MD/STIR overview: The Faculty of Medicine and Dentistry (FoMD) at the University of Alberta offers the MD with Special Training in Research Program (MD/STIR) to undergraduate medical education (UME) students. Through this program UME students participate in world-class biomedical research and develop their research, presentation and communication skills. Students that successfully complete their MD degree and all requirements of the MD/STIR program receive the designation of “Special Training in Research” on their degree parchment and transcript.

The MD/STIR program is made possible by Faculty research supervisors. Supervisors direct student research activities, contribute to stipend support in some cases, and assist the MD/STIR student to fulfill the requirements of the MD/STIR program (outlined below).

Research requirements: The main research requirement for students in the STIR program is a minimum of 24 weeks of research experience (excluding vacation time) through flexible timelines (outlined below). All MD/STIR students engage in ~16 weeks of full-time research in the summer after first year of medical school. The remaining ~8 weeks of research can be conducted via three alternative options:

- full-time in the summer after year 2 (Option A), or
- part-time during academic year 2 and part of the summer after year 2 (Option B), or
- part-time during academic years 2 and 3 (See Option C).

The timeline option that best fits the supervisor and student must be indicated in the application.

Student stipends: All MD/STIR students must receive a student stipend when they are engaged in the full-time summer research portion of the program. All students should apply for an Alberta Innovates Summer Research Studentship award and any other appropriate competition. In many cases MD/STIR students are successful in obtaining Alberta Innovates Summer Research Studentship funding. If unsuccessful in obtaining an Alberta Innovates Summer Research Studentship award, the top 10 unfunded students that have applied to the MD/STIR program will be supported by the FoMD for 50% of their stipend provided that the supervisor also contributes 50%. If ineligible for the above 50:50 support, the supervisor may opt to contribute 100% of the summer stipend.
Information for Supervisors of students in the Special Training in Research Program (MD/STIR)

If no summer stipend support is obtained for the student, the student is ineligible for the MD/STIR program.

Student presentations and oral defense: All MD/STIR students must present 3 oral research seminars and 1 poster presentation.
- oral presentation to fellow MD/STIR students and supervisors
  - 3 minute “pitch” presentation of proposed work
- oral presentation to an appropriate group (e.g. lab meeting, group meeting, conference)
  - arranged by the supervisor at a convenient time for the supervisor
- oral presentation to the MD/STIR Research Committee
  - 10 minute presentation of final report
  - supervisor is invited to participate
- Poster
  - presented to fellow MD/STIR students
  - presented at FoMD Summer Student Research Day in November
    - best poster eligible for travel award to present at National Student Research Forum Conference (November, Galveston, TX)
- Oral defense to the MD/STIR Research Committee
  - 15 minute defense of final report
  - supervisor is invited to participate
  - The student is expected to understand the basis and selection of methodologies used, the interpretation of results and the impact of any findings

Written component: All MD/STIR students must submit an application that is approved by the MD/STIR Research Committee and must submit a final report.
- Application
  - The student is expected to become familiar with pertinent literature and is responsible for writing the research proposal component of the application. The supervisor will guide the student but the student must write the proposal.
  - The student will receive feedback from the MD/STIR Research Committee and can submit revisions if required for acceptance into the program.
- Final Report
  - The student submits a final report in the form of a research manuscript.
  - The report includes a section that outlines the student’s research activities in detail. If other people contributed to the data or analysis, this must be clearly stated.

Student evaluations: All MD/STIR students receive feedback and are evaluated at various stages of the program.
- The supervisor evaluates the student’s performance and submits a confidential evaluation that will be included in the student’s final report. The evaluation form can be downloaded from https://www.ualberta.ca/medicine/programs/mdstir
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- Faculty members evaluate the student’s poster presentation.
- The MD/STIR Research Committee evaluates the student’s Application, Final Seminar and Final Report

Expected outcomes for the MD/STIR student: To successfully complete the STIR program, the student must demonstrate a good practical understanding of the scientific process. This includes development, formulation and testing of hypothesis, experimental design, validation, presentation, analysis and interpretation of results.

Please note that the student is admitted based upon the proposed research submitted. If the project or role of the student changes, the Chair of the MD/STIR Research Committee must be advised in writing by the end of May of the first summer of research.

Successful completion of the MD Special Training in Research Program requires:

1. Maintenance of good academic standing for each academic year in the MD Program.
2. Attendance of the mandatory Research Ethics and Integrity Seminar
3. Proof of ethics approval for studies involving animal or human subjects (must accompany the application).
4. Advising the Chair of the MD/STIR program in writing by the end of May if the project or student role in the project changes.
5. Twenty-four (24) weeks of hypothesis-driven research to be conducted by Option A, B or C as indicated in the application.
6. At least one oral presentation to be arranged in consultation with the supervisor (lab meeting, research group, research retreat).
7. One informal oral presentation as scheduled by the Office of Research in the Faculty of Medicine and Dentistry.
8. Poster presentation to fellow MD/STIR students and presentation of the same poster at FoMD Summer Student research Day
9. Submission of a final report to the MD Research Committee by the last day in September in the relevant year.
10. An oral presentation to be given to the MD Research Committee in October or November in the relevant year as scheduled by the Office of Research in the Faculty of Medicine and Dentistry.
11. Oral defense to the MD Research Committee and demonstration of understanding of the basis and selection of methodologies, the interpretation of results and impact of any findings.