CLINICAL INVESTIGATOR PROGRAM OPERATIONS MANUAL

I.

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I. Introduction

The major goal of the Clinician Investigator Program (CIP) is to assist in the career development of clinician investigators in Canada. The program provides a formal postgraduate medical education pathway that fulfills the existing specialty/subspecialty requirements of the Royal College and provides integrated, structured, and rigorous research training. The training involves a minimum of two years of research intensive training that involves enrolment in a graduate degree program (graduate stream), to complete a thesis or equivalent, or in a postdoctoral fellowship program if the resident already has a Master's or PhD degree (postdoctoral stream).

For the purpose of this program, health research includes not only the traditional areas of laboratory and clinical biomedical research, but also such fields as economics and management, and social, behavioral, and information sciences as they apply to health and disease.

The program is available to residents enrolled in specialty or subspecialty residency programs accredited by the Royal College who has demonstrated an interest in and a potential for careers as clinician investigators.

II. Goals and Objectives

(See Appendix D for Complete Goals and Objectives)

1. Medical Research Expert

- function effectively as a clinician investigator, integrating all of the CanMEDS Roles to function as a clinician and to conduct ethical research
- seek appropriate consultation from others as required, recognizing the limits of their own clinical research expertise

2. Research Communicator

- develop rapport, trust and ethical relationships with research subjects, peers and other professionals

3. Research Collaborator

- participate effectively and appropriately in interprofessional research teams
- effectively work with others in research teams to prevent, negotiate and resolve interprofessional conflicts

4. Research Manager

- manage activities for research skill and career development effectively
- manage research project and resources appropriately, effectively and efficiently
- manage experimental data recording and result interpretation appropriately in research endeavors
- serve in administration and leadership roles, as appropriate to their research career

5. Health Advocate

- participate in ethical research, with appreciation for the importance of research to the social, economic and biologic factors that impact health
- participate in activities that demonstrate an ability to advocate for research participants, patients, communities and populations, as appropriate to further health and the research enterprise
- promote dissemination of research knowledge to patients, communities and populations, as appropriate

6. Scholar

- establish and maintain knowledge, skills and attitudes appropriate to their research practices, with a thorough understanding and appreciation of the components of proper scientific inquiry
- elicit and accurately synthesize relevant research information and perspectives from relevant sources
- evaluate information and its sources critically and apply this appropriately to research practices and decisions
- demonstrate proficient and appropriate use of research skills. Perform complete and appropriate assessments of research questions and problems, using effective experimental methodologies to address questions
- convey relevant information and explanations accurately to research subjects, peers and other professionals, in research activities, including scientific presentations, grant proposals, publications and other communications
- consult appropriately for feedback on knowledge and performance
- maintain and enhance professional activities through ongoing learning
- facilitate the learning of others about research, including patients, families, students, residents, other health and research professionals, the public and others, as
- contribute to the creation, dissemination, application and translation of new knowledge and practices

7. Professional

- demonstrate a commitment to the profession, society, subjects and patients through ethical and honest research practices
- demonstrate commitment, honesty, integrity and compassion in research activities, including participation in profession-led regulation, peer-review activities, and the prevention of academic misconduct
- demonstrate a commitment to clinician researcher health and sustainable practice
- understand the role of a clinician scientist in academic medicine
- utilize research skills to promote medical science within the health care system

III. STRUCTURE OF PROGRAM

A. PATHWAYS

There are three pathways for CIP training:

1. The Continuous Training (CT) pathway, involves a minimum of 24 months of continuous, intensive research training which can be done at different points in residency.

2. The Fractionated Training (FT) pathway, is intended to allow for a distribution of a minimum 24 months of research during training, in periods of 3 months or longer blocks, with one year of continuous research training. The FT option is for individuals who wish to pursue research that requires several years to plan a research project, allowing interruptions for clinical work.

3. The Distributive Curriculum Training (DCT) pathway, is intended for outstanding residents who have research experience prior to entering a residency program. In the DCT pathway, there is coordinated entry into the PGY1 year for both CIP and the specialty program. The PGY1 and PGY2 years in the DCT pathway are identical to a traditional specialty training program but the PGY3 equivalent is distributed over the PGY3 to PGY5 years, with three months of selective time in the PGY3 year utilized for research and completion of some clinical training requirements during the research block. In the DCT pathway, there are 27 months of research experience.

B. STREAMS

There are two streams for CIP training:

1. Graduate Stream

   This stream is for candidates who do not hold a graduate degree and therefore must be enrolled in a graduate program at McGill University. The supervisor must hold an appointment in the graduate department where the CIP candidate is enrolled. Committee meetings regarding the candidate's progress and proper completion of forms 1 and 2 (see Appendix A) after one, two, and subsequent years will be the responsibility of the graduate school. The CIP administrative assistant will ensure that proper documentation of the above is submitted to the CIP committee for review.

2. Post Graduate Stream

   This stream is for candidates who already hold a graduate degree but who wish to pursue post doctoral research training under the auspices of CIP. Such candidates should be enrolled in the faculty of graduate studies as a PhD or as a post-doctoral fellow. Progress tracking involves the completion of the graduate school forms 1, 2, and 3 (as outlined under Progress Tracking, see Appendix A) with subsequent approval by the CIP committee. An advisory committee, composed of the fellow's supervisor, a member of the CIP committee, and an external expert, will monitor the candidate's progress and report to the CIP committee. It is the responsibility of the CIP fellow to establish such a committee.

IV. APPLICATION

1) Completed CIP Registration Form
2) Curriculum Vitae
3) A one-page summary of research project
4) Supporting letter from research supervisor
5) Bio sketch C.V. in NIH format from your supervisor

V. CRITERIA FOR ADMISSION

- At the time of application, the candidate should be enrolled in a RCPSC accredited specialty or subspecialty program ***and***

- The candidate should be registered as a graduate student in the Faculty of Graduate studies at McGill OR, if the candidate already holds a graduate degree, be enrolled as a post doctoral fellow ***and***

- Research supervisor must have an appointment in the graduate school where the CIP candidate is enrolled **and**

- Research proposal must be reviewed and accepted by the CIP Committee

VI. ACCEPTANCE

- Applications will be assessed by the CIP committee (see Appendix C) who will render a decision about whether or not such applicants are accepted into the program

- In principle, non-thesis based Masters will not be acceptable for acceptance into CIP unless specifically approved by the CIP committee

- Deadline for submission of application is June 1 of each academic year.

- Deadline for Formation Complémentaire funding is the previous January (see Funding below) and, as a result, such applications will be considered earlier to allow for the possibility of Formation Complémentaire Funding (see section VII, page 11).

VII. FUNDING

The sources of funding for CIP are several folds:

A. Formation Complémentaire
   - Residents enrolled in CIP are eligible for RAMQ funding as part of the Formation Complémentaire Program
   - No PREM is required
   - There are 12 positions in Quebec for four medical schools i.e. McGill has at least 3 of these positions
   - Competitive funding
   - Interested CIP fellows should submit their CIP applications for the January CIP committee meeting for acceptance into CIP and should demonstrate their interest in obtaining such funding
   - All interested CIP applicants are ranked by the committee regarding the 'strength' of their application and the list is submitted to the PGME office
   - The Associate Dean for PGME will obtain the positions from the RAMQ and distribute them according to the list submitted by CIP committee.

B. FRQS Clinician Scientist Award
   - A five year research program awarded by the FRQS
   - First two years are CIP years and designated as phase I-funding will be provided by the RAMQ
   - The CIP program director will be responsible for ensuring that the candidates are appropriate for CIP and the program
   - The second two years are research years in a University outside of McGill and designated as phase 2. Funding will be provided by the FRQS. Progression from phase 1 to phase 2 requires approval from the FRQS and requires a formal letter of intent of an academic position at a McGill University Hospital
   - The final year is an academic position at a McGill University Hospital with salary support from the FRQS and requires that the candidate will apply for an FRQS Chercheur Boursier career award.

C. Alternative third party sources from the FRQS or CIHR

- All CIP fellows are eligible for competitive salary support programs from the FRQS and CIHR. Details regarding application are provided by the respective funding organization.

D. Internal departmental funding

- CIP candidates can be funded by internal departmental or university awards

E. Internal CIP funds

- For CIP candidates unable to obtain funding through all of the mechanisms described above, there are CIP funds available to support such candidates.
- The amount, duration and awarding of these monies will be at the discretion of the CIP committee at one of their quarterly meetings.

-

VIII. EVALUATIONS

- All CIP residents will be evaluated by their respective supervisors every six months using the CANMEDS evaluation forms designed specifically by the Royal College for the Clinical Investigator Program (see Appendix B).

- These evaluations will be completed online using the McGill One45 System
    - Evaluations completed from outside institutions will be completed on hard copy forms, to be submitted to the CIP administrative assistant for CIP files.

- Supervisors will be evaluated, confidentially, by their residents after the completion of their fellowship.

- CIP trainees will also provide feedback of the CIP curriculum using the One45 System

IX. PROGRESS TRACKING

- All CIP fellows will undergo tracking of their research progress using the McGill graduate school tracking forms (Form 1, form 2, and form 3, see Appendix A).

- For residents in the Graduate Stream, form 1 at month 3 and form 2 at month 6 will be evaluated by the CIP committee and discussed at meetings 1 and 2, respectively (see Appendix C). The deadline for submission for CIP candidates is October 1 for the 1st form 1 (at 3 months) and January 1 for the 1st form 2 (at 6 months). The final progress tracking forms at months 12 and 24 will be completed by their respective graduate programs and submitted to the CIP committee.

- For residents in the Post Graduate Stream, form 1 at month 3 and form 2 at month 6 will be evaluated by the CIP committee and discussed at meetings 1 and 2, respectively (see Appendix C). The deadline for submission for CIP candidates is October 1 for the 1st form 1 (at 3 months) and January 1 for the 1st form 2 and 3 (at 6 months). The final progress tracking forms (forms 1,2, and 3) at months 12 and 24 will be completed by the CIP resident and submitted to the CIP committee for approval.

X. REASEARCH BEING CONDUCTED OUTSIDE OF MCGILL UNIVERSITY

- Individuals may undertake their research training as part of a CIP in institutions outside of the faculty of medicine where they are registered in a specialty/subspecialty residency program. For those undertaking research training at a different institution from their specialty/subspecialty residency program, the research training should ideally be supervised by the CIP director at the centre supervising the research training, if a program is offered at that university. If this is not possible, the CIP committee and the faculty of medicine in which the individual is registered retain all the above responsibilities for approval and monitoring of the individual's off-site CIP research training, including the validation of its satisfactory completion.

- Individuals undertaking research outside of McGill University, as part of their CIP training, must complete a minimum of 12 months of training at McGill University

- Research training, including designated supervisors, undertaken in an outside institution must be approved by the CIP committee

- All evaluations, using Royal College certified forms, must be completed by the supervisor overseeing the CIP trainee's research in the outside institution and must be approved by the CIP committee.

- During the time of research training in an outside institution, progress tracking forms, using forms 1, 2, and 3, will be completed by the CIP trainee and approved by the CIP committee.

XI. CIP Lecture Series

- The CIP lecture series is a series of 14 sessions per year, given by experts in academic medicine, usually on every second Tuesday at 16:30 for 60-90 minutes

- It is mandatory that all CIP fellows attend the 14 sessions in the CIP Lecture series

- Attendance will be taken and each CIP fellow must be present for at least 12 of these sessions in order to receive CIP certification

- Usually these lectures should be attended in the first year of the CIP program although sessions missed in the first year can be attended in the second year

XII. REMEDIATION

A resident that receives a borderline evaluation from their supervisor, or unsatisfactory progress tracking (as defined below), will be deemed to have had a Poor Performance Evaluation. Residents who have two Poor Performance Evaluations will be placed on probation thereby being subject to the following procedure:

- The CIP director will meet with the candidate to discuss what steps are to be taken to remedy the situation.

- The student will have one month to resubmit a revised form 1 progress tracking form, based on the supervisor's and the committee's suggestions. The revised progress tracking form will be circulated among members of the CIP committee to assess if it is satisfactory, providing feedback to the CIP program director. Areas of weakness will be identified and a proposed remediation and upcoming 3-month timeline will be decided by the committee, in consultation with the supervisor, based on proposed objectives. The student will then submit a progress tracking form 2, outlining the resident's progress in remediation, at the end of the 3 month period.

- Both forms will be submitted to the CIP committee members for approval.

- After the CIP committee has reviewed the report, the CIP director will meet again with the candidate to inform him/her of the CIP committee's decision.

- CIP residents considered not to be meeting required levels of knowledge or ability despite the procedures outlined above in, will have their dossier discussed among CIP committee members and specific measures will be adopted such as requesting further training in research by the individual with either the existing supervisor or even a different supervisor or the candidate will be asked to withdraw from the program. Further training will be subject to the Progress Tracking measures that have been adapted by the program.

- The CIP Program Director will write a letter outlining the reasons for the Probation, the areas of weakness, the remediation plan, the start and end date of the probationary period, in line with the Evaluation & Promotion in Postgraduate Medical Training regulations (in accordance with Article 5, http://www.medicine.mcgill.ca/postgrad/docs/promog2014.pdf).

Unsatisfactory progress tracking is defined as progress tracking that does not meet the satisfaction of the CIP committee despite initial written feedback by the committee.

XIII. Appeal

A resident may Appeal the Decision of the CIP Program Committee placing him or her on probation, in accordance with Article 7.1.b of the Evaluation and Promotion in Postgraduate Training Programs regulations.

XIV. COMPLETION OF PROGRAM AND GRANTING OF ROYAL COLLEGE CERTIFICATION

- Successful completion of the CIP program will be granted after the following steps have been completed and approved by the CIP committee
    - Completion of 24 months of research as defined by one of the three different pathways noted above (see IIIA, p.6)
    - Completion of all evaluations by their supervisors
    - Completion of all progress tracking forms
    - Attendance at CIP curriculum lectures (see section XI)
    - Completion of the on-line MSSS ethics course
    - Obtaining of a Masters degree for all Graduate Stream trainees
    - For all Post Graduate stream CIP fellows, publication of at least one peer review publication or have at least one peer review paper 'in press'
    - Completion of all clinical components and obtaining RCPSC certification in the individual's specialty/subspecialty by examination

APPENDIX A: Progress Tracking Forms 1, 2 and 3

RESEARCH OBJECTIVES REPORT FORM

☐ This is a SEMI ANNUAL report.
☐ This is an INTERIM report (following an unsatisfactory progress report).

Name: ____ _____ Supervisor: _ _____

Degree & Year: __ _____Dates of Applicable Time Period:_____

Department: _____From_____ To:_____

Objectives and timelines for the applicable time period:

By signing below, all parties acknowledge that the objectives and timelines described above are acceptable. **Please note that failure to meet objectives on any two progress reports may be cited as grounds for requiring that a student withdraw from the program of study.**

Supervisor: _____Date:_____

Student: _____ Date:_____

CIP Program Director:_____ Date: _____

☐ Student did not sign form and does not agree with the objectives (explanation attached)

RESEARCH PROGRESS RECORD

To be completed by the student

Part I

☐ This is a SEMI ANNUAL report.
This is an INTERIM report (following an unsatisfactory progress report).

Name: _ _____ Supervisor: _____

Degree & Year: _____Dates of Applicable Time Period: _____

Department: __ _____From:_ _ _____ To :__ _____

Progress towards research objectives, to be completed by student in reference to previously stated objectives (including publications and presentations)

1/2

RESEARCH PROGRESS RECORD
Part II

Other Activities and Accomplishments
(including funding, prizes and awards, committee service, research assistantships, teaching, and other, as appropriate)

Number of meetings with supervisor since the last progress report: _____

Student's Signature: _____Date:_____

RESEARCH PROGRESS REPORT FORM

To be completed by the supervisor and/or supervisory committee
Indicate if this is an INTERIM report (following an unsatisfactory report)

Name: _____Supervisor: _____

Degree & Year:_____Dates of Applicable Time Period: _____

Department:_____From: _____ To :_____

Evaluation of Research Progress							
	Comprehensives	**Research Plan**	**Requisite Knowledge**	**Research Skills**	**Motivation**	**Research Accomplishments**	**Other**
Meets Objectives	☐	☐	☐	☐	☐	☐	☐
Fails to Meet Objectives	☐	☐	☐	☐	☐	☐	☐
NA	☐	☐	☐	☐	☐	☐	☐

Explanation of above ratings

By signing below, all parties acknowledge that the evaluation and progress described above are acceptable. **Please note that failure to meet objectives on any two progress reports may be cited as grounds for requiring that a student withdraw from the program of study.**

Overall research progress: satisfactory_____; NOT satisfactory_____;

Supervisor:
_____Date:_____

Student: _____ Date: _____

CIP Program Director:_____ Date: _____

☐ Student did not sign form and does not agree with evaluation (explanation attached)

APPENDIX B: Evaluation Forms

McGill University
Clinical Investigator Program

Name: _____ **Dates of Applicable Period:**
Supervisor: _____ **From:** _____ **To:** _____

This information is confidential and will not be shared with your supervisor(s) while you are enrolled in the CIP Program

	Strongly Disagree	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
Stimulated enthusiasm for learning	☐	☐	☐	☐	☐
Encouraged the contribution of independent, original thought	☐	☐	☐	☐	☐
Assisted in the development of your working knowledge and understanding of the general principles of research methodology related to your area of research	☐	☐	☐	☐	☐
Assisted in the development of competence in clinical and laboratory techniques	☐	☐	☐	☐	☐
Was approachable for discussion	☐	☐	☐	☐	☐
Freqency of contact was appropriate	☐	☐	☐	☐	☐
Provided appropriate independence in conducting research	☐	☐	☐	☐	☐
Provided feedback on draft thesis material in a timely manner	☐	☐	☐	☐	☐
Provided adequate opportunity to present publically and meet with leading scholars in the area of research	☐	☐	☐	☐	☐
Contributed to the improvement of your technical skills	☐	☐	☐	☐	☐
Provided direction and feedback	☐	☐	☐	☐	☐
Provided quality informal day-to-day teaching	☐	☐	☐	☐	☐
Assisted in the refining of the topic of research and the establishment of a critical path for completion of the research and thesis preparation	☐	☐	☐	☐	☐
Discussed with you any arrangements for provision of student funding	☐	☐	☐	☐	☐
Ensured appropriate continuing supervision during his/her absence	☐	☐	☐	☐	☐
Provided a good role model as a clinician / researcher	☐	☐	☐	☐	☐
Provided a good role model as a teacher	☐	☐	☐	☐	☐

COMMENTS (if any)

McGill Post Graduate Medical Education

McGill University
Clinical Investigator Program

Name: _____ **Resident:** I ☐ II ☐

	Could not judge	*Unsatisfactory*	*Borderline*	*Satisfactory*	*Superior*
Medical Research Expert					
Effectively functions as ethical clinical investigator	☐	☐	☐	☐	☐
Seeks appropriate consultation from others as required	☐	☐	☐	☐	☐
Research skills in study/experimental design	☐	☐	☐	☐	☐
Technical aspects of research skills	☐	☐	☐	☐	☐
Quality of data recording and interpretation	☐	☐	☐	☐	☐
Ability to gather and critically appraise reference material	☐	☐	☐	☐	☐
Problem-solving skills	☐	☐	☐	☐	☐
Communicator					
Communicates with subjects,peers, professionals	☐	☐	☐	☐	☐
Quality of verbal presentations, formal and informal	☐	☐	☐	☐	☐
Quality of written research reports and manuscripts	☐	☐	☐	☐	☐
Follow-up and completion of tasks and meeting deadlines	☐	☐	☐	☐	☐
Collaborator					
Participates in interprofessional research teams	☐	☐	☐	☐	☐
Ability to work with others in team environment	☐	☐	☐	☐	☐
Manager					
Manage activities for research skills and career development	☐	☐	☐	☐	☐
Manage research resources, data recording and results	☐	☐	☐	☐	☐
Serve in administration and leadership roles	☐	☐	☐	☐	☐
Health Advocate					
Participates in ethical research with appreciation of all factors	☐	☐	☐	☐	☐
Advocates for subjects, patients and the community	☐	☐	☐	☐	☐
Promotes dissemination of research knowledge appropriately	☐	☐	☐	☐	☐
Scholar					
General knowledge of research principles and skills	☐	☐	☐	☐	☐
Specific knowledge and understanding of specialized topics	☐	☐	☐	☐	☐
Critically evaluate information and sources and apply to research	☐	☐	☐	☐	☐
Conducts continuous self-directed learning	☐	☐	☐	☐	☐
Professional					
Commitment, honesty,and compassion in all research activities	☐	☐	☐	☐	☐
Self-awareness and responds to feedback	☐	☐	☐	☐	☐
Global	☐	☐	☐	☐	☐

COMMENTS (Include strengths, weaknesses and provide a rationale for your ratings. Please use reverse side if necessary)

.....

.....

.....

.....

Signature of Supervisor **Date**

Signature of Trainee **Date**

☐ Agree ☐ Disagree

McGill University
CIP

Evaluated By : evaluator's name
Evaluating : person (role) or moment's name (if applicable)
Dates : start date to end date

* indicates a mandatory response

CIP Curriculum Evaluation Form

	Poor	Fair	Good	Very Good	Excellent
INTEREST	○	○	○	○	○
SPEAKER	○	○	○	○	○
ORGANIZATION	○	○	○	○	○
CONTENT	○	○	○	○	○
OVERALL	○	○	○	○	○

Comments:

The following will be displayed on forms where feedback is enabled...
(for the evaluator to answer...)

*Did you give feedback at the end of the rotation? / Avez-vous donné de la rétroaction au stagiaire à la fin du stage?
○ Yes/ Oui
○ No/ Non

(for the evaluee to answer...)

*Did you recieve feedback at the end of the rotation? / Avez-vous reçu de la rétroaction à la fin du stage?
○ Yes/ Oui
○ No/ Non

*Are you in agreement with this assessment? / Êtes-vous d'accord avec cette évaluation?
○ Yes/ Oui
○ No/ Non

Please enter any comments you have(if any) on this evaluation. / Si vous le désirez, svp nous donner vos commentaires plus bas.

APPENDIX C: CIP Committee Meeting Schedule and Tasks

Four annual meetings of the CIP committee meeting per year as follows:

- Meeting 1 (October):
  - Approval of form 1 (3 month) for all new CIP fellows

- Meeting 2 (January)
  - Approval of form 2 and 3 (6 month) for all new CIP fellows
  - Ranking order list (to be submitted to PGME) of all CIP applicants interested in Annee Complémentaire funding

- Meeting 3 (April)
  - TBD

- Meeting 4 (June)
  - Assessment and approval of all new CIP candidates

Appendix D: Complete Goals and Objectives

MCGILL UNIVERSITY
FACULTY OF MEDICINE

CLINICIAN INVESTIGATOR PROGRAM
Goals and Objectives

The major goal of this program is to foster the career development of Clinician Investigators by providing a formal postgraduate education program that fulfills the existing clinical specialty requirements of the Royal College and provides, in addition, a minimum of two years of structure research training.

The residents must be enrolled in RCPSC accredited specialty or subspecialty programs leading to RCPSC certification. They must be selected by their faculty or registered in the CIP by the final year of the specialty or subspecialty program.

To participate in the CIP program at McGill, the resident must be registered in an approved program of the Faculty of Graduate Studies and Research and meet all its requirements.

Each research resident will have a designated research supervisor and resident committee.

Educational and research objectives for the residents will be given out to each resident in the CIP program.

The completion of such a program would enable the resident to have acquired the knowledge, skills and attitudes essential to the establishment of a career in research.

Satisfactory completion of the CIP requires the following:

- completion of the clinical components and obtaining RCPSC certification in the individual's specialty/subspecialty by examination

- completion of the research component of training and verification of completion by the host Medical School. An evaluation by the graduate school with awarding of the degree constitutes satisfactory completion of the research component.

- completion of progress tracking with approval of the Clinical Investigator Program (CIP) committee.

EDUCATIONAL AND RESEARCH OBJECTIVES FOR MCGILL RESIDENTS ENROLLED IN THE CIP

General Requirement

At the end of the period of research training the individual will be expected to have acquired the knowledge, skills and attitudes fundamental to embarking on a career in health research. In most cases, further research training specific to the candidates' field of interest will be required, so that he/she can succeed as an independent investigator. The CIP should also provide an opportunity to integrate research and clinical care. During the first two years of the research component, some time may be spent in clinical activity; the majority of the time (at least 80%), however, will be devoted to research.

Specific Objectives for Individual Research Residents

Demonstrated competence must be achieved in the following areas:

1. Medical Research Expert
   Through formal course work, to develop a working knowledge and understanding of research methodology including:
   - General principles (basic experimental design, clinical trial design, critical appraisal of the literature, biostatistics, medical and research ethics etc).
   - Knowledge relevant to the specific area of research, as well as, general knowledge relating to the clinical and research aspects of the chosen field of study.
   - Competence in the techniques specific to the research project; in a laboratory, in clinical health related fields, or in experimental design or data analysis and population studies.
   - The ability to design, plan and carry out an experiment, and to analyze and interpret the results.

2. Communicator
   - The ability to present information in a formal setting and to defend such a presentation and discussion.
   - The ability to write a report suitable for publication in a peer reviewed journal.
   - The ability to write a grant proposal for research funding.

3. Collaborator
   - An ability to work effectively as part of an interdisciplinary team.

4. Manager
    - Displays ability to manage own time effectively
    - Provides appropriate and timely follow-up on research-related issues.
    - Understands resource allocation issues with respect to own research

5. Health Advocate
    - In-depth knowledge of the ethical issues relevant to the conduct of research in human subjects.
    - In-depth knowledge of the ethical issues relevant to the conduct of research in animal models.

6. Scholar
    - A commitment to the need to re-examine accepted beliefs through a spirit of inquiry.
    - A commitment to the importance of absolute objectivity and honesty in the conduct and reporting of research.
    - An understanding of the needs for continuing self-education.

7. Professional
    - Demonstrate awareness of major research-governing national bodies
    - Understand and demonstrate ethical research practices
    - Demonstrates professional behavior toward own team and other researchers

Individual educational and research objectives will be developed for each resident in conjunction with the research supervisor.

Residents must meet the individual educational objectives of their respective Graduate Programs as per the requirements outlined in the description in the handbook on Graduate Studies in Medical and Allied Sciences