

LETTERS TO THE MJM

TWELFTH EUROPEAN STUDENTS' CONFERENCE

Dear *MJM*,

Given that the *MJM* and European Students' Conference (ESC) share the common goal of encouraging the pursuit and communication of medical research among students, we thought your readers might be interested in learning more about the Conference. As our name implies, the Conference enjoys a European flavor but we wish to actively encourage North American students to also attend, facilitating closer ties and a greater flux of ideas between the two continents.

The 12th European Students' Conference will be held from the 21st – 24th of November, 2001, at Charité, the medical school of the Humboldt University in Berlin. It offers 300 European and international medical students and young doctors a great opportunity to present the findings of their research. Uniquely, they will be evaluated by peers and professors to learn how to improve one's presentation skills. Scholarships totaling 10 000 Deutschmarks / 5000 Euros will go to the three best oral presentations; the best poster will receive an award of 3000 marks / 1500 Euros.

Medical education will be an important topic at the 12th ESC. Different systems of medical education will be compared. We also offer courses, such as "How to start-up a problem-based learning or history taking group at your own faculty." In addition, workshops for developing important skills such as "planning, financing, and presenting your research project" will take place. Highly regarded scientists will discuss "science, life and chances", and students will have the opportunity to talk with them.

In a separate event we will contribute to the "Year of Life Sciences" promoted by the German Federal Ministry of Research and Education, to which we welcome a wide public.

One of the main goals of the 12th ESC is to present an "open-minded Germany". An extensive cultural-social program is scheduled promoting Berlin as the new capital of Germany. Pre-conference tours are offered to the surrounding countryside, Dresden, and the region of the German classical period (Weimar, Erfurt and Jena). Of course, there will be social gatherings such as parties and dinners.

The 12th ESC has recently signed an agreement with the IFMSA (International Federation of Medical



Students' Associations, ifmsa.org) during the March Meeting in Malta. The IFMSA's Standing Committee on Research Exchange (SCoRE) recommends that the participants of its research exchange attend the 12th European Students' Conference and present their work. We will offer the five best applications from the Research Exchange Program free registration and accommodation. So, if you have done a research exchange, why not apply to the 12th ESC?

We enthusiastically welcome applications from medical students and young doctors worldwide. For further, more detailed information, please visit our website: www.esc-berlin.com.

Yours Faithfully,

The Organizing Committee

K. Akdenizli, B. Geisler, A. Neidhardt, E. Ovaska,
J. v. Recklinghausen, A. Schuster, L. Wirth, M. Wlodarski

IDEALS, PASSION, AND COURAGE

Dear *MJM*:

Helping a fellow human being is likely the most common reason why students enter the medical profession. The immense satisfaction that we experience by helping another person motivates us to devote our lives to a profession that proclaims this as its *raison d'être*. However, as we enter the clinical years of medical education, it becomes evident that to achieve this in the context of medicine is indeed a challenge.

Why is it that we have the ideals, yet still fail to help others the way we hoped to?

On June 19th, 2000, the McGill Chapter of Phi Delta Epsilon medical fraternity had the honor of hosting Dr. Miguel N. Burnier Jr., Chairman of the Department of Ophthalmology, McGill University, as the Aaron Brown Lecturer. Dr. Burnier gave a lecture titled "A Story", through which he communicated an inspiring message, and answered this unasked question. "What makes a good physician is not the knowledge one possesses, but three things: ideals, passion, and courage."

Ideals give direction to our lives. It is the ideal of wanting to help the sick that brought most of us to the doors of the medical profession. Through medicine we hoped to cure disease and thus alleviate suffering. However, the suffering of a patient is more than the symptoms of the disease, it is the consequences of the disease – physical, emotional, psychological, and social consequences. Only if we are able to recognize the distinction between disease and illness and address the full impact of both can we alleviate the suffering.

Passion empowers ideals. The practice of medicine in the 21st century is a foreboding challenge. Physicians are inundated with increased numbers of patients and concomitant decreased availability of support staff and health care funding. These factors not only compromise patient care directly but they also affect the physician's interactions with patients. Physicians, when working in stressful situations, rarely have enough time to spend with their patients. They are unable to provide the holistic care that is needed to alleviate the suffering. Furthermore, these behaviors and stressors are passed down to the residents and the medical students. The passion that we have as young medical students starts to decline as we face the similar challenges of worsening working conditions. The small, yet frequent difficulties we encounter on the way to becoming the "good doctors" we set out to become, make us question the realism of such an entity. Passion empowers us to practice our ideals and the loss of passion allows us to compromise our ideals.

It is courage that will carry us through the difficult times that we may encounter as health care professionals. Courage is the capacity to suffer in the name of our ideals. When in situations that challenge our ideals and dampen our passion, it is courage that sustains us. Courage transforms the challenges we experience into opportunities to grow through suffering. As medical students develop courage, they give depth to their passion and ideals, and thus mature to become the role models they once followed. Thus, young medical professionals need to remember their ideals, sustain their passion, and harness their courage to achieve their goal.

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RESEARCH LETTER

TOWARDS AN IMPROVED AIDS VACCINE: ENHANCING THE MHC CLASS I AND II ANTIGEN PRESENTATION OF SIV PROTEINS USING UBIQUITIN AND HLA-DM TARGETING SEQUENCES

Dear *MJM*:

Today, 17 years after the discovery of the human immunodeficiency virus (HIV) and in spite of the considerable effort and funds invested in basic research, acquired immunodeficiency syndrome (AIDS) is still a major epidemic without a cure (1). It is estimated that as many as 40 million people in the world are currently infected. Although numerous advances have been made in understanding HIV biology and pathogenesis and devising treatments, today's clinical therapy is far from solving the underlying pathological problem. The available therapeutic drugs include reverse transcriptase inhibitors and protease inhibitors, which are able to lower viral load to undetectable levels and which seem to improve survival of HIV-infected individuals. This therapy, however, is extremely expensive, has many side effects, and does not prevent a viral rebound after drug withdrawal.

The generation of an effective and affordable vaccine against AIDS is a major goal for developing countries where costly treatment is not an option. Several candidate vaccines have been designed and are currently being tested. One possible approach is the generation of pure DNA vaccines that would import antigenic viral protein into human cells. The proposed mechanism of action is that the foreign protein gets either phagocytosed by, or expressed from within, an antigen-presenting-cell (APC). Antigen presentation may occur by degradation via the ubiquitin-proteasome pathway, association with the major histocompatibility complex class I (MHC I) polypeptide and presentation on the cell surface to CD8⁺ T cytotoxic cells; or by degradation and processing in the endosomal/lysosomal compartments, association with MHC II molecules via the endosomal HLA-DM chaperones, and presentation to CD4⁺ T helper cells, which consequently initiate either a cytotoxic or a humoral response to the antigen.

In a recent collaborative study involving the laboratory of Dr. Franchini at the NCI, NIH, a new highly attenuated NYVAC (New-York-vaccinia virus) vaccine was assessed in Rhesus macaques, which are used as host models for HIV infection. This vaccine contained the *gag*, *pol* and *env* genes (encoding the viral capsid, polymerase, and envelope proteins