tionships and career choice decisions.<sup>2,4,6,7</sup> Also, because of their sexual orientation, GLBT students and residents are often the targets of unprofessional behaviours, such as harassment and academic mistreatment, from their supervisors and faculty members.<sup>9,10</sup>

Although Canadian medical schools have been proactive in supporting other underrepresented groups in the profession, such as women and Aboriginal medical students, more work is needed to address the needs of GLBT medical students.

### Louie Chan

Medical student, Class of 2007 University of Toronto Toronto, Ont.

## **Shelley Turner**

Medical student, Class of 2006 McMaster University Hamilton, Ont.

#### References

- Yiu V. Supporting the well-being of medical students. CMAJ 2005;172(7):889-90.
- Risdon C, Čook D, Willms D. Gay and lesbian physicians in training: a qualitative study. CMAJ 2000;162(3):331-4.
- Stefan M. GLMA conference stresses tolerance, sensitivity toward sexual minorities. Ont Med Rev 2000;67(1):57.
- Peterkin A, Rison C. Caring for lesbian and gay people: a clinical guide. Toronto: University of Toronto Press; 2003. p. 1-24, 291-308.
- Moulton D. ACMC: Study looks at med students' views of gays. Med Post 2004;40(19):16.
- British Medical Association. Career barriers in medicine: doctors' experiences. London (UK): The Association; 2004.
- Burke BP, White JC. Wellbeing of gay, lesbian, and bisexual doctors. BM7 2001;322(7283): 422-5.
- 8. Klamen D, Groosman L, Kopacz D. Medical student have a habitation of the second state of the second seco
- dent homophobia. J Homosex 1999;37(1):53-63.

  9. Brogan DJ, Frank E, Elon L, Sivanesan SP, O'Hanlon KA. Harassment of lesbians as medical students and physicians. JAMA 1999;282 (13):1290-2.
- Peterkin AD. Staying human during residency training. 3rd ed. Toronto: University of Toronto Press; 2003. p. 99-105.

DOI:10.1503/cmaj.1050112

I thank Louie Chan and Shelley Turner for their comments, in response to my recent *CMAJ* piece,¹ on a very important issue that faces GLBT medical students. I agree with them that medical schools across Canada need to be more proactive on this subject.

At the University of Alberta we are trying to address GLBT issues in sev-

eral ways. The first was through an educational session on GLBT issues with our student advisors. We are hoping to integrate diversity modules into our medical curriculum and are developing a support group for staff, residents and medical students who are dealing with GLBT issues within our medical school. In 2004 I attended a conference of the Canadian Rainbow Health Coalition (a national organization that provides a means for people working on GLBT health and wellness issues to network and advocate together) and tried to network that organization with the Association of Faculties of Medicine of Canada. The Coalition is also developing educational materials that I hope can be used in the medical curriculum.

Although there is a long road ahead to completely change the attitudes of people within the medical field, I am hopeful that continued small advances will eventually lead to a safe and healthy environment for all minority medical student groups.

#### Verna Yiu

Assistant Dean, Student Affairs Faculty of Medicine and Dentistry University of Alberta Edmonton, Alta.

#### Reference

Yiu V. Supporting the well-being of medical students [editorial]. CMA7 2005;172(7):889-90.

DOI:10.1503/cmaj.1050146

# An unusual crystal

We were most interested in the report by Joe Dylewski and colleagues on acute monoarticular arthritis caused by birefringent Maltese cross-like crystals composed of lipids. Arthritis has been reported in patients with hyperlipidemias, especially type II. Although Glueck and colleagues reported synovitis in such patients, the body of evidence favours a periarticular site of inflammation. Cholesterol crystals have been identified in some patients but do not appear to be particularly inflammatory. To date we know of no other report of

Maltese cross-like crystals in patients with arthritis associated with hyperlipoproteinemia.

Why arthritis is associated with hyperlipoproteinemia remains a mystery. Perhaps high levels of blood blood lipids of a certain type act as a source of lipid-bound macroenzymes.<sup>6</sup> It is perhaps germane that high concentrations of trypsin and lipase resulting from pancreatic disease cause synovial fat necrosis with either a mono- or polyarthritis and subcutaneous necrosis.<sup>7,8</sup>

### W. Watson Buchanan

Emeritus Professor of Medicine Walter F. Kean
Clinical Professor of Medicine
McMaster University
Head of Service, Rheumatology
Hamilton Health Sciences
Hamilton, Ont.

#### References

- Dylewski J, Awan Z, Roy, I. Acute monoarticular arthritis caused by Maltese cross-like crystals. CMAJ 2005;172(6):741-2.
- Rifkind BM. The hyperlipoproteinaemias. B J Hosp Med 1970;4:683-92.
- Glueck EJ, Levy RI, Frederickson DS. Acute tendinitis and arthritis. A presenting symptoms of familial type II hyperlipoproteinemia. JAMA 1968;13:2895-7.
- Struthers GR, Scott DL, Bacon PA, Walton KW. Musculoskeletal disorders in patients with hyperlipideamia. *Ann Rheum Dis* 1983;42:519-23.
- Fam AG, Sugai M, Gertner E, Lewis A. Cholesterol "tophus." *Arthritis Rheum* 1983;26:1525-8.
   Remaley AT, Wilding P. Macroenzyems: bio-
- Remaley AT, Wilding P. Macroenzyems: biochemical characterization, clinical significance, and laboratory detection. Clin Chem 1989;35:2261-70.
- Hughes PSH, Apisarnthanrax P, Mullins JF. Subcutaneous fat necrosis associated with pancreatic disease. Arch Dermatol 1975;111:506-10.
- Smuckler NM, Schumacher HR, Pascual E, Brown S, Ryan WE, Sadeghian MR. Synovial fat necrosis associated with ischemic pancreatic disease. Arthritis Rheum 1979;22(5):547-53.

DOI:10.1503/cmaj.1050126

by Drs. Buchanan and Kean in our case. As mentioned in the text, elevated levels of lipids in the serum and/or synovial fluid are unusual in Maltese-cross crystal-associated arthritis (only 2 of 13 reported cases). The references cited in our text suggest that the lipid-containing crystals are formed in the synovial fluid by various proposed but unproven mechanisms. They are not the product of an abnormal