part 3: Biospecimen Checklist. Parts 2 and 3 are found on the CLISA website. / La demande est séparée en trois parties : 1ère partie : Renseignements généraux ; 2ème partie : Sélection des données ; 3ème partie : Sélection des échantillons biologiques. Les parties 2 et 3 sont disponibles sur le site Web de l’ELCV.

- Please ensure that you have completed all of the sections of the application form that are relevant to your application. Incomplete applications may result in processing delays or refusal of your application. / Assurez-vous de bien remplir toutes les sections pertinentes du formulaire de demande d’accès. Les demandes incomplètes pourraient causer un retard dans le traitement de votre demande ou entraîner un refus.

Submitting an application / Envoyer la demande

- E-mail applications to access@clsag-calvis.ca, clearly indicating “Application for DSSAC – your name” in the subject line / Envoyez la demande par courriel à access@clsag-calvis.ca en indiquant clairement, dans l’objet du courriel, le titre « Demande pour le DSSAC – votre nom ».

CLSA Application: Data Checklist
Application Part 2 of 3
(last updated May 9, 2016)

Demande de l’ELCV : Sélection des données
Partie 2 de 3
(dernière mise à jour le 9 mai 2016)

SUMMARY / RÉSUMÉ
Please mark an X for the data that you are requesting from the CLISA BASELINE data collection. / Inscrivez un X à côté des données de la collecte INITIALE de données de l’ELCV que vous demandez.

- Section A: Questionnaires / Questionnent
- Section B: Physical Assessments / Examens physiques
- Section C: Biomarkers measured in blood / Biomarqueurs mesurés dans le sang

Please mark with an X the modules containing the variables in the CLISA dataset that you are requesting. In the Comments section, include other relevant information concerning your request. / Inscrivez un X à côté des modules contenant les variables de l’ensemble de données de l’ELCV que vous demandez. Ajoutez toute autre information pertinente à votre demande à la section Commentaires.

SECTION A: QUESTIONNAIRES / QUESTIONNAIRES

<table>
<thead>
<tr>
<th>Interview module</th>
<th>Module de l’entrevue</th>
<th>Telephone Interview (Face-to-face Assessment)</th>
<th>Face-face Interview (In Person or DSS Visit)</th>
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<tbody>
<tr>
<td>Age / Age (AGE)</td>
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<tr>
<td>Sex / Sexe (SEX)</td>
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<tr>
<td>Socio-Demographic Characteristics / Caractéristiques socio-démographiques (SDC)</td>
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<tr>
<td>Country of birth / Pays de naissance</td>
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<td>Ethnicity / Ethnique</td>
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<tr>
<td>Culture / Culture</td>
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<tr>
<td>Language / Langue</td>
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<tr>
<td>Religion / Religieuse</td>
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<tr>
<td>Marital status / État matrimonial</td>
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<tr>
<td>sexuelle</td>
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</table>
Step 2 – Review CLSA Study Protocols

Researchers

Protocols

The CLSA provides documents online to facilitate understanding of the study and how we are gathering and managing the data.

Protocols

CLSA Protocol – Executive Summary
CLSA Protocol - Full Study Design and Baseline (2008)
CLSA Protocol – First Follow-up (2015)

Data Collection Tools

Over the course of 20 years, the CLSA will be conducting full data collection every three years. At each major data collection event, the questionnaires and physical assessments remain largely the same for consistency, but there will be some additions to the data collection to further enhance the CLSA platform.

Questionnaires
Step 3 – Review Questionnaires

Before you begin browsing the Data Preview Portal, we recommend that you look at the CLSA Protocols and Data Collection Tools – a collection of all questionnaires and tests administered during Baseline data collection. You can download and search these files for terms of interest.
Step 4 - Data Preview Portal (DPP)

- Gateway to access for data and biospecimens
- Variable search mechanism providing simple descriptive statistics for selected variables
- Currently available for alphanumerical data only
The **Variable Search** tool is designed to enable researchers to locate items of interest within available data. Please also consult the list of **Variables not yet available**.
Variables Not Yet Available

The following open text variables collected during the baseline interviews of the Tracking and Comprehensive participants are not part of the April 2016 release. Data cleaning for these variables is ongoing. They will be added as they become available.

Open Text Variables - not included in April 2016 release

- Type of work
- Industry sector of work
- Longest type of work
- Industry sector of longest work
- Type of work
- Industry sector of work
- Longest type of work
- Industry sector of longest work
- Drug name for respiratory problem. Specify
- Drug name for diabetes. Specify
- Drug name for depression. Specify
- Drug name for high blood pressure. Specify
- Drug name for under-active thyroid. Specify

<table>
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<tr>
<th>Open Text Variables</th>
<th>Tracking - Baseline</th>
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<td>Industry sector of longest work</td>
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<tr>
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<td>Industry sector of longest work</td>
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<td>LBF_LGIND_SP_COM</td>
</tr>
</tbody>
</table>

Labour Force

Medications
### SMART TIPS

Variables from Baseline interviews are preselected by default. To limit your search, select/deselect each under the 'Dataset' tab on the left:
- Search for **Areas of Information** or **Scales** using the search bar below.
- For **Variable Names** and **Labels**, use the search fields under the 'Variable' tab.
- When searching multiple terms, default search mode is a conjunction (AND). To switch to (OR), use the Advanced option.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dataset</th>
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<tbody>
<tr>
<td>Variable properties</td>
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<tr>
<td>Additional information</td>
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<tr>
<td>Areas of Information</td>
<td></td>
</tr>
<tr>
<td>Constructs for cognitive functioning and mental health</td>
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<tr>
<td>Constructs for general health</td>
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<tr>
<td>Constructs for the social domain</td>
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</table>

- **Variables (5,197)**

<table>
<thead>
<tr>
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<th>Label</th>
<th>Dataset</th>
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<tbody>
<tr>
<td>ADL_ABLAP_COM</td>
<td>OARS scale: Able to take care of appearance</td>
<td>COM</td>
</tr>
<tr>
<td>ADL_ABLAP_TRM</td>
<td>OARS scale: Able to take care of appearance</td>
<td>TRM</td>
</tr>
<tr>
<td>ADL_ABLBD_COM</td>
<td>OARS scale: Able to get out of bed</td>
<td>COM</td>
</tr>
</tbody>
</table>
Selecting a CLSA dataset

- Variables from all 4 Baseline data collection events are preselected by default (CMCQ, COM, TMCQ & TRM)
- To limit your search, you can select/deselect each under the Dataset Tab on the left
- For example, you can choose to search only data from the COMPREHENSIVE assessment (COM, CMCQ)
Searching the DPP

Using the search fields
- Variable label (food, stress, injury,...)
- Variable name (INJ_BRKN_COM; ALC_HVST_TRM,...)

Using the search box
- Areas of Information (Lifestyle, Diseases, Medication,...)
- Scales (Life-space assessment, Kessler Psychological Distress,...)

Using the drop-down menus
- Areas of Information
- Constructs
Searching by Areas of Information or Scales

- Areas of Information (Lifestyle, Diseases, Medication,...) and Scales (Life-space assessment, Kessler Psychological Distress,...) can be searched in the search bar, or from the dropdown menu on the left.
- Areas of Information group together variables around a common theme.
- For example, the search term ‘depression’ brings up both the CES-D Scale and the ‘Psychological distress and emotions’ AoI.
If you have already consulted the Data Collection Tools, and are familiar with the name of the variables you are interested in, you can enter them in the search field directly. For example, DEP - for variables from the CES-D Depression Scale.
You can also search using Variable Labels, by entering them in the search field directly. Please note however, this search is not likely to return an exhaustive list of variables, overlooking those that may not have been labelled with your search term of interest.
You can also perform searches with multiple criteria, entering an AOI (e.g. Psychological distress and emotions) and a Variable Label (e.g. depression). You then have the option of viewing intersection (AND) or union (OR) search results. For example, below, only 1 variable has the label ‘depression’ AND is also part of the Psychological distress and emotions AOI.
By changing the operator to OR, you retrieve results that EITHER have the label ‘depression’, OR are part of the Psychological distress and emotion AOI – resulting in 120 variables.

You can change the operator – AND/OR using the ‘Advanced/Basic’ link here.
16.4% of Comprehensive participants responded YES to the question “Has a doctor ever told you that you suffer from clinical depression”
Need More Information?

Still have questions? Email us: access@clsa-elcv.ca
CLSA Data Access Fees

- Partial cost-recovery model
- $3,000 for a straightforward alphanumeric dataset for any number of participants
- Additional fees applied for requests that require more complex customization
- No cost for graduate students who use CLSA data for their Master’s or PhD theses
- One free dataset for postdoctoral fellows
- Derived variables returned to the CLSA database as appropriate
Data Access Process and Timeline

Submit Application

- Administrative (NCC) & Statistical (SAC) Review 4 – 5 weeks
- Data and Sample Access Committee (DSAC) Review ~ 6 weeks
- Data & Sample Access Agreement Signed; Proof of Ethics Approval Provided 1 -2 weeks
- Dataset Preparation & Delivery (SAC) 1 year
- Monitoring (CLSA) Annual Report

Final Report

4 – 5 weeks
~ 6 weeks
1 -2 weeks
1 year

NOTE: All times are approximate; signing of Data and Sample Access Agreement between institutions is beyond the control of the CLSA
Funding opportunity: Researchers invited to analyze Canadian Longitudinal Study on Aging (CLSA) data

May 17, 2016

Canadian researchers are invited to submit health research projects which make use of available CLSA data. The selected projects will help find ways to improve the health of Canadians by better understanding the aging process and the factors that shape the way we age.

Researchers in all areas of health are invited to submit applications as the data available from over 50,000 Canadians covers various aspects of people’s lives, including biological, medical, psychological, social, lifestyle and economic aspects. The research projects should help us understand how these factors, taken individually and in combination, have an impact in both maintaining health and in the development of disease and disability as people age. This funding opportunity is restricted to the currently available alpha numeric data from the CLSA.

While this funding opportunity is focused on the CLSA data, linkages with data from any other data sets (e.g. environmental data) are encouraged.

The [Canadian Longitudinal Study on Aging](https://canadianagingstudy.ca/) is an initiative of the Canadian Institutes of Health Research. This specific funding opportunity is a partnership with the [Quebec Network for Research on Aging](https://www.qnra.ca/).
$1,205,000 available to fund up to 17 grants
$70,000 for up to one year
Alphanumeric data only
Researchnet application includes CLSA Data Access Request Application
CLSA Research Team
Scientific Management Team

Lead Principal Investigator
Parminder Raina (McMaster)

Co-principal Investigator
Christina Wolfson (McGill)

Co-principal Investigator
Susan Kirkland (Dalhousie)
UVic: Debra Sheets, Lynne Young, Holly Tuokko
UBC: Teresa Liu-Ambrose, Michael Kobor
SFU: Andrew Wister, Scott Lear
UCalgary: David Hogan, Marc Poulin, Eric Smith, Alex Chin, Hossein Sadrzadeh
UManitoba: Verena Menec, Phil St. John
McMaster: Parminder Raina, Cynthia Balion, Lauren Griffith, Andrew Costa, Harry Shannon, Christopher Patterson, Michael Veall, Guillaume Paré, Brenda Vrkljan
UOttawa: Vanessa Taler, Larry Chambers
McGill: Christina Wolfson, Ron Postuma, Brent Richards, Mark Lathrop
USherbrooke: Hélène Payette, Benoît Cossette
Dalhousie: Susan Kirkland
Memorial: Gerry Mugford
UToronto: Andrew Paterson
UWaterloo: Mark Oremus, Mary Thompson, Changbao Wu
Eindhoven University of Technology: Edwin van den Heuvel

+ Scientific working group members and co-investigators
CLSA Funders and Partners
The CLSA is funded by the Government of Canada through CIHR and CFI, and provincial governments and universities

Susan.Kirkland@dal.ca
access@clsa-elcv.ca
bbc@clsa-elcv.ca
info@clsa-elcv.ca
www.clusa-elcv.ca

Connect with us
Final Reminders

- For more information on the CIHR Funding Opportunity visit:
  - English: www.cihr-irsc.gc.ca/e/49778.html
- Presentation slides and the webinar recording will be posted to the CLSA website:
  - www.clsa-elcv.ca/stay-informed/presentations
  - www.clsa-elcv.ca/stay-informed/clsa-webinars
- The 2016-17 CLSA Webinar Series returns in September with a focus on research projects using CLSA data. Visit our website for updates.

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