

Annual Report
Division of Infectious Diseases
April 1, 2005 - March 31, 2006

I. Highlights

The Division of Infectious Diseases continues to be extremely busy, a reflection of the ongoing and important role of infectious diseases in the global community. Building on a strong tradition of clinical service, research, and teaching, the Division has expanded its activities in the following fields:

- refugee and immigrant health
- tuberculosis
- emerging infections (e.g. Clostridium difficile, West Nile Virus, MRSA, VRE)
- bioterrorism
- new vaccines (i.e. Human Papillomavirus [HPV])
- new antibiotics

Members of the Division co-published an in-depth analysis of the Montreal outbreak of C. difficile colitis, and continue to perform ground-breaking research in this area. As well, large grants were received for the continued studies into vaccine-preventable diseases in the Canadian foreign-born population of immigrants and refugees.

II. Evaluation of Past Academic Year

In providing this information try to summarize the essential points in a single narrative and use appendices to provide the necessary detail.

a. Faculty

Dr. Brewer was recruited from Harvard Medical School and Mount Auburn Hospital to join the Division of Infectious Diseases as Associate Professor of Medicine and Associate member of the Department of Biostatistics, Epidemiology and Occupational Health. He also was appointed Director, International Health Office for the McGill University Faculty of Medicine.

b. Clinical Activities

The walk-in Infectious Diseases Clinic operates on a daily basis (Monday to Friday) in the mornings (09-11h30). The clinic is staffed on rotation by Infectious Diseases specialists (i.e. Dr. Jack Mendelson, Dr. Mark Miller) and on occasion by Dr. Andre Dascal and Dr. Christina Greenaway.

We also have a weekly Tuberculosis Clinic (Thursday afternoons) which handles patients with active tuberculosis as well as a screening for potential TB. The clinic is also involved when the Public Health Department requests that some industrial plant be screened for TB. This clinic is staffed by Dr. C. Greenaway, Dr. Mark Palayew and Dr. Karl Weiss. On occasion both Dr. Andre Dascal and Dr. Mark Miller have been asked to attend.

There were 7,513 patient visits in both Infectious Diseases and Tuberculosis Clinics during the past year. This represents a 28% increase over the 5,875 visits in 2001

Drs. Dascal and Miller see private patients twice weekly. Dr. Portnoy sees private patients daily, while Dr. Greenaway sees patients weekly. There were 7,941 patients seen in the GFT offices.

c. Honours and Awards

Dr. T. Brewer: 2005, RVH Centennial Award

Dascal A was awarded a Quebec National Assembly Medal for his contribution to the preparation and response to bioterrorism threats in the province.

Dascal A (PI). Consortium de recherche quebécois sur le Clostridium difficile. Fonds de la Recherche en Sante du Quebec (FRSQ). 2005-07, \$1,200,000.

Loo V, Dascal A, Bougault AM. Consortium de recherche québécois sur le Clostridium difficile. CIHR. \$200,000.

Dr. Dick Menzies PI for Montreal (Montreal Chest Hospital), Dr. Chris Greenaway PI for Jewish General Hospital (Sub-site). 1999-2009. Centers for Disease Control and Prevention. \$1,800,000 .Tuberculosis Trials Consortium (TBTC), US Public Health Services Studies.

“Infectious Diseases in Immigrants: Burden, Impact and Interventions”
Greenaway C. FRSQ Bourses de Chercheurs-Boursiers Cliniciens. \$156,357

Subventions d’Etablissement de Jeunes Chercheurs Cliniciens.
“Infectious Diseases in Immigrants: Burden, Impact and Interventions”.
Greenaway C. FRSQ. \$30,000

d. Teaching Activities

The entire department is involved in teaching/training of fellows/residents/students during the academic year when they rotate through both the Infectious Disease/Microbiology electives. Here is a summary of the hours spent during this activity:

July 1, 2005-June 30, 2006

<u>Residents</u>	<u>Microbiology</u>	<u>Microbiologist</u>	<u>Number</u>	<u>Hours/annee</u>
M. Oughton*	Microbiology	M.Miller/A.Dascal	4 periods	640 hours
I.Alzahrani*	Microbiology	M.Miller	2 periods	320 hours
M. AlHassani*	Microbiology	M.Miller	1 period	160 hours
J.Pappenburg*	Microbiology	M.Miller	1 period	160 hours
A. Mak*	Microbiology	M.Miller	1 period	160 hours
J. Nguyen**	Microbiology	M.Miller	2 weeks	10 days
C. Tsien **	Microbiology	C.Greenaway	2 weeks	10 days
J. Lipes**	Microbiology	M.Miller	4 weeks	20 hours
H.AlMohri**	Microbiology	A.Dascal	4 weeks	20 hours
B. Schwartz**	Microbiology	A.Dascal	4 weeks	20 hours
P. Moschonas**	Microbiology	M.Miller	4 weeks	20 hours
A.AlMehrezi**	Microbiology	C.Greenaway	4 weeks	20 hours
A.Kermack**	Microbiology	C. Greenaway	4 weeks	20 hours
I. Lega**	Microbiology	M.Miller	4 weeks	20 hours
M. Teltscher**	Microbiology	M.Miller	1 week	5 hours
A.Hoffman**	Microbiology	J.Zaharatos	3 weeks	15 hours
B.Cummunigs**	Microbiology	M.Miller	4 weeks	20 hours

*Residents/Fellows on lab rotation

**Residents/Fellows on ID Service

d. Teaching (continued)

Dr. T.F. Brewer

March 2006 Department of Epidemiology, Biostatistics and Occupational Health departmental lecture series. "Epidemic Intelligence: The Role for a Non-Governmental Reporting System"
Lecturer for 30-40 McGill University Faculty and Graduate Students
20 hours of preparation; 1.0 hour lecture

April, 2006 Back to Basics Course "AIDS in the Tropics" Lecturer for 15-20 McGill University Medical Students. 15 hours of preparation; 1.0 hour lecture and 1.0 hour supervised discussion

May, 2006 Tropical Diseases: A review of clinical and laboratory medicine
Lecturer for McGill University Health Centre Continuing Medical Education Course
15 hours of preparation; 1.0 hour lecture

Dr Mark Miller

Medical Liability (Impact of nosocomial infections on the liability of hospitals, clinics, and medical staff). CMPL 522, Faculty of Law, McGill University: 6 hours

Faculty of Law, McGill University. "Science, Technology and Law" Course #CMPL 576.
"Nosocomial and Iatrogenic Infections": 6 hours

Dr. Andre Dascal

"Back to Basics" 26 medical students – 3 weeks. 40 hours preparation, 3 hour lecture/day.

Dr. C. Greenaway

McGill medical school – introduction to clinical skills. 8 sessions of 3 hours each yearly.

e. Service to Academic Community and other contributions:

M. Miller

"Gestion d'éclosion et d'épidémie en milieu de santé" Ministère de la Santé et des Services sociaux, Montréal, Québec.

"Reuse of Single-Use Medical Devices: Where are we now?" 19th National Conference ORNAC, Montreal, Quebec.

"Nosocomial Infections" during JGH/MGC Retreat 2005, presented in Montreal during the "Infectious Disease in the Elderly" conference. Montreal (Qc) 2005

Moderator: Symposium panel on Clostridium difficile panel during ICAAC, Washington, DC (USA) December 2005.

"Nosocomial Infections" during JGH/MGC Retreat 2005, presented in Montreal during the "Infectious Disease in the Elderly" conference. Montreal (Qc) 2005

A.Dascal

"Combating Hospital Acquired Infections: The Montreal C. difficile Experience". Healthcare

Emergency Preparedness 2005. Toronto September 26-27 2005 Toronto.

Eyewitness to Emerging Infections: C. difficile Outbreak in a Canadian Metropolis” Eyewitness to Emerging Infections CVPH Medical Center, Plattsburgh New York. September 29, 2005

“C. difficile Outbreak in Quebec” Vermont Public Health Department and Fletcher Allen medical Center University of Vermont. April 1, 2005

Dr. T. F. Brewer

2005 Hospital Grand Rounds, Lima, Peru
2005 McGill International Health Lecture Series, Montreal, Canada

f. Consulting Activities:
None

g. Research Activities:

Dascal A. A longitudinal study of people living with HIV’s health status, quality of life, and prevention behaviours: psychosocial and environment factors. Universite de Quebec a Montreal, 2004. \$10,000

Dascal A. Primary HIV study acute HIV infection with or without symptoms: clinical, immunological and virological aspect. 2004 CIHR & FRSQ. \$10,000

Miller MA, De Marche M, Dascal A, Portnoy J. “A double-blind, placebo-controlled study of E5564, a Lipid A antagonist, administered by twice daily intravenous infusions in patients with severe sepsis”. Eisai Medical Research Inc., USA. (continuation)

Miller M. Vicuron Pharmaceutical Inc. # 03-019 – Phase III, Randomized, Double-Blind, Multi-Center Study to Evaluate the Safety and Efficacy of Dalbavancin Versus Cefazolin in the Treatment of Uncomplicated Skin and Soft Tissue Infections with Suspected or Confirmed Gram-Positive Bacterial Pathogens. Protocol VER001-8. (continuation)

Miller M. Vicuron Pharmaceutical Inc. #03-016 – Phase III, Randomized, Double-Blind, Multi-Center Study to Evaluate the Safety and Efficacy of Dalbavancin Versus Linezolid in the Treatment of Complicated Skin and Soft Tissue Infections with Suspected or Confirmed Gram-Positive Bacterial Pathogens. Protocol VER001-9 (continuation)

Miller M. An open-label, dose ranging, randomized clinical evaluation of OPT-80 in patients with Clostridium difficile-associated diarrhea (CDAD). Optimer Pharmaceuticals. 2004-5. \$25,000

Miller M. Darel Inc.: A phase I, prospective, placebo-controlled trial of bactericidal ultraviolet (UV) “laser” exposure for the reduction of surface bacterial pathogens on diabetic ulcers and venous stasis ulcers of the lower extremities. April 12, 2004. \$20,000

Miller M, Dascal A, Portnoy J, Greenaway C, Gottlieb W. A phase III, double blind, randomized, controlled, multicenter study to evaluate the efficacy of GSK Biologicals' HPV-16/18/VLP/AS04 vaccine compared to hepatitis A vaccine as control in prevention of persistent HPV-16 or HPV-18 cervical infection and cervical neoplasia, administered intramuscularly according to a 0, 1, 6 month schedule in healthy females 15-25 years of age. 2004, GlaxoSmith Kline. (continuation)

Greenaway C (PI), Miller M. "Developing a Point of Care Test to Measure the Susceptibility to Infectious Diseases in Immigrants" 2005-08 BioVeris Corporation, \$481,000 US

Dascal A (PI). Consortium de recherche quebecois sur le *Clostridium difficile*. Fonds de la Recherche en Sante du Quebec (FRSQ). 2005-07, \$1,200,000.

Loo V, Dascal A, Bougault AM. Consortium de recherche quebecois sur le *Clostridium difficile*. CIHR. \$200,000.

Brewer, T F. Principal Investigator, Emerging Disease Surveillance in Mekong Delta and East Africa. 2004-2007. Rockefeller Foundation.

Brewer TF. Principal Investigator. "Expanding Outbreak Reporting in Newly Independent States". 2004-2006 Nuclear Threat Initiative

h. Publications

Brewer TF, Heymann SJ. Reducing Tuberculosis Mortality in the 21st Century. Arch Med Res 2005;36:617-621.

Freiman A, Ting P, Miller M, and Greenaway C. Papulonecrotic tuberculid: a rare form of cutaneous tuberculosis. Cutis. 2005; 75(6):341-345.

Greenaway C, Lienhardt C, Adegbola R, Brusasca P, McAdam K, Menzies D. Humoral Response to Mycobacterium tuberculosis Antigens in Patients with Tuberculosis in the Gambia. The International J of Tuberculosis and Lung Disease 2005;9(10):1112-9.

Turner SA, MacLean JD, Fleckenstein L, Greenaway C. Parenteral ivermectin in a patient with disseminated strongyloides. American J of Tropical Medicine and Hygiene. 2005;73(5):911-4.

Miller MA. Probiotics as medical therapies. CMAJ 165(11), 1470, November 27, 2005.

Loo VG, Poirier L, Miller MA, et al (including Dascal A). A predominantly clonal multi-institutional outbreak of *Clostridium difficile*-associated diarrhea with high morbidity and mortality. N Engl J Med, 2005 Dec 8; 353(23): 2442-9.

Louie T, Miller M, Donskey C, et al. Safety, pharmacokinetics and outcomes of PAR 101 in health subjects and patients with *Clostridium difficile*-associated diarrhea (CDAD). Presented at ICAAC, December 2005, Washington, DC, USA.

Boyd DA, Miller M, Mulvey MR. Enterococcus gallinarum N04-0414 harbors VanD-type Vancomycin resistance and is missing the *ddi2* gene. Presented at Interscience Conference on Antimicrobial Agents & Chemotherapy, December 2005.

III. Objectives and Priorities

The continued growth in the field of Infectious Diseases on a local, national, and international level will require additional efforts in patient care, research, and teaching at the JGH. The Division is already “stretched” in terms of its current space and resource allocation for all of these important activities. The maintenance of the current high standards, as well as the ongoing expansion of the Division, are contingent upon additional space and resources