

# Understanding the complexity of Aging and Health through interdisciplinary research: The Canadian Longitudinal Study on Aging (CLSA)

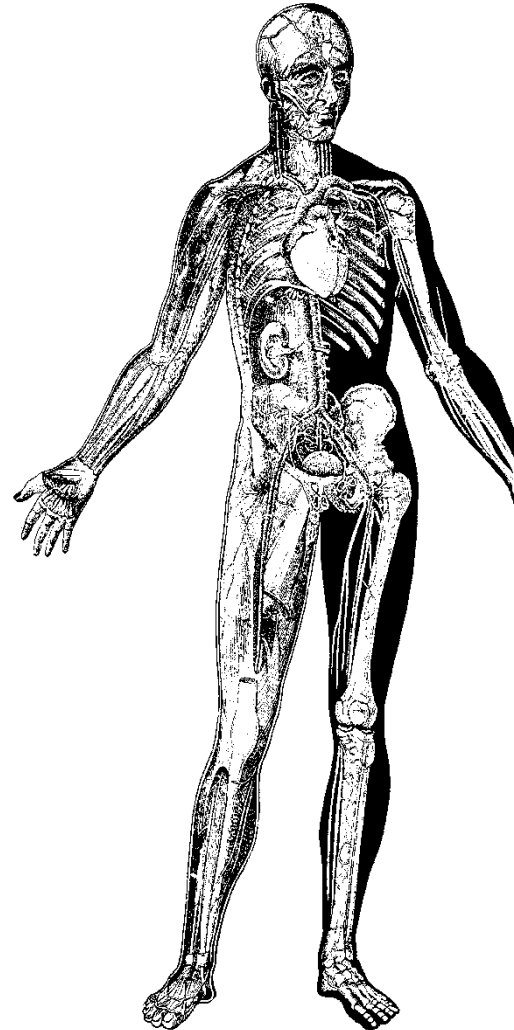
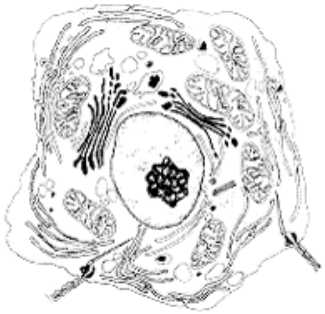
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Institute Advisory Board  
London, Ontario  
June 15<sup>th</sup>, 2006



# The Canadian Longitudinal Study on Aging (CLSA)

- ▶ A key component of the Canadian Lifelong Health Initiative, a strategic initiative of CIHR
  - ▶ The Canadian National Birth Cohort
  - ▶ The Canadian Longitudinal Study on Aging
- ▶ More than 160 researchers - 26 institutions
- ▶ Multidisciplinary - biology, genetics, medicine, psychology, sociology, demography, economics, epidemiology, nursing, nutrition, health services, biostatistics, population health

# Innovation - Cell to Society



- ▶ Mid life to old age
- ▶ Quantitative traits
  - ▶ Physical
  - ▶ Social
  - ▶ Psychological
- ▶ Gene-environment interactions
- ▶ Disease, disability, psychosocial consequences
- ▶ Adaptation

# CLSA Architecture

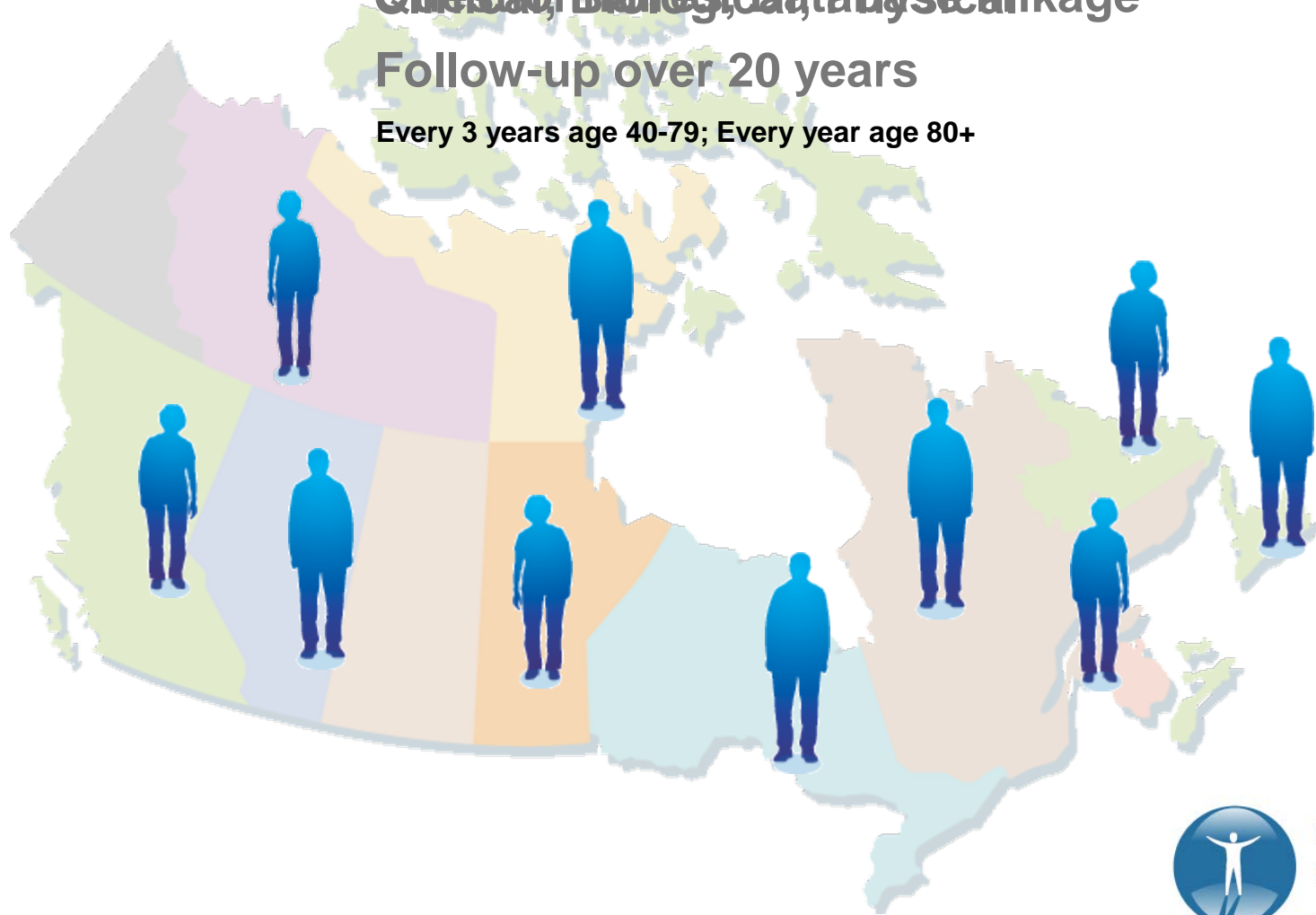


**Population enrolled: 50,000 (at 10 sites)**

**Questionnaires, Biological, and Physical**

**Follow-up over 20 years**

**Every 3 years age 40-79; Every year age 80+**



# Focus of Measurement

## Biomedical

- Activities of daily living/disability/injuries
- Frailty/co-morbidities
- Chronic diseases
- Cognitive function
- Mental Health
- Oral health
- Vision, hearing
- Medications
- Health Care Use
- Institutional care
- Genetics/Biomarkers
- Nutrition

## Psychosocial

- Lifestyle/behaviours
- Social networks and social support
- Values and meaning
- Everyday competence, adaptive functioning, coping
- Personality, emotion, psychopathology
- Work to retirement transitions
- Structural inequalities
- Built environments/physical environment
- Economics (wealth)
- Healthy aging and well being

# UPDATE

- Phase 1 studies
- Phase 2 Proposal
- Canada Foundation for Innovation (CFI)

# Phase 1 Studies and progress

- 1. Exploring the acceptability and feasibility of conducting a large longitudinal population-based study in Canada---  
Complete
- 2. Testing the CCHS as a potential participant recruitment vehicle for the CLSA—Complete
- 3. Feasibility of blood and urine specimen collection and OGTT in private and hospital based clinical laboratories ---ongoing
- 4. Feasibility of accessing health care utilization databases--  
complete
- 5. Return of individualized test results to participants and/or nominated health care providers---complete



# Phase 1 Studies and progress

- 6. Development and evaluation of disease ascertainment algorithms ---ongoing
- 7. Telephone cognitive tests as tools for the identification of eligible study subjects in population based research--ongoing
- 8. Assessment of the logistics of data collection methods and data transfer for text material---final
- 9. Exploring attitudes about mental incapacity and long term participation in the CLSA Protocol ---ongoing
- 10. Improving the informed consent process for complex population based research: finding the optimal information strategy---ongoing



# Phase II Proposal

- Recruitment Studies
  - Statistics Canada
  - Health Care registration databases
- Measurement Studies
  - Systematic review to update
  - Delphi consensus
  - Translation
  - Reliability and validity studies
  - Finalize documentation (training modules etc.)

# Canada Foundation for Innovation Application for Infrastructure

# The Vision

- ▶ A national network of infrastructure to enable state-of-the-art longitudinal interdisciplinary population based research across Canada
- ▶ Once in place this network will support the *largest interdisciplinary* research project in aging conducted to date: the **Canadian Longitudinal Study on Aging**



# Highly Qualified Personnel

	PI's/Faculty	Postdoctoral Fellows	Graduate Students	Technicians
2006	<ul style="list-style-type: none"> <li>➤ 10 -RI</li> <li>➤ 2 Recruits (2 repatriations)</li> <li>➤ 25 Local Affiliates</li> </ul>	<ul style="list-style-type: none"> <li>➤ 5 HCSC-RI</li> <li>➤ 45 National Affiliates</li> <li>➤ 3 Clinical Research Fellows</li> </ul>	<ul style="list-style-type: none"> <li>➤ 10 HCSC-RI</li> <li>➤ 35-45 National Affiliates</li> </ul>	<ul style="list-style-type: none"> <li>➤ 6 HCSC-RI</li> <li>➤ 14 Local Affiliates</li> <li>➤ 3-5 Other (Collaborators)</li> </ul>
2007	<ul style="list-style-type: none"> <li>➤ 5 HCSC-RI</li> <li>➤ 1 Recruit</li> <li>➤ 25 Local Affiliates</li> </ul>	<ul style="list-style-type: none"> <li>➤ 5 HCSC-RI</li> <li>➤ 45 National Affiliates</li> <li>➤ 3 Clinical Research Fellows</li> </ul>	<ul style="list-style-type: none"> <li>➤ 10 HCSC-RI</li> <li>➤ 35-45 National Affiliates</li> </ul>	<ul style="list-style-type: none"> <li>➤ 8 HCSC-RI</li> <li>➤ 14 Local Affiliates</li> <li>➤ 3-5 Other (Collaborators)</li> </ul>
2008	<ul style="list-style-type: none"> <li>➤ 6 HCSC-RI</li> <li>➤ 29 Local Affiliates</li> </ul>	<ul style="list-style-type: none"> <li>➤ 5 HCSC-RI</li> <li>➤ 50 National Affiliates</li> <li>➤ 4 Clinical Research Fellows</li> </ul>	<ul style="list-style-type: none"> <li>➤ 10 HCSC-RI</li> <li>➤ 35-45 National Affiliates</li> </ul>	<ul style="list-style-type: none"> <li>➤ 10 HCSC-RI</li> <li>➤ 14 Affiliates</li> <li>➤ 3-5 Other (Collaborators)</li> </ul>
Total HQP	<b>30 – 35</b>	<b>160 - 165</b>	<b>135 - 150</b>	<b>23 - 27</b>

## IMPACT:

*300+ HQP trained within 3 years with unique expertise in Aging & Population Health  
Formation of a premiere national Training Facility for the Study of Aging*

# Partnerships



**Statistics Canada**  
**Health Canada**  
**HRSD**  
**Provincial Agencies**

*Fonds de la recherche en santé*  
**Québec**



**Canada Foundation for Innovation**  
**Fondation canadienne pour l'innovation**




**HEART & STROKE FOUNDATION**  
*Finding answers. For life.*

**Health Charities**  
**Private Sector**



**Alzheimer Society**  
**CANADA**



**CIHR IRSC**



**CLSA**  
**ELCV**

# International Links



Womens Health and  
Aging Study - **USA**

Aging & Sexuality - **USA**

HRS - **USA**

British Birth Cohort - **UK**

UK Biobank - **UK**

ELSA - **UK**

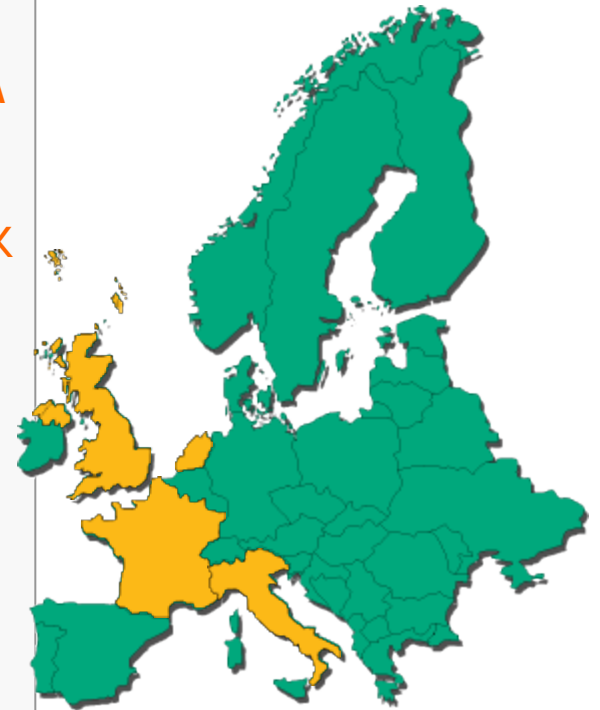
ALSPAC - **UK**

Cohorte Constances -  
**FRANCE**

LASA - **Amsterdam**

ILSA - **Italy**

InChianti - **Italy**





# Key Outcomes

- ▶ **Advance** the research agenda in aging, population health
- ▶ **Enable** new science leading to reduced disability and suffering among Canadians
- ▶ **Inform** social and health care policy, clinical and public health policy
- ▶ **Provide** a new framework for interdisciplinary, collaborative research
- ▶ **Retain/Recruit** outstanding researchers
- ▶ **Train** highly qualified personnel, graduate students, new researchers

# Institutional Support

- ▶ Development of CLSA Protocol
- ▶ Cash contributions of \$2,628,794
- ▶ Commitment to securing funds for ongoing operations and maintenance
- ▶ Full 30% institutional IOF funding
- ▶ Commitment to 6 CRCs
- ▶ Endowed Chairs in Population Health and Genetic Epidemiology



CLSA  

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ELCV

Email: [CLSA@epid.jgh.mcgill.ca](mailto:CLSA@epid.jgh.mcgill.ca)

Website: [www.CLSA-ELCV.ca](http://www.CLSA-ELCV.ca)



# Long term sustainability

- ▶ CLSA Funding(CIHR, Federal Government)
- ▶ National Centers for Excellence(NCE)
- ▶ CFI
- ▶ Provincial Funding (FRSQ)

Other national cohorts under development

- ▶ Canadian National Birth Cohort
- ▶ Cancer/chronic diseases cohort
- ▶ Multi-generational cohort

Other population health studies in Canada

- ▶ CaMos
- ▶ PURE

# Sustainability through Research

## Use of core facilities

- ▶ Large cohorts in development stages - CIHR
  - ▶ Canadian National Birth Cohort
  - ▶ Cancer/chronic disease cohort
  - ▶ Multi-generational cohort
- ▶ Large population based research
  - ▶ Canadian Multicentre Osteoporosis Study (CaMos)
  - ▶ Prospective Urban and Rural Epidemiology Study (PURE)
  - ▶ Panel Study of Lifecourse Dynamics (PSLD)
- ▶ Smaller clinical/population research
  - ▶ Investigator driven – e.g. Prevalence study of MS in Quebec (MS Latitude Project)