

Annual Reporting for Faculty Supported Research Centres and Networks

All Centres (provisional Centres; McGill Centres), Research groups and Networks that receive funding from the Faculty of Medicine are required to provide two components of reporting:

1. an Annual Report of Activities and Outcomes (see below),
2. a Financial Statement (see attached Excel document).

The reporting period is May 1, 2019 – April 30, 2020.

Deadline: Monday, May 25th, 2020 at 5pm

Please send both documents to Faculty of Medicine's Research Office (riac.med@mcgill.ca).

Continued support from the Faculty is contingent on:

1. the receipt of the reporting documents on time,
2. the evaluation of reported activities by the Faculty's Committee for Oversight of Research Units (CORU),
3. the availability of Faculty funds.

Your strong engagement in the Faculty's mission for continued research excellence and financial stewardship is truly appreciated.

Annual Report of Activities and Outcomes

Please respect the page limits, where indicated, or the report will be returned.

(The accepted font is Times New Roman or Calibri regular 11 pts)

1. Name of the Unit: McGill International TB Centre
2. Director's contact information: Dr. Madhukar Pai, madhukar.pai@mcgill.ca, 514-398-5422
3. If the Unit is a **Senate-approved** McGill Research Centre, indicate date of approval: December 3rd, 2014; Board of Governors approval February 2nd, 2015.
4. Mission Statement of the Unit: To conduct innovative research and training that can support TB elimination within Canada and globally
5. Number of Unit members: 35, including 19 Full members, 7 Associates, 1 Emeritus and 8 Foreign-based associate members.
6. Number of members affiliated with McGill's Faculty of Medicine: 16
7. **Unit's website:**
URL: <http://www.mcgill.ca/tb/>

Note: The website needs to feature the following:

- all sources of funding support (including the Faculty of Medicine's logo),
 - the List of Members and their institutional affiliation with appropriate links,
 - the activities supported by the Unit
 - all previous Annual Reports.
8. Summary of past year's **goals and objectives** of the Unit. (**limit: ½ page**)
 - Use bullet points or numbered lists and be as quantitative as possible.
 - Indicate unforeseen changes, opportunities or difficulties.
- In this 7th year of operations, the Centre continued to grow while staying focused on the core goals:
 - *To conduct innovative research that could result in transformative new tools required to end TB globally*
 - *To provide training & technical assistance that can support TB elimination within Canada and globally*

- In terms of membership, the Centre now has 19 full members, 7 regular associate members and 8 foreign-based associate members.
- Leadership and Coordination: Dr. Madhukar Pai continued as the Director. The leadership team also included three Associate Directors: Dr. Maziar Divangahi (Fundamental Research), Dr. Faiz Ahmad Khan (Clinical Research) and Dr. Olivia Oxlade (Global/Population Health) to replace Dr. Amrita Daftary, who left McGill University to take up a new position at York University in Toronto. A new TB Centre Manager was also hired (Ms. Charity Omenka) to replace Ms. Alexandra Gatto.
- WHO Collaborating Centre: Since November 17th 2018, the Pan American Health Organization / World Health Organization (PAHO/WHO) designated the McGill International TB Centre as a PAHO/WHO Collaborating Centre for Tuberculosis Research. This designation will remain effective till 2022. Dr. Dick Menzies is the Director of the WHO Collaborating Center, and is also part of the TB Center Executive.
- Our WHO Collaborating Center partnered with the World Health Organization to host an important two-day conference in Montreal: Technical consultation on latent TB infection: research scale up and target regimen profiles, Montreal, Canada, 16-17 September 2019. Over 30 participants attended the meeting from all over the world, and a report has been submitted to WHO.
- Unforeseen changes: This year, the Centre's 8th [Annual TB Research Day](#) scheduled for March 23rd had to be rescheduled for Fall 2020 due to the COVID-19 pandemic. The global and Canadian public health response to it severely limited travels and gatherings. Over 60 participants were expected to attend the event, including keynote speakers and partners from the United States and other provinces. We continue to monitor events closely to determine whether to hold this event at a physical location or as an online event. Activities planned include poster and oral presentations by trainees, student prizes and awards. We are also planning the second TB Film Festival title "How to Survive a Plague", co-hosted with the McGill Global Health Programs.
- Our TB Center also worked with Dr. Martha Crago's office to submit a LOI for the New Frontiers in Research Fund (NFRF) competition: TB Elimination in Canada? Let's start over: A Biosocial Transformation

9. **Major achievements** enabled by the support obtained from the Faculty. **(limit: 1 page)**

(see Appendix for suggested metrics)

Note: We care to evaluate how the Unit is doing as a whole greater than the sum of its talents. For this reason, do not list achievements from a single PI member of the Unit. Instead, please report only the achievements from the coordinated efforts of at least two PI members of the Unit.

- Use bullet points
- Insert an appendix for publications, grants, etc. if necessary.

Below is a non-exhaustive list of the Centre's major achievements in the reporting period, enabled with support obtained from the Faculty of Medicine:

- We continued collaborations and research as a [World Health Organisation \(WHO\) Collaborating Centre for tuberculosis research](#).
- Our WHO Collaborating Center partnered with the World Health Organization to host an important two-day conference: Technical consultation on latent TB infection: research scale up and target regimen profiles, Montreal, Canada, 16-17 September 2019.
- **At least 100 publications were co-authored by PIs.** The journal impact factors for these varied from 2.284 to 79.258, with an average of 18.675. Center members had publications in journals such as New England Journal of Medicine; The Lancet: Lancet Global Health; Cell; Science Immunology; PLoS Medicine; Nature Microbiology; Nature Reviews Disease Primers and BMJ (see Appendix 1 for selected publications).
- There were at least **4 grants funded or ongoing with at least 2 Unit PIs as co-investigators** during

the applicable period, representing more than **\$1.2 million** operating budget for May 2019 to April 2020.

- **Policy contributions:** TB Center members were actively involved in several major international policies and reports, including:
 - WHO [guidelines](#) rapid review on management of drug-resistant TB
 - The [Lancet Commission](#) on Tuberculosis
 - The [Economist Intelligence Unit](#) report on drug-resistant tuberculosis
 - The American Thoracic Society, U.S. Centers for Disease Control and Prevention, European Respiratory Society, and Infectious Diseases Society of America (ATS/CDC/ERS/IDSA) [Clinical Practice Guideline](#)
- **Hosting of the WHO TB Technical Consultation Meeting:** TB Centre executive, Dr Menzies, hosted a technical consultation meeting on [latent TB infection management: Research for scale-up and target regimen profiles](#) on 16-17 Montreal in September 2019.
- **Monthly seminars:** A total of 8 [seminars](#) brought together members and students with an average of 30 attendees per event. They were usually composed of two talks given by local or international experts in the field of TB.
- **Summer Institute 2019:** The TB Centre remained the biggest contributor to the McGill Summer Institute in Infectious Diseases and Global Health (www.mcgill-idgh.ca), which hosted over 550 participants from over 43 countries in June 2019. TB courses taught during the Summer Institute included TB Research Methods; Advanced TB Diagnostics; Qualitative methods in Global Infectious Diseases Research; and Clinical Tuberculosis.
- **Participation in the Union Conference:** TB Centre members and trainees chaired or presented in over 20 sessions at the 50th Union World Conference on Lung Health that held in Hyderabad, India between 30 October to 2 November 2019. The theme of the conference was “Ending the Emergency: Science, Leadership, Action”.
- **Prizes, special awards to member(s) as a result of Unit activities:** Behr M: Elected Canada Research Chair in Mycobacteria Genomics; K Schwartzman: Elected Fellow of the Canadian Academy of Health Sciences; FA Khan: awarded the Donald A Henderson Prize; M Pai: awarded the Principal’s Prize for Public Engagement Through Media, McGill University.
- **Media:** The Centre has been in external media at least 60 times this year. We are continually sought by national and international media organizations based on our collective expertise. The Centre also sends out a monthly newsletter to all its members, and we continually update our website’s resources section, which is freely available (<https://www.mcgill.ca/tb/resources>).
- **TB Research Day – Rescheduled for Fall 2020:** The TB Centre Research Day keynote speakers are:
 - Gregg Gonsalves, a global health activist, epidemiologist, Assistant Professor at Yale School of Public Health and an Associate Professor (adjunct) at Yale Law School, reputable for his HIV advocacy in the USA.
 - Minnie Grey is the Executive Director of the Nunavik Regional Board of Health Service, and is involved in fostering Inuit well-being in Canada and around the globe.
- In 2020, The TB Centre will renew its **support of IDIGH Annual Student Research day** (<https://idigh.ca/en/events/research-day>) (new date to be announced).
- Dr. Marcel Behr from the TB Center is Co-Director of the [Mi4 initiative](#), while Dr. M Pai serves on its Scientific Advisory Committee.

10. **New Members** who joined the Unit in the past year and their **institutional affiliation(s)**.

Name Last, First	Title PI, Staff or Trainee [Graduate student (GS) or post- doctoral fellow (PDF)]	Type of Membership Full, Associate	Affiliation(s)
Evans, Tim Grant	PI	Member	* School of Population and Global Health (SPGH), Faculty of Medicine, McGill University * Global Policy and Innovation, McGill University * Nutrition and Population (HNP) Global Practice, World Bank Group

11. Members who have **left the Unit** over the reported year, but stayed on as an associate member.

Name Last, First	Title PI, Staff or Trainee [Graduate student (GS) or post- doctoral fellow (PDF)]	Type of Membership Full, Associate	Affiliation(s)
Daftary, Amrita	PI	Associate Director	York University

12. State how the current and forecasted activities of your Unit align with the Education or Research mission (Strategic Research Plan) of the Faculty of Medicine and/or other Faculties at McGill (limit: ½ page):

Faculty and trainees of the McGill International TB Centre are leaders in each of the three aims laid out in the Faculty Mission Statement: Education, Research and Service. In terms of research, the Centre presents multiple opportunities for synergistic research interactions, both across disciplines and across institutions, thus contributing to the development of innovative research and academic programs. More specifically, Centre investigators address research goal D.3, by using genomic technologies to advance our study of microbes and their capacity to spread among different host populations (Reed). Additionally, studies of the host resistance to these microbial threats directly addresses research theme E1, Basic Life Sciences, most specifically aims E.1.3 (Integrative genomics (Schurr) and E.1.5 (Molecular Medicine- Behr). Because of our specific expertise in host-pathogen interactions, our work also addresses research goal E. 2.3 (Host-Pathogen interactions and Infectious Disease Pathogenesis – Behr, Divangahi). Finally, the Centre expertise has also extended to epidemiology, theme E.3.1, including evaluation diagnostic tests (Pai, Alvarez, Behr) and epidemiology of TB in Canada and abroad (Menzies, Schwartzman, Benedetti). The latter investigators also maintain an interest in C.3, Health and Society, with a published record of studying the social determinants of TB (Zwerling, Oxlade, Daftary, Engels).

More recently, since TB is a major respiratory infection, members of our TB Center are actively engaged in the Canadian response to the [Covid-19 pandemic](#). Dr Behr is Co-Director of Mi4, which is playing a huge role in supporting research on various aspects of Covid-19. Since March, Mi4 has provided 36 grants, totalling 3 million \$, to support coronavirus research. Among the TB Center researchers who have been supported, the list includes Dr Menzies, Divangahi, Behr, Campbell, Reed, and Benedetti.

Dr. Tim Evans, the newest member of the TB Center, is coordinating the [Canadian Covid-19 Immunity Taskforce](#), funded by the Canadian government.

During 2019, Dr. Pai received a new grant from the Bill & Melinda Gates Foundation to launch an international [learning network on tuberculosis](#). This online Community of Practice was launched in October 2019 in Hyderabad, India, and now has over 1000 members from 50+ countries.

13. Explain why support from the Faculty of Medicine continues to be crucial to the operations of the Unit **(limit: ½ page)**:

The funds provided by the Faculty of Medicine enable us to pay for a part-time TB Centre Manager whose main tasks are the development of the membership base, the organization of the Annual TB Research Day, the maintenance of the McGill TB Centre website, the financial management of all the expenses related to TB Centre accounts, the daily TB Centre online communications, the branding of the Centre, and the increasing administrative support for different projects (e.g. qualitative TB research TB training in Nunavut, Covid-19 research and the NFRF). Although the Centre benefits from other sources of funding, few if any allow for salary support, highlighting the crucial nature of the funding received from the Faculty of Medicine. Additionally, an increase in the support provided by the Faculty of Medicine would allow us to hire a manager on a near full-time basis and expand the Centre's activities.

The funds also enable us to provide travel awards to students. These awards are specifically for trainees - Graduate students and Postdoctoral fellows - and are used to defray the costs for presenting at scientific meetings (i.e. registration and travel expenses). They are co-sponsored with McGill Global Health Programs.

Another event that is made possible thanks to the support of the Faculty is the Annual TB Research Day. During the event, multiple prizes and awards are given to students. The majority are co-sponsored with McGill Global Health Programs. They include publication prizes (Emil Skamene Prizes for the Best Paper in Biomedical Research, Jonathan Meakins Prizes for the Best Paper in Clinical Research and Margaret Becklake Prizes for the Best Paper in Health Outcomes Research) and poster and oral presentations prizes. Moreover, all the expenses related to the keynote speaker are also assumed by the TB Centre in the context of the Faculty funding.

Finally, the funding supports various expenses of the Centre throughout the year, notably the office material and the expenses related to the scientific seminars, and effort made to submit large, team grants such as NFRF.

It's unlikely the TB Centre and its activities would have the same reach and impact without the funding received from the Faculty of Medicine.

14. List action items that the Unit has taken or will consider taking in the next year towards growth and sustainability of its operations **(limit: ½ page)**

- Use bullet points

- **Other Funding Sources**

The Centre also plans on renewing its funding requests to the RI MUHC (WHO Collaborating Centre), McGill Global Health Programs (matching funds for TB Research Day, travel awards, etc.), MI4 (training program in Nunavik) and MGH Foundation (TB Research Day ALFA award), as well as continuing to explore other funding opportunities.

- **Increase in the Scale and Focus of Activities**

At present, the 34 active members of the McGill TB Centre have a clear vision targeting tuberculosis and related diseases. They have been able to leverage this increased focus towards specific events, like

regular scientific meetings, a research day, several multi-investigation operating grants and the Summer Institute courses. Based on the excellent international reputation for TB-related research, the Summer Institute has successfully transitioned from 1 course in TB diagnostics (2011) to 8 courses that now form the McGill Summer Institute for Global Health. These courses bring together an important number of Full, Associate and foreign-based investigators from the Centre (<http://mcgill-idgh.ca>), who often contribute as faculty presenters and panelists/moderators during the different courses.

As mentioned previously, members of the TB Center are very actively leading, via Mi4 and SPGH, several initiatives focused on the Canadian response to the Covid-19 crisis. This has increased the scale and expanded the focus of the TB Center, while still focused on infectious diseases research and policy.

15. Provide suggestions about how the Faculty could do better to support the Unit and research efforts in general (e.g., centralized data repositories, institutional data management plans, support for software developments, guidance for adopting open-science practices, simplification of administrative procedures, etc.) **(no page limit but please be specific and unleash your creativity!)**

In order to support the Unit and research efforts in general, the Faculty could provide administrative support in the context of specific projects, notably for projects that require accreditation from McGill Continuing Professional Development Office

In the attached (Excel) **Year-End Financial Report** please detail:

1. Expenditures of funding provided by the Faculty of Medicine and other sources, towards meeting the objectives of the Unit,
2. Any in-kind contributions provided to the Unit by other partners and sponsors,
3. Projected budget for the coming year (including request to the Faculty of Medicine).

Suggested Performance Indicators (non-exhaustive list)

Quantitative:

- Governance: provide details of management meetings. For example, membership, frequency, attendance, the nature of the meetings and the outcomes.
- Number of workshops, conferences or seminars conducted, number of attendees and target audience;
- Number of visiting scientists hosted by the Unit;
- Number of outreach activities (e.g., public lectures, including in schools, the industry and government agencies, press releases);
- Number of publications co-authored by at least 2 Unit PIs, and journal impact factors;
- Number of targeted activities:
 - involving research interactions for graduate and postgraduate students,
 - Industry stakeholder interactions;
- Number of web hits and articles downloaded;
- Outcomes of surveys of Unit members;
- Number of grants funded, with at least 2 Unit PIs as co-applicants;
- Prizes, special awards to member(s) as a result of Unit activities.

Qualitative:

- Activities/outcomes which may not have occurred without the Unit;
- Use of shared resources and facilities;
- Effectiveness of governance processes in place;
- Research building capacity, or removing impediments to research;
- Multi-disciplinary collaborations;
- Increased or new collaboration and partnerships as a result of Unit activities, and with different types of end users (e.g. industry, government and community groups);
- Workshops & meetings the Unit provided financial support for;
- Communication within/outside the Unit (e.g. email, newsletters, website, etc.);
- Level of engagement at seminars and workshops organized by the Unit;
- What exceptional successes, if any, have occurred during the reporting period;
- What disappointments, if any, occurred during the reporting period;
- How new skills have been acquired as a result of research technology;
- Emphasize collaborations between other Units at McGill and internationally;
- Development of tools, software, databases;
- **Emphasize all kinds of open-science efforts.**