

Program Description

The Canadian Network on Hepatitis C (CanHepC) recruits and provides training and stipend support to Master's, Doctoral, and Post-Doctoral students as well as MDs and summer students whose research involves hepatitis C virus (HCV) and related diseases and who have demonstrated excellence early in their careers. All the trainees must be registered in a graduate or fellowship program at one of our affiliated institutions across Canada at the time of tenure of the award. In addition, the training program employs the knowledge and experience of mentors across Canada from multiple disciplines. Every mentor has played a major role in recent advances in hepatitis C research and has displayed their ability to train excellent researchers.

Objectives

CanHepC is a translational hepatitis C virus (HCV) research and training network established in 2015 through a joint initiative between the Canadian Institutes of Health Research (CIHR) and the Public Health Agency of Canada (PHAC). Our overarching goal is to improve health outcomes for people living with HCV at all stages of the cascade of care. We aim to close the gap between knowledge and practices, train and build capacity in research. Our main focus is to support translational research to prevent HCV infection, reach the undiagnosed and assess the health implications of HCV infection and re-infection in priority populations. Our research areas of focus and platforms structure are described below, they each are supported and will build on CanHepC's existing infrastructure of cohorts, data linkage platforms and biobanks:

Research Area 1: Optimising prevention and treatment programs to eliminate HCV

- **Theme 1.** Prevention of Hepatitis C
 - Theme 1.1 Behavioural, social and structural determinants
 - Theme 1.2 Correlates of protective immunity in priority populations
- **Theme 2.** Improving methods and measures to monitor the cascade of care, and assess progress towards HCV elimination
- **Theme 3.** Implementation science to optimise the cascade of care for priority populations

Research Area 2: Long-term consequences and health implications of hepatitis C infection, re-infection and treatment

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| a. Liver-related outcomes | b. Re-infection |
| c. Non-liver-related outcomes | d. Maternal-Fetal |

Cross-Cutting Platforms:

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| • Training, Education, and Mentorship Program | • Indigenous Platform |
| • Knowledge Translation and Exchange (KTE) | • Equity, Diversity and Inclusion (EDI) Platform |

Eligibility

Trainees who wish to apply to the Canadian Network on Hepatitis C, should confirm that they are eligible candidates by verifying that they meet the following requirements:

Administrative Requirements

- Ph.D students and post-doctoral trainees must be able to commit two years (minimum) to the program. They should not be beyond their third year of training on September 1st, 2023
- MSc and Ph.D trainees must be full-time students for their duration in the program.
- Must be registered or must have the intent to register in a recognized graduate program the same year where the application has been accepted by the research training program.
- Must be supervised or co-supervised by a CanHepC mentor.
- Each mentor can only have 2 trainees in the program at any time. Communicate with your proposed mentor to make sure they have the space for you. Under exceptional conditions, a third trainee could be accepted under co-supervision.

- A mentor is a PI who is a co-applicant on the CanHepC CIHR funded grant and holds an academic appointment that allows him/her to accept and supervise trainees.

Disciplinary Requirements

The CanHepC welcomes trainees from all academic backgrounds. The student's research must revolve around hepatitis C.

Disciplines/Themes ^{(Description at the end of the document):}

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| 1. Biomedical Research | 2. Health Systems Services |
| 3. Clinical Research | 4. Population Health Research |

Academic Requirements

An acceptable candidate may be any of the following types of trainees:

- **Graduate Students**
 - Students entering any recognized Master's or Doctorate program.
- **Post-Doctoral Fellows**
- **M.D.s**
 - Intend to complete or have already completed specialty training in the fields of General Internal Medicine, Gastroenterology, Infectious Diseases or Hepato-Biliary Surgery; or
 - Participants in a Royal College Clinician Investigator Program at one of the eleven participating universities

Note: With the exception of MD's and post-doctoral fellows, all applicants must be registered or must have the intent of registering in an affiliated graduate program before starting their fellowship.

Awards & Stipends

Selected CanHepC applicants will be awarded the amounts in Canadian Dollars (CAD) described below.

Graduate Student pursuing Master's degree	\$25,000/year	up to	2 years
Graduate Student pursuing Doctoral degree	\$30,000/year	up to	4 years
Post-doctoral Fellows	\$45,000/year	up to	2 years
Medical Doctors	\$57,200/year	up to	2 years

Stipends are paid directly to the trainee's supervisor who will then redistribute the money to the trainee. **The stipends run from September to August each year.** Stipends are pro-rated. Therefore if the trainee will graduate in March, they will only receive 9 months' worth of the stipend.

After their first year, all trainees are expected to apply for outside funding such as CIHR fellowship awards, pharmaceutical company scholarships, etc. Students who succeed in obtaining external funding will receive a bonus of up to \$5,000/year. If the external funding is less than what the CanHepC would provide, the program will "top-up" the amount and provide the bonus.

- For example, if a Doctoral student wins a \$25,000/year scholarship, the CanHepC will "top-up" the student's funding with another \$5,000 and then provide a \$5,000 bonus.
- Post-doctoral Fellows are expected to apply for outside funding the first year.

Funding is made available to CanHepC trainees for the following activities:

- Attending the CanHepC Annual Meeting and Symposium – Travel costs (a maximum amount will be provided for each city), travel to and from the airport, with shuttle ground transportation or carpooling in taxi.

The CanHepC reserves the right to deny or decrease the amount of funding available to the students.

Training Curriculum

CanHepC selected trainees will be required to participate in the training curriculum listed below:

- Attend the MCB6355 course – Transdisciplinary Studies in Infectious Disease (using Hepatitis C as a model) 4 credits.
 - To be completed once
 - Master and PhD students must be registered at Université de Montreal for this course and complete both the assignments and the collaborative grant proposal project
 - Students are welcomed and encouraged to audit the course again without having to do the homework/grant project again in other years
 - MDs and Postdoctoral fellows must attend 70% of the lectures (16 lectures of 24), homework is exempt.
 - MDs and Postdoctoral fellows must coach a grant exercise; help trainees with the Letter of Intent, Research module, CV, Budget and Presentation.
 - Funding will be suspended for MDs and Postdoctoral fellows who fail to fulfil these requirements.
- Participate in the webinar series
 - To be completed every year
- Participate in the online journal club
 - To be completed every year
 - Trainees should attend a minimum of 80% of meetings
 - Every trainee must *present at least once* during the year (September – June)
- Liver clinic visits and report on observation
 - Minimum of 15 hours
- Maintain contacts with local Canadian Liver Foundation chapters to perform knowledge translation
 - Contact Karen Seto (kseto@liver.ca) for details on how to get in touch with your local chapter
- Attend the Annual Meeting, Symposium and CLM meeting.
- Submitting abstracts to the Canadian Liver Meeting (CLM)
- Other requirements as introduced

Application Process

All applicants must be endorsed by a CanHepC mentor. To be accepted by a mentor, the trainee must contact the mentor directly. Send them your CV and explain that you would like them to be your mentor in the CanHepC. Make sure to include a brief message detailing your research interests.

The CanHepC must receive the following documents by: *date of the applications deadline in 2023 is not yet determined.*

Applications of CanHepC trainees who wish to pursue the next stage in the same lab can do so at the MSc/PhD transition in a case of a "direct passage": in this situation, they do not need to reapply to the program. They will receive funding for 4 years as is done for PhD students.

- Signed and completed CanHepC Application Form including research project summary
- Research Project Summary:**
- The research project summary should be completed in collaboration with the proposed supervisor(s).
 - The research project summary should be written in general scientific language, which is an important skill to acquire for future success in the research environment as applications are being reviewed by multi-disciplinary committees.
 - Include the specific hypothesis of the research and describe the applicant's role on the project.
 - The research project summary is among the most important parts of the application. Applicants and their supervisor(s) should make sure that it provides a concise account of the subject matter, an overview of each part of the research plan, specific project aims and the methodology. The summary should reflect the significance of the project.
 - **Maximum 500 words**, including references (references can be in a smaller legible font). Figures and tables are not accepted.
- A letter of support from the proposed mentor
 - Two signed and completed CanHepC Reference Forms
 - Applicant's CIHR Common CV
 - Transcripts of applicant's complete academic record to date, postdoctoral trainees are exempt
 - Proposed supervisor & co-supervisor (if any) complete CIHR Common CV
 - Proof of application/acceptance/attendance within an academic program of study

- Foreign trainees must submit documentation indicating permission to study and perform research within Canada prior to the award start date (September 1st).

Applications should be submitted on line through our [website](#).

Applicants who pass the first selection stage will be invited to give a short 10-minute presentation via web/teleconference on their proposed research project on “day to be communicated later”. Members of the selection committee will ask the trainee questions about their research.

The announcement of the results of the application process is scheduled for “day to be communicated later”.

Note: With the exception of undergraduates, MDs and postdoctoral trainees, CanHepC selected trainees **must** be registered or registering in a graduate program by September 2023. Otherwise, acceptance into the program may be temporarily suspended or completely revoked.

The Four Themes of CIHR Funded Health Research

Research funded by CIHR is organized under the four themes shown below. This section provides a description of each theme as well as examples of common ethical issues that may arise under each theme. Research is not an activity that is isolated from society. A wide range of stakeholders influence the lifecycle of knowledge creation and application including funders, students, patients, industry, and policy-makers as illustrated in the examples below.

Theme 1: Biomedical Research

Biomedical research is research with the goal of understanding normal and abnormal human functioning, at the molecular, cellular, organ system and whole body levels, including development of tools and techniques to be applied for this purpose; developing new therapies or devices that improve health or the quality of life of individuals, up to the point where they are tested on human subjects. Biomedical research may also include studies on human subjects that do not have a diagnostic or therapeutic orientation.

- Common ethical considerations that researchers should be aware of under this theme include:
 - Access to, and the allocation of, scarce resources such as databanks or expensive equipment required to conduct research
 - Factors that may inappropriately influence the framing of research questions and the conduct of researchers such as personal gain and other conflicts of interest

Theme 2: Clinical Research

Clinical research is research with the goal of improving the diagnosis, and treatment (including rehabilitation and palliation), of disease and injury; improving the health and quality of life of individuals as they pass through normal life stages. Clinical research usually encompasses research on, or for the treatment of, patients.

- Common ethical considerations that researchers should be aware of under this theme include:
 - The ways in which the funding source may influence the researcher and the research agenda
 - Equal access to research participation and the equitable distribution of research benefits to human participants

Theme 3: Health Systems Services

Health services research includes research with the goal of improving the efficiency and effectiveness of health professionals and the health care system, through changes to practice and policy. Health services research is a multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and, ultimately, Canadians' health and well-being.

- Common ethical considerations that researchers should be aware of under this theme include:
 - Complex ethical tradeoffs that must be considered when analyzing the economic efficiency of the health care system or particular services
 - Determining the best interests of diverse communities and the best way to serve the needs of these communities

Theme 4: Population Health Research

Population and public health research comprises research with the goal of improving the health of the Canadian population, or of defined sub-populations, through a better understanding of the ways in which social, cultural, environmental, occupational and economic factors determine health status.

- Common ethical considerations that researchers should be aware of under this theme include:
 - Thinking through the special considerations or unique harms and benefits that may arise when conducting research with vulnerable groups

- Weighing the best interests of groups or whole populations against the rights of individuals when conducting public health research