

## EDITORIAL

### THE MJM: AN OPPORTUNITY FOR INTERNATIONAL STUDENT COLLABORATION



There is a common saying in today's scientific community: publish or perish. As a result, researchers spend most of their time writing and revising articles for scientific publications. From anaphylaxis to zoology, there is a scientific journal to suit your particular field. Though this at times might seem a bit excessive, it is vitally important. From the monks who illuminated manuscripts while praying in their hilltop monasteries to Gutenberg's industrialization of the written word, the preservation and spread of information has been a great preoccupation. It is said that Isaac Newton only wrote his *Principae Mathematica* at the insistence of his colleagues who feared most his work would be lost if anything happened to him. Had Newton not acquiesced, the realm of physics might have been set back centuries at his death. The concept of keeping a written record of one's research is central to the scientific process. The free flow of ideas allows collaboration and elaboration between individuals that may not actually ever meet. Furthermore, documenting research and experimental results obviates the need for experiments to be repeated by others. Without such documentation, the sum total of human knowledge might have to be rediscovered with the passing of each generation. Whether in the Great Library of Alexandria or the humble collection dedicated to Sir William Osler, humanity has always realized the necessity to gather knowledge together for all those who wished to learn from it. It is within this philosophical framework that the MJM tries to play its small part.

Being an international peer reviewed student-run medical journal, one of the main goals of the MJM is to introduce novel ideas and interpretations of scientific research from a student's perspective. A medical journal presenting solely student work provides the means for recognizing the high caliber of student research on a larger scale. In fact, the MJM encourages individuals who are relatively new to research to submit their work for publication for the first time, a process that might serve as an important stepping stone and incentive for further research endeavors. For the student editors and publications staff, there are the additional educational benefits associated with the production of the journal and the value of international student collaboration. The present editorial board,

which includes students from several countries, including Canada, United States, United Kingdom, Italy, and Israel, has had the unique opportunity to develop and utilize an online forum for editing articles. The mission of the MJM is to facilitate discussions regarding important medical issues and nurture student participation in endeavors that could potentially lead to beneficial outcomes in the medical community. With a mix of original articles, letters to the editor, literature reviews, and our trademark "crossroads" articles that explore the relationship between medicine and humanities, the MJM strives to put together an issue that informs, stimulates, and raises as many questions as it answers.

**Aravind Athiviraham** (picture), M.D. C.M. (2005), is the seventh Editor-in-Chief of the MJM. His current research is conducted in the Division of Cardiothoracic Surgery, McGill University Health Centre, and compares the postoperative outcomes of off-pump surgical revascularization and conventional coronary artery bypass. **Christopher Labos**, M.D. C.M. (2006), is the Executive Junior Secretary at the MJM. His upcoming research project at the McGill University Health Centre will involve an analysis of the delays to definitive care in trauma patients with a view to suggesting amendments to triage protocols.

### A MIDSUMMER DREAM



Summer marks the end of school year for high school and college students in Canada and other places around the world. As the aspiring pupils ready themselves to enter their studies next fall, we should perhaps ponder on how our societies, obsessed with the system of productivity, assessment and elimination, often fails to provide what may be just as important to our youngsters- the environment to shape individual talents and the room to dream about the future.

Those who dreamt in the realm of science and medicine weaved their reveries into unparalleled historical achievements. Just a century ago, Sir William Osler initiated bedside teaching in medicine, and half a century later, Sir Archie Cochrane introduced the concept of evidence based medicine. Built on these once dreamy ideas, biomedical science and technology have since that time revolutionized medicine and exponentially proliferated the ability of physicians to provide better care to their patients.

From these developments, medical scientists and physicians are each becoming more and more highly specialized. With the potential risk of losing the broader perspective and of falling into the pitfall of

irreconcilable divergence in their viewpoints, the presence of good physician-scientists is crucial to ensure that the knowledge created in one specialty is not lost upon the other. The physician-scientists also take on the important role as teachers, showing students the necessity of applying scientific rigor to both research and patient care. However, the change in practice patterns, the financial burden and the long training have decreased the number of physician-scientists to a sub-optimal level, and the consequences can be felt especially in North America.(1)

In a recent article by Francis Collins, Director of the National Human Genome Research Institute, cosigned by a group of highly acclaimed scientists, the future of genomic research was dreamt to be a giant triad consisting of basic sciences, health care and social responsibility.(2) The proposal serves as a good blueprint for shaping the future of science and medicine because of its universal applicability. The proposal also identifies six elements that intersect the triad at all levels; two of these elements are education and training, showing again their undeniable importance in supporting the progress of science and medicine.

Yet the simultaneously most important and most difficult aspect of the dream of Collins et al. may be social responsibility. It is a necessity to recruit sufficient resources and to make concurrent advances in ethics, law and social sciences alongside with biomedical science. The power differential between richer and poorer institutions and countries, and the lack of mechanisms to maintain the balance is a serious threat to this future. In the March 7th issue of *Science*, Kofi Annan, United Nations Secretary-General, appealed to all scientists to commit to stop the "acceleration of the disparity between advanced and developing countries, which creates social and economic difficulties at both national and international levels"(3). At the international level, infectious diseases such as AIDS, TB and malaria are WHO-declared emergencies that threaten less-industrialized countries, but the current state of resource disequilibrium and power differential prevent the delivery of good medicine and research opportunities to those in need. At the national level, the imbalance may lead to the neglect of important research areas and the creation of heterogeneous health care. To us, students, the inequality in resource distribution may also profoundly impact on the quality of education and training, preventing many to pursue their aspirations at a personal level.

The current state of our education calls for immediate attention. The increase in demand and the lack in supply of physician-scientists have profound

implications in maintaining scientific advancement, patient care and teaching; the increasing gap between the affluent and the poor presents as a major obstacle to our common interest. Much solidarity is needed amongst us, the students, to embrace our dreams and our future.

The unique genre of MJM offers the opportunity for all students to communicate their thoughts, to show their concerns, and to demonstrate their efforts, while providing a solid ground for learning and development. The non-profit and peer-review nature of MJM opens an impartial international forum for those willing to share their ideas and passion. As the MJM cherish the joy of producing issue 7.2, we hope that more dreams will be generated and fulfilled as result of our hard work.

We dream again today. What about you?

## REFERENCES

1. Zemlo TR, Garrison HH, Patridge NC, Ley TJ. The Physician-Scientist: Career Issues and Challenges at the Year 2000. *The FASEB Journal* 14:221-230; 2000
2. Collins FS, Green ED, Guttacher AE, Guyer MS. A vision for the future of genomic research. *Nature* 422, 835 - 847; 2003
3. Annan K, A Challenge to the World's Scientists, 299(5612):1485; 7 Mar 2003.

**Charles C.H. Lin**, B.Sc. (Hon.), M.D. C.M. (2005) is the seventh Editor-in-Chief of the MJM.

## IN THIS ISSUE

The recent SARS outbreaks have shifted the world's attention back to the unwavering menace of infectious disease. Despite the media-hype of newly mutated viruses, we must not forget the many other infectious diseases that threaten the human integrity on an international scale.

Tuberculosis (TB), a disease that was documented as early as 2000 B.C., is a prime example of the struggle between innovative therapies and resilient pathogens. With over 8 million new cases each year, the World Health Organization (WHO) has declared TB a global emergency and epidemic. Today, it is estimated that one-third of the world population are infected with TB and this number is increasing at an alarming rate.

In this issue, the MJM explores the challenges, the progress and our hopes in the war against TB. In a letter to the MJM, Zhang describes how Non-Governmental Organizations (NGOs) such as Médecins Sans Frontières (MSF) provides students an opportunity to battle TB and other infectious diseases in the front line. Hung et al. describe risk factors for TB conversion in the prison population. In focus, Schurr et al. explain the interplay between host genetics and TB while Menzies and Behr provide insight from a clinical perspective.