

October 2004

Med Update by Jennifer Clara Tang

Institute for Molecular Medicine and Health Opens



Michael G. DeGroot Centre for Learning and Discovery

On Friday October 22, 2004, the Institute for Molecular Medicine and Health (IMMH) opened in the Michael G. DeGroot Centre for Learning and Discovery (“New advanced facilities...,” 2004). The 63 000 sq foot IMMh is home to several research facilities including: the Centre for Gene Therapeutics, Centre for Functional Genomics, and the Dr. John Mayberry Histology Laboratory. The IMMh also houses Canada’s first university laboratory certified to provide gene vectors for use in patient clinical trials: the Robert E. Fitzhenry Vector Laboratory. Vectors are special DNA segments used to transport foreign genes into organisms. Vectors have the potential to be used as therapy for diseases such as cancer, HIV/AIDS, asthma, and gastrointestinal diseases. Not only will the opening

of cutting edge research facilities in the IMMh help to recruit top researchers to McMaster and increase the cost-effectiveness of research, they will also help to speed new therapies discovered in laboratories into reality for patients who require them.

November 2004

McMaster Named Canadian Research University of the Year

McMaster University was named Canadian Research University of the Year (under the Medical/Doctoral category) (Research Info Source, 2004). McMaster scored 94 points out of 100. Rankings were based on two equally weighted main categories: i) input measures: total sponsored research income, faculty research intensity, and graduate student research intensity and ii) output measures: publication intensity in leading journals. Research intensity was defined as “total research income per full time faculty position or graduate student”. Publication intensity was defined as “the total number of publications (articles, reviews, notes, etc.) per full time faculty in 5000 leading international journals covering different fields of natural science, life/health science and social science.”

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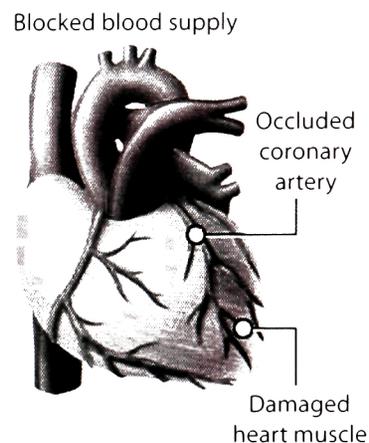
RESEARCH UNIVERSITY OF THE YEAR

McMaster University

November 2004

Reviparin: Hope for Heart Attack Patients

One of the major barriers faced by developing countries is the high cost of drugs used to prevent further complications in heart attack patients. A study led by Drs. Salim Yusuf and Shamir Mehta of the Population Health Research Institute at McMaster University presented a possible solution to this problem. The randomized control trial found that the use of Reviparin, an inexpensive anti-blood clotting drug, reduced rates of death, reoccurrence of heart attack or stroke by 13% in patients with acute myocardial infarction (heart attack) when used in conjunction with reperfusion strategies and oral antiplatelet therapy (Brookes, 2004). This trial had a large sample size of 15 570 patients from China, India and Pakistan, 7780 who were randomized to reviparin and 7790 who were randomized to placebo. Reviparin is a low molecular weight heparin which enhances the effects of antithrombin (University of Illinois, n.d.). Antithrombin inhibits factors in the coagulation cascade, thus preventing clotting. One safety concern the study encountered while testing Reviparin was a statistically significant increased risk of life-threatening bleeds (0.9% of Reviparin patients experienced this compared to 0.4% of placebo patients, $p < 0.001$). However, one must consider that the benefits of Reviparin appear to outweigh the risks; for every 1 000 patients treated with Reviparin, 15- 20 patients are prevented from dying or suffering another heart attack. Only 2 per 1000 treated are expected to experience these major bleeds (Brookes, 2004). Considering that 75% of the world's acute myocardial infarction cases occur in low and middle income countries (Brookes, 2004), Reviparin may prove to be a cost effective solution for developing nations.



A Myocardial Infarct (Heart Attack)

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January 2005

Collaborations for Health Initiative



Susan Denburg, Associate Dean Academic, Faculty of Health Sciences

McMaster University rang in the New Year with the announcement of the "Collaborations for Health" initiative headed by Susan Denburg, Associate Dean Academic of the Faculty of Health Sciences. The goal of this initiative is to "support the McMaster community in linking excellence in health related research and education to external health needs" ("New McMaster initiative...", 2005). The new initiative exists to foster interdisciplinary communication and collaboration in order to address complex problems in health. Involvement of several faculties (Institute of Environment and Health, Faculty of Health Sciences, and Faculty of Social Sciences) in the West Nile Virus study commissioned by the provincial government is an example of the type of interfaculty collaboration promoted by this initiative. The completed Phase I of the "Collaborations for Health" involved a task force responsible for identifying health-related activity on campus in areas such as humanities, social and behavioural sciences and business. Phase II of this initiative begins at the end of January with a call for faculty submissions for ideas with regards to health related research and educational collaborations. It is extremely heartening to see that the spirit

of collaboration taught to McMaster students in Inquiry courses is also used by their professors to advance McMaster research. See the report on Phase I: http://www.mcmaster.ca/vpacademic/IHWG_report.pdf