Science, innovation and entrepreneurship: Why and how scientists should take an active role in the commercialization process

Cynthia Go
University of Toronto

12:00–1:00 pm, Thursday, Oct. 31, 2013, KHE119

ABSTRACT
Innovation is increasingly based upon a triple helix of university-industry-government interactions. The increased importance of knowledge and the role of the university in incubation of technology-based firms has given it a more prominent place in the institutional firmament. This talk will address how innovations can become useful in society? What is needed for a company to use such innovations successfully? Why and how do individuals and companies commercialize a technology? Topics include intellectual property, financial basics, company structure, negotiations and others, giving students an understanding of enterprises and the skills they require in their teams.

BIOGRAPHY
M. Cynthia Goh is Professor at the Department of Chemistry, the Institute of Medical Science, the Munk School of Global Affairs, and Director of the Institute for Optical Sciences at the University of Toronto. She received her PhD from the University of California at Los Angeles, and carried out postdoctoral fellowships at Columbia University and the University of California, Berkeley, prior to taking a faculty position at the University of Toronto. Professor Goh is a physical chemist with a diverse set of research interests, including fundamental studies of complex systems biomaterials, interfaces, probe microscopy, the development of new research instrumentation and nanotechnology. She is also known for her interest the translation of scientific discovery to technology and products, and the education of scientist-entrepreneurs. She invented the technique of diffraction-based sensing, a highly sensitive approach for the detection of biomolecules with applications in medical diagnostics and in drug discovery.

Together with her students, she founded Axela Biosensors Inc (www.axela.com) to commercialize the technology; Axela’s dotLabTM system, is a commercial instrument used by researchers and clinicians for a variety of applications in the bio and medical areas. Her scientific research on understanding of the self-assembly of biomolecules and polymers resulted in a platform technology for making nanoparticles; based on this science, she and her students founded Vive Nano, now Vive Crop Protection (www.vivecrop.com), with over 30 employees targeting agriculture applications. She is also co-founder of Dalenyi BioSurfaces (www.dalenyi.com), a company engaged in immunoassay tools, Sciventions (www.sciventions.com) a scientist-to-scientist e-commerce solutions company, and Pueblo Science (www.puebloscience.org), a non-profit company engaged in science literacy for low resource settings.

Professor Goh’s interest in the education of scientist-entrepreneurs led her to introduce a non-credit series in 2004, which led to what is now known as Entrepreneurship101 at MaRS, the flagship entrepreneur training program of the MaRS Discovery District, with over 1500 registered attendees annually. In 2012, as Director of the IOS, she introduced Techno2010, a one-month intensive training program specifically geared for university scientists intending to build a tech-based company. Techno2010, 2011 and 2012 have led to the creation of over 35 start-ups based on the results of scientific research, many of which now have sales and follow-on funding.