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### **Paper Title**

Women in Academia; Perspectives from Canada

### **Abstract**

In Canada, women are underrepresented at higher levels of academia in Biological Sciences. While they account for 35.8% of Assistant Professors and 30.9% of Associate Professors, only 17.9% Full Professors are women<sup>1</sup>. The one area in which the percentage of women significantly exceeds that of men is a category labeled "Other". This includes instructor/lecturers and non-tenure track positions; lower paid positions with less job stability. There is also a lack of women in senior administrative positions within the top academic institutions in Canada. Specifically, at Simon Fraser University (Burnaby, BC, Canada) there are a total of 62 tenured or tenure-track faculty members between the Department of Biological Sciences and the Department of Molecular Biology and Biochemistry. Of those, only 15 are women. This trend can no longer be explained solely by pipeline issues. There are ample statistics indicating that women have constituted at least 40% of graduate students in the biological sciences since the early 1990's. Yet this clearly has not translated into a corresponding increase in women in senior faculty positions.

While there are likely many factors that contribute to loss of women along the pipeline, work/family balance is definitely a major issue. Obtaining a faculty position in academia is an extremely competitive process. Achieving tenure then requires a demonstrated excellence in research, as judged by publications and grants, as well as teaching and service. These demands often occur when women are considering having children or juggling young families. A study by Mary Ann Mason, the first woman Graduate Dean at the University of California, Berkeley, revealed that women who have children within five years of having received their PhD are 38% less likely to achieve tenure than men who have children during this period<sup>2</sup>. Thus, there is an inherent gender bias in the tenure system

While there is no magic bullet, mentoring is an important means to encourage and support women in science at all stages of their career. It is essential to convey to young women that a career in science, in particular academia, is exciting, intellectually stimulating and can be highly rewarding. I have been able to communicate my enthusiasm for science through training and mentoring both undergraduate and graduate students in my laboratory. While I have not specifically recruited female students, 13/14 undergraduate students who have completed independent research projects in my lab have been women. All but one of my graduate students have also been women. Because I also strongly

believe that it is important to encourage younger girls to pursue math and science, I joined the Board of Directors for the Society for Canadian Women in Science and Technology (SCWIST) ([www.scwist.ca](http://www.scwist.ca)). SCWIST is a non-profit organization established in 1981 to promote, encourage and empower women working in science and technology. The goals of SCWIST are:

- To promote public awareness of the opportunities for women in science and technology
- To encourage the full participation of girls and women in all aspects of science and technology education
- To increase the representation, retention and status of women in the science and technology workplace

In SCWIST's 26-year history, the organization has implemented and coordinated many exciting, fun and interesting programs and workshops to achieve these goals. One major program developed and implemented by SCWIST to promote and encourage women in science is the *ms infinity* project. *ms infinity* stands for "math + science = infinite options". This program exposes young women to interesting and exciting career options and positive female role models who are pursuing dynamic careers in science and technology. *ms infinity* attempts to defy stereotypes of science careers and women scientists. This highly successful program is in its 17<sup>th</sup> year and is supported by the Natural Sciences and Engineering Research Council of Canada (NSERC).

1. CAUT Almanac of Post Secondary Education in Canada, 2007.
2. <http://www.aaup.org/publications/Academe/2004/04nd/04ndmaso.htm>