

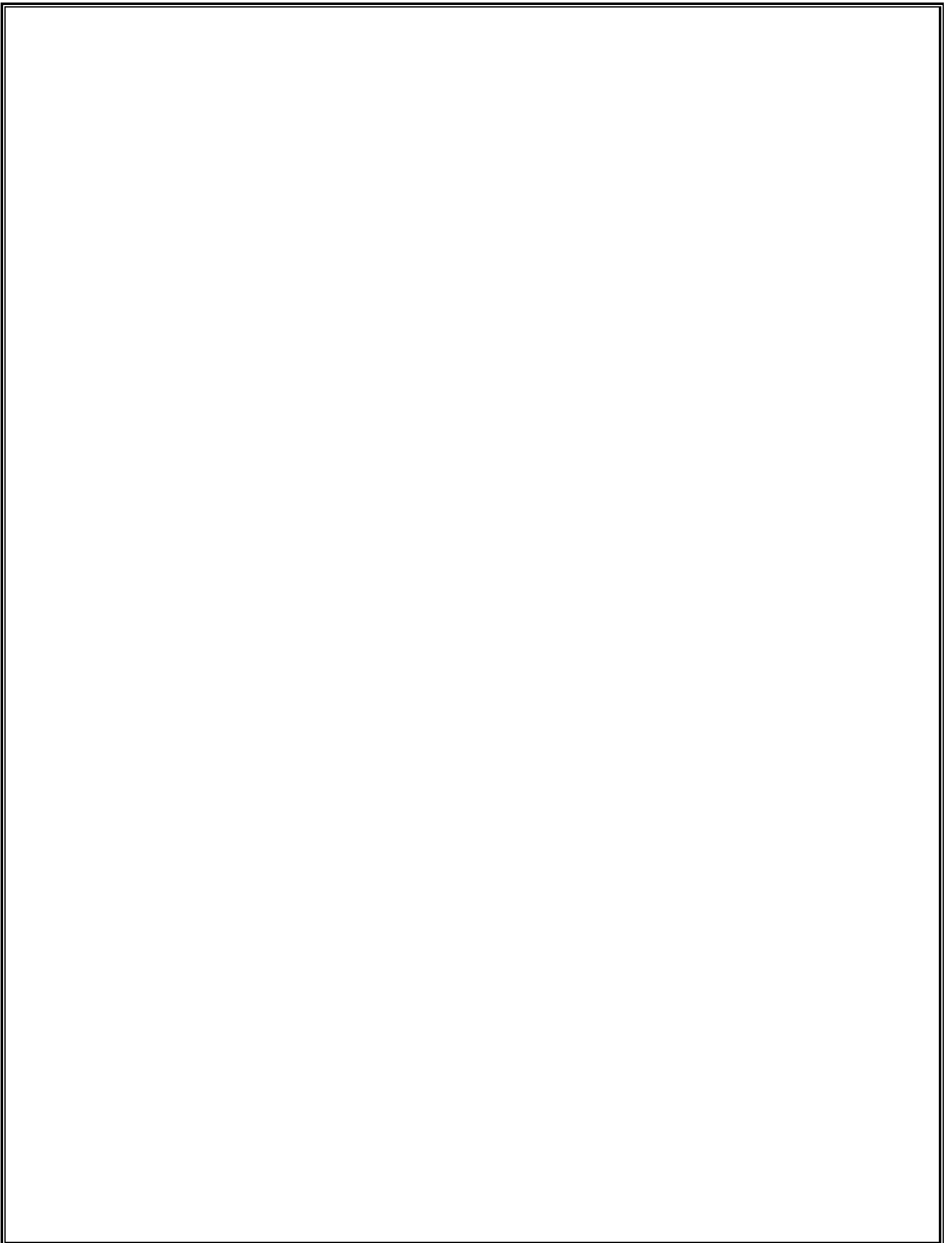
DTT Project



Annual Report



Compiled by the TB Program Evaluation & Research Unit, University of Alberta





DTT PROJECT

Annual Report

DTT Project Annual Report
Year 3: 2008-09
Compiled by TB PE&RU, University of Alberta



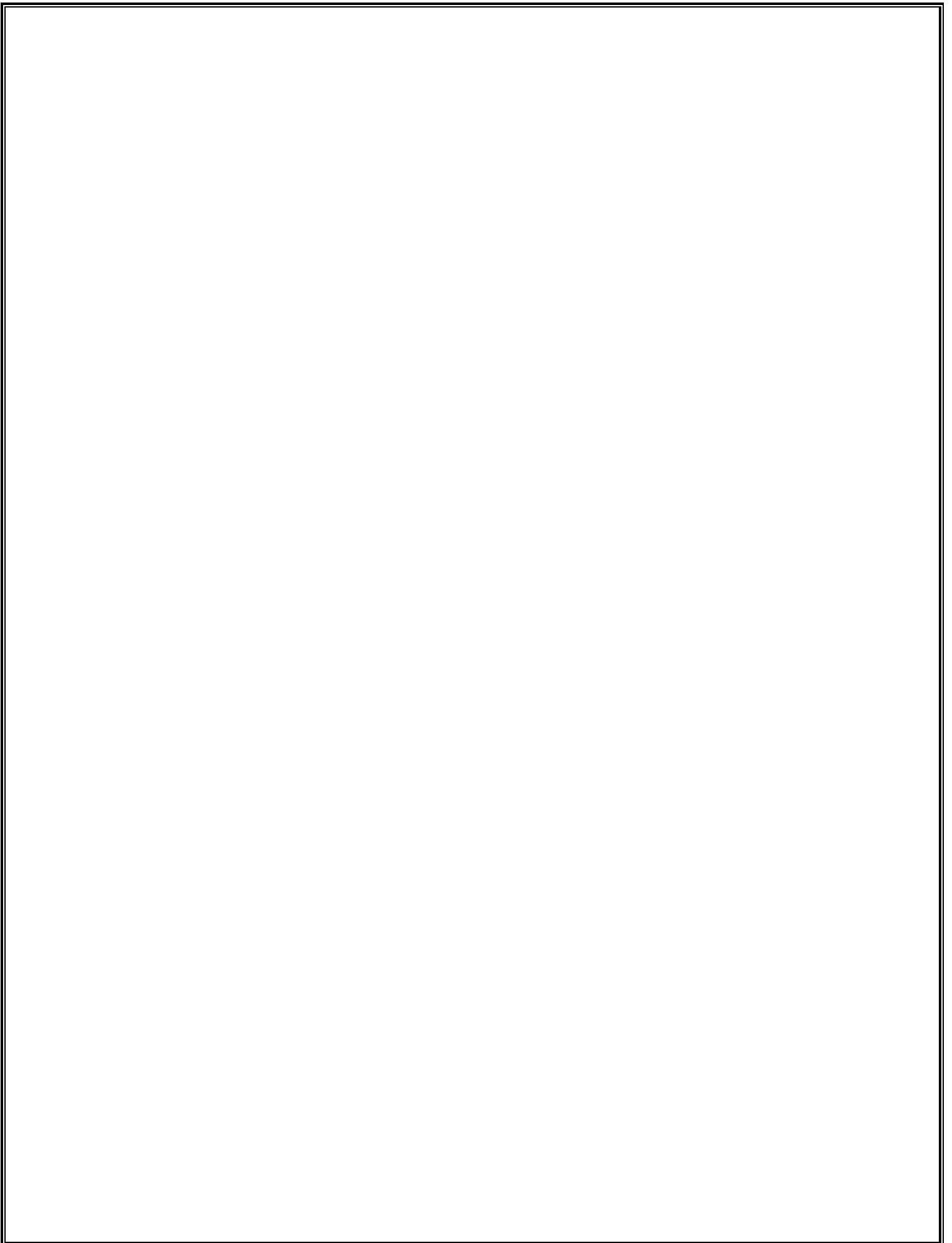
UNIVERSITY OF
ALBERTA



UNIVERSITY OF
SASKATCHEWAN



UNIVERSITY
OF **MANITOBA**



Introduction

The CIHR/Health Canada-funded Determinants of TB Transmission (DTT) Project has recently completed its third of five years. It has concluded the recruitment period, January 1, 2007 to December 31, 2008. There remain a few potential participants meeting criteria still to be collected. Registry and genotype data gathering will continue for the remainder of the fingerprint window ending December 31, 2010.

University annual ethics approvals and institutional approvals have been submitted and received across all participating provinces.

In the last year the study team welcomed new staff and trainees. Network Committees provided feedback and support to the team, study coordinators continued to invoke awareness of and support for the project, and recruitment estimates are on track. Preliminary findings are now available for Objective 1 of the project, and qualitative meetings have helped to develop further lines of inquiry for Objective 2 (See text box below for project objectives).

DTT Project Objectives

Objective 1:

To characterize the occurrence and spread of particularly virulent strains of TB in order to understand the potential role of clinical and environmental determinants of TB transmission through the retrospective analysis of all culture-positive TB cases in Alberta from 1990-2007

Objective 2:

To prospectively identify determinants of TB transmission on the prairies, with emphasis on Aboriginal people, through the use of structured and semi-structured interviews and DNA fingerprinting of TB case isolates to capture all transmission events leading to early disease

Summary to Date

STUDY OVERVIEW

Year 3 of the project demonstrates the shift from recruitment and data collection to the next phase which seeks to address our primary objectives, through coding, analysis and dissemination.

RECRUITMENT

Province	Instrument		
	Questionnaire		Interview
	Eligible	Completed (%)	Completed (Aboriginal)
MB	115*	77 (67)	18 (18)
SK	89	75 (84)	23 (23)
AB	40	36 (90)	20 (15)
Total	244	188 (77)	61 (56)

*Data from an estimated 40 cases not available to date

In a preliminary analysis of this data, it was found that approximately 90% of all eligible TB transmitters in the three provinces were from one or other aboriginal group. Also noteworthy was the finding that approximately 62% of transmitters were sputum smear-positive (highly infectious).

TB REGISTRY DATA ABSTRACTION AGREEMENTS

Agreements between provincial governments, universities and study investigators continue to be discussed in Manitoba, while Alberta and Saskatchewan have reached their agreements.

RESEARCH AGREEMENTS

Agreements regarding registry access between the University of Alberta and Manitoba Health and Healthy Living (MHHL), as well as sub-contracts between the UofA with the UofM and the UofS as detailed in the agreement remain outstanding. Discussions with the Health Information and Privacy Committee (HIPC), part of MHHL, are still underway.

STUDY TEAM

The study team, consisting of eight investigators, four full time research staff, and numerous collaborators, continues to coalesce and is more dedicated than ever.

Co-Investigator Meeting

In September 2008, members of the DTT project gathered at a ranch an hour west of Edmonton to hear a talk given by a former TB patient. The guest speaker emphasized the dual importance of spirituality and medication in the healing process. Thus began the two day DTT retreat that brought together research staff, co-investigators and Elder Paul Daniels of the Alberta DTT Network Committee.

The retreat was a chance for research staff to maintain balance in work and ensure continued positive relationships. Among the retreat events was a sweat lodge ceremony in order to offer the cultural supports necessary for the inclusion of the Aboriginal participants' and Aboriginal researchers' reality within the research process.

In addition, the retreat coincided with a two day qualitative meeting at which additional analysis was carried out utilising in-depth interviews undertaken with smear positive TB patients. The outcomes of the meeting were shared at the Network Committee Meetings.

In early 2009 the annual in person meeting of co-investigators and research staff was planned for Saskatoon. It was anticipated that the group would discuss the transition from 'in person' data collection to cohort follow up, involvement of future trainees and the ongoing interaction with laboratories, registry holders, First Nations Inuit Health for obtaining outstanding data. It was further anticipated that the meeting would solidify the team and continue to affirm to those involved, the mutual goal of TB elimination in the Prairie Provinces.

Trainees

The project benefits from the accomplishments and contribution of its trainees.

Deanne Langlois-Klassen is a PhD candidate who is working on the Beijing/W objective (see later reference under laboratory data). She has been awarded a CIHR Doctoral Research Award and a Frederick Banting and Charles Best Canada Graduate Scholarship Doctoral Award. In February 2009, she presented two posters on TB in immigrants at the International Union Against Tuberculosis and Lung Disease – North American Region Conference in Vancouver;

- *Why are tuberculosis case numbers and rates unchanging among foreign-born persons in Canada?*
- *Treatment of latent tuberculosis in recently arrived immigrants to Canada*

Jessica Moffatt is a Master's student who comes to us from McMaster University where she completed her degree in Health Studies. She is now taking her Master's degree in Public Health with a Population Health Stream at the University of Alberta. She was a recipient of a Western Regional Training Centre for Health Studies award for Master's students. She is undertaking the

Community Based Research project that arose out of the DTT project. Community Based Research can be generally defined as research that strives to be community situated, collaborative and action-oriented; as such her work will identify existing community strengths and foster an exchange of ideas to arrive at TB prevention and control strategies and recommendations that are of mutual benefit to the community and the program. This project involves five University of Alberta Faculty members, one Elder, one First Nations Inuit Health Branch staff member and a coordinator to advise on the project. A community co-investigator, fluent in the language spoken in the community and English, is in the process of being recruited. The aforementioned project is funding by the Public Health Agency of Canada, First Nations and Inuit Health and the Network Environments for Aboriginal Health Research.

Jessica Grant is a Master's student who comes to us from Mount Allison University in New Brunswick where she completed her Bachelor of Science (Biology) degree. Her Master's program will be in public health and based out of the University of Saskatoon. She has applied for a CIHR scholarship. Her project will be a mixed method study under the supervision of investigators Sylvia Abonyi and Richard Long. The study team is currently advertising for a post-doctoral opportunity. In addition, two summer students have been hired; (1) Angela Lau who is funded by an AHFMR Summer Studentship and the Canada Summer Jobs Program (Government of Canada) and (2) Michael Jensen is funded by the Northern Alberta Clinical Trials and Research Centre and the Canada Summer Jobs Program (Government of Canada). Angela will assist in consolidation of the DNA fingerprint database and the completion of a related transmission project, "The Public Health Consequences of Smear-positive Pulmonary Tuberculosis in Patients with Typical and Atypical Chest Radiographs". Michael will assist in construction of population grids for use as denominators in incidence and other calculations. The students work will provide invaluable support and enhancements to the overall objectives and goals of the DTT project.

PROVINCIAL NETWORK COMMITTEES

In this third Annual Report, it is again important to reiterate the important role of the Provincial Network Committees play in the DTT project. The Committee's role, although less in the data-gathering phase of the study, is essential to ensuring that the study continues to honour the principles of consultation with the Aboriginal community at large. As stated in the first annual report, the role of the Network Committees is to ensure ongoing feedback and appropriate conduct throughout the study.

Meetings with the Provincial Network Committees in all participating provinces were held over the past year. Alberta met with theirs in December 2008, while both Saskatchewan and Manitoba conducted theirs in January 2009. As the recruitment period would be ending at the conclusion of December 2008, these meetings provided an opportunity to provide very preliminary numbers of participants in the project. Updated information on the status and the work to date with the project were shared with all members. These updates allow for the committee members to ask questions or clarify information. Further, it allowed for discussion to ensue regarding all aspects of the project. As well, these meetings continue to provide an opportunity to bring forward any concerns that study coordinators may have encountered.

In Alberta, a related project, the Community Based Research project was discussed and members gave feedback on community selection criteria.

STUDY AWARENESS

Study awareness continues to be an important aspect of the project to ensure that community stakeholders and associated health staff are conscious of and supportive of the project. Although the focus of the last year was heavily weighted on data collection and a final recruitment deadline, study awareness activities and relationship building continued throughout the year. Study Coordinators work diligently to stay in touch with service providers, Aboriginal organizations and leadership, funding agencies and federal and provincial prevention and control programs.

Here are some recent updates:

Manitoba:

The study coordinator provided a study update to the Assembly of Manitoba Chiefs-HIRC committee in October 2008. Further, a poster presentation on the project was presented at the International Union Against Tuberculosis and Lung Disease – North American Region conference in Vancouver, February 2009;

-A Prairie-wide Approach to the Study of TB Transmission in Canada.

Saskatchewan:

Saskatchewan benefits from the existence of mobile clinics in First Nations and Metis communities. Their presence allows the study coordinator an opportunity to visit and speak with service providers, TB clients and community leaders directly.

Alberta:

The ongoing connection with stakeholders remains strong with the Principal Investigator's involvement at the Edmonton TB Clinic, his clinical commitments with Alberta Health and Wellness/First Nations and Inuit Health and his presence in the Pulmonary division, Department of Medicine. The Study Coordinator provided a presentation at the 6th Spring Tuberculosis Conference in Edmonton, April 2008.

LABORATORY DATA

All available isolates (n=1901) have been Beijing/W genotyped, including culture positive TB cases diagnosed in Alberta up to the end of June 2007. Currently, the Provincial Laboratory for Public Health is conducting additional genotyping to further validate the molecular epidemiologic results. It is anticipated that this confirmatory testing will be completed by October 2009. Beijing/W subtyping analysis (to determine if the epidemiologic and clinical characteristics of Beijing/W TB cases are attributed to one or more of the Beijing/W subtypes) is on hold pending further funding given that laboratory costs are not included within the operational grant.

The Beijing/W family of strains accounted for 19.9% (n=378) of TB cases diagnosed in Alberta between 1990 and mid-2007 based on currently available data. The vast majority of Beijing/W cases were attributed to foreign-born persons (89.2%), with 88.4% (n=298) of these cases occurring among foreign-born persons who originated from the Western Pacific region. This finding is consistent with a larger the body of literature which has found the Western Pacific region to be 'hotspot' for the Beijing/W family of strains. Among Canadian-born persons, the incidence of Beijing/W TB was not significantly different for Aboriginal and non-Aboriginal persons, with 26 (6.9%) and 15 (4.0%) cases respectively. Overall, the distribution of Beijing/W and non-Beijing/W TB cases was similar with respect to sex, year of diagnosis, and HIV status. However, statistically significant differences were noted between Beijing/W and non-Beijing/W cases based on age at diagnosis within the three population groups (foreign-born, Canadian-born Aboriginal and Canadian-born non-Aboriginal persons).

Comprehensive data analyses are being completed at the present time. It is anticipated that the majority of data analyses will be completed by Spring 2010 and all data analyses completed by Fall 2010. Dissemination of the initial results is anticipated in Fall 2010 through conference and meeting presentations, with submission of manuscripts to peer-reviewed journals following in 2011.

UPCOMING PLANS

The third year of the DTT project met expectations thanks to the hard work of the research team and the guidance of the Provincial Network Committees and collaborators. Year four of the DTT project promises similar levels of achievement, with a continued focus on data analysis for all aspects under study.

Across all involved provinces, Provincial Network Committee meetings are scheduled for May and June 2009. There are plans to bring all three Committees together for a group meeting in May 2010. This will provide a valuable opportunity for interaction across all the participating provinces' stakeholders and research staff. Further, plans for a potential Project Conference in 2011 would bring together a larger group of service providers, funding agencies, PNC members and national/provincial prevention and control programs. This would coincide with the final stages of dissemination and study completion.

Longer term goals include the interest in developing a Prairie-wide lay organization for the control of TB among the Aboriginal population and in developing a set of knowledge sharing workshops with Indigenous peoples in New Zealand along with collaborators at the University of Auckland. We also anticipate the involvement of additional trainees down the road.



CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada



Health
Canada Santé
Canada