

**Alumni Career Night:
Chemical & Physical Sciences
January 27, 2010**

Coordinated by the Career Centre
University of Toronto Mississauga

With the support of the
Erindale Society of Chemical & Physical Sciences

Guest Speakers:

Dr. Kelly Akers – Founder and CEO, ProSpect Scientific

Elaine T. Vandenberg – Director, Quality, GlaxoSmithKline

Avon Saldanha – Clinical Research Specialist, Applied Health
Research Centre, the Li Ka Shing Knowledge Institute of St.
Michael's Hospital

Annil Ramsumair – Clinical Supplies Associate, AstraZeneca

Dr. Donald Philip - Science Education, Department of Chemical
and Physical Sciences, University of Toronto Mississauga

Career Centre, UT Mississauga
Room 3094, South Building
905-828-5451
careers.utm@utoronto.ca
www.utm.utoronto.ca/careers



Sample Career Options for Chemical & Physical Sciences Students

There are many different career options available for chemical and physical sciences graduates. Below is just a *sampling* of types of positions that graduates may choose. Please note: This is not an exhaustive list as there are many other career options available. Some positions listed may also require additional education or experience.

- Laboratory Technician*
- Quality Control Analyst*
- Quality Technician
- Quality Assurance Manager
- Safety Inspector
- Teacher/Professor*
- Radiation Therapist*
- Science/Technical Writer*
- Doctor*
- Research Technician
- Laboratory Manager
- Pharmaceutical/Technical Sales*
- Pharmaceutical Research Chemist
- Environmental Educator
- Toxicologist
- Food Scientist*
- Cytogenetic Technologist
- Biostatistician
- Intellectual Property Manager
- Government/Regulatory Affairs Specialist
- Chemist*
- Chemical Salesperson
- Industrial Hygienist
- Textile Chemist
- Paint Formulation Chemist
- Pharmacologist*
- Purchasing Officer
- Paramedic*
- Optometrist*
- Pharmacist*
- Dentist*
- Massage Therapist*
- Science Magazine Editor/Writer
- Environmental Lawyer
- Epidemiologist*
- Health Policy Analyst
- Medical Librarian
- Health Records Administrator*
- Chiropractor*
- Entrepreneur*

Note: career profiles for many of the above jobs are available in the Career Centre. Those marked with an asterisk(*) can be viewed using Career Cruising, a Canadian electronic career guide available in the Centre.

Alumni Career Profiles

The following are excerpts from alumni career profiles of Chemical & Physical Sciences graduates listed on the UT Mississauga Career Centre web site. To read the complete profiles of these and other alum, visit www.utm.utoronto.ca/careers/alumni_profiles.html

Sara Dicks

Degree: BSc, Majors: Forensic Science and Chemistry; Minor: Biology; 2001

Sara Dicks is a business analyst for GS1 Canada (formerly known as the Electronic Commerce Council of Canada). She produced documents and charts, intellectual and written support, conducting research, monitoring reports and developments in other jurisdictions for projects relating to food traceability.

"At my place of employment, in this particular position, one needs to be a creative and a critical thinker. Logical and analytical reasoning skills and excellent writing and communication skills are also paramount. One would think my education would logically lead to a forensic scientist position, but I have taken a business path to broaden and refine my skill set," says Sara, who also has a Masters in Chemistry. "Upon completion of my Masters degree, I was hired as the business analyst for one project and then promoted to business analyst for the department."

Sara believes she was hired because she demonstrated that although her education was not in business or commerce, she had the requisite skills and abilities for the position. "Even though the job was not a logical step based on my degree, I applied for it regardless. During my interview, I explained how my broader skill set, as opposed to the skill set specific to my forensic science and chemistry education, had equipped me for the position. I was hired at the end of end of my interview," she says. "The keys to my success are determination and support. You are responsible for your own career path, but you can't do it alone. Having an excellent support system is critical to success. My career path was not the most direct, but I have benefited from it greatly."

Ana Laura Lopes

Degree: BSc; Major: Physics and Astronomy; 2005

Ana Laura Lopes is currently a Technology Licensing Associate at the Massachusetts Institute of Technology.

"I help our licensing officers to license MIT's technology to different industries," says Ana Laura, who previously held a position as a physics instructor at Boston College High School. "The biggest challenge is to deal with so many different people such as attorneys, inventors and companies. They all have different opinions on the technology and what to do with it. Sometimes it is hard to negotiate a deal."

She says a person in her position needs to know how to deal with people and have negotiating skills.

"A lot of patience and the love for investigation are always very helpful," she says. "The reward of this position is to see so many of our technologies be further developed and commercialized. There is a lot of great and useful technology that comes from our labs to public use."

More career profiles of UT Mississauga alum: www.utm.utoronto.ca/careers/alumni_profiles.html

Exploring Career Options in Chemical and Physical Sciences

In addition to finding information online or in print, it is important to explore career options by talking with people in the field. The UT Mississauga Career Centre offers a number of programs, services and events to help you do this, including:

Extern Program

You are matched with a professional in your preferred career area and you go to the host's work place to job shadow them for 1-5 days in February (Reading Week) and/or after exams finish in May. More information and deadline dates to apply at www.utm.utoronto.ca/careers/extern.html

Connect with an Industry Professional

A partnership of the Career Centre and Office of Advancement, this program allows current students to make connections with UT Mississauga alumni working in the field of their choice to arrange an information interview. Information interviewing is not interviewing for a job, but rather a way for you to gain valuable insights into your career area of interest, that would otherwise be difficult to find in books or on the internet. The insights you gain will allow you to make more informed decisions, whether you are planning your career or looking for a job. Some examples are:

- President, Golden Goliath Resources Ltd.
- Science Teacher, American International School
- Scientist, Toronto General Research Institute
- Management Analyst, City of Toronto
- Strategy & Operations Consultant, Deloitte Consulting LLP
- Technical Analyst, Cantox Health Sciences International

For complete information, visit <http://www.utm.utoronto.ca/careers/connect.html>

Networking Binder

Our print networking binder contains contact information for professionals in the field willing to answer your career questions. Samples of past or current contacts include professionals from Boojum Research Technologies, Becton-Dickson & Co and MDS Pharma Services. Ask for more information at the Career Centre, Room SE3094.

Networking Events

Congratulations – by receiving this package, you have already attended one Alumni Career Night. Keep an eye out for more events in the future, including additional networking events and career fairs.

Career Counselling

Make an appointment to speak one-to-one with one of our professional Career Counsellors. Appointments may be booked by visiting us in SE3094 or by calling 905-828-5451.

Gaining Relevant Experience

Start early by seeking relevant opportunities that will help you gain experience and develop the skills that employers want. Some possible ways to gain relevant experience include:

Part-time, summer and volunteer work in positions that allow you to develop and demonstrate marketable skills. These might include both technical skills and “soft” skills like teamwork, project management, leadership, report writing, and presentation skills. The Career Centre web site offers listings of part-time, summer and volunteer opportunities throughout the year at www.utm.utoronto.ca/careers.

Samples of previous listings on the Career Centre Online include:

- Summer Research Student, UofT Dept Of Medical Biophysics
- Green Plan Project Coordinator, Ralph Thornton Community Centre
- Business Development Analyst, Sun Chemical Limited
- Research Assistant, London Kidney Clinical Research Unit
- Associate Chemist (Analyst), Interface Biologics
- Geophysics Student, Encana Corporation
- Junior Scientist, Molecular Biology, U OF T - IGEM
- Technical Analyst, Pfizer Inc.
- School Energy Program Leader, Toronto Green Community
- Volunteer for Clean Air!, Ontario Clean Air Alliance
- Laboratory Technician (Microbiology), Pepsi Bottling Group
- Petrophysicist, Shell Canada
- Naturalization Crew Leader, Credit Valley Conservation

Get involved in on-campus extra-curricular activities: Join on-campus clubs and community associations that demonstrate your commitment and enthusiasm for particular industries. On-campus clubs include: Erindale Society of Chemical and Physical Sciences, Let's Talk Science Partnership Program or the Pre-Med Club. You can also use these opportunities to network with people in your career field. For example, as a club executive, you might organize a career event in partnership with the Career Centre and take on some of the responsibilities of contacting professionals to take part in such an event.

Attend relevant conferences that are being held in southern Ontario. Use these opportunities to increase your knowledge of the field, network with people working in the field and with potential employers. Volunteer to work at these conferences—it is a great (and cheap) way to meet a lot of people.

Consider the Research Opportunity Program (ROP). UTM's ROP allows students in their second, third and fourth year to earn one full course credit by participating in a faculty member's research project. Deadline for applications is usually mid-March.

Apply for a Work-Study opportunity on campus. This program provides eligible University of Toronto students with an opportunity to work on campus and gain valuable career and/or academic related experience. Positions are posted with the Career Centre every September. Past postings that might be of particular interest to physical and chemical science students have included:

- Research Assistant
- Bioinformatics/Genome Research
- Insect Lab Research Technician
- UTM Recycling Coordinator
- M. Biotech Assistant
- Animal Lab Assistant
- Herbarium Assistant
- Environment Health Policy Research
- Fruit Fly Research Assistant

For more information, including eligibility requirements, visit www.utm.utoronto.ca/careers/work_study.html

Finding Work

Small Group Workshops

We offer a variety of workshops covering different phases in the career planning and work search process, including How to Access Job Postings for Recent Graduates (RGES), Networking, Effective Interviews, and others. Check the Career Centre events calendar for upcoming workshops. We also offer sessions with information about applying for graduate and professional school, including Road to Grad School.

Employment Advisors

Our professional staff are available to assist you in pre-booked one-to-one resume critiques or practice interviews, or to answer your job search questions. Drop by SE3094 or call 905-828-5451 for more information and to learn how we can help you get started.

Employment Services

The Career Centre offers online job postings for current students and for up to two years after graduation. Programs include: full-time work following graduation (Recent Graduates Employment Service); graduating year recruitment (Graduating Students Employment Service); Summer Employment; Part-time/Temporary; On-Campus; Ontario Work Study Program on-campus jobs; and Volunteer Listings.

For access to postings for current students, simply visit www.utm.utoronto.ca/careers and register online. Those seeking access to full-time listings (graduating year or recent graduates) must attend an orientation session prior to accessing listings. Please ask the Career Centre for details.

The following are samples of opportunities that have previously been listed on the Career Centre Online (samples have been edited for length):

Job Title: QUALITY ASSURANCE OFFICER
Department: Canadian Food Inspection Agency
Description: Report to Burnaby Laboratory Director-monitors and evaluate Burnaby Laboratory quality system, verify that the system meets the requirements of ISO (International Standards Organization) standards and of the Standards Council of Canada. Lead and manage the activities of the Burnaby

Laboratory Quality Assurance Team, and act as mentor to Laboratory personnel in the quality assurance area. Maintain documentation control for the Laboratory's quality assurance system, including documentation on all complaints, non-conformities, and results of investigations. Coordinate or conduct internal audits for compliance with Standards Council of Canada CAN-P-4D (ISO 17025) standard. Receive and follow up on complaints concerning data quality. Provide advice concerning the development, implementation and management of laboratory quality assurance systems.

Qualifications Graduation from a recognized university with a degree in science with a specialization in chemistry, microbiology or a closely related field. Experience working in a management role in a quality assurance/quality control program in an analytical laboratory. Experience using a laboratory information management software system. Experience using common office software such as WordPerfect, Word, Excel and e-mail

Job Title: SMALL SCALE FERMENTATION LAB TECHNICIAN

Responsibilities: Placing safety as the highest single priority in the workplace. Safe start-up, operation and shut-down of lab fermentation equipment. Sets up experimental equipment and improves the control, operations, and reliability of existing experimental equipment. Submits samples to analytical for analysis, then collates the data and enters it into a database or graphics program on a computer. Reads process and laboratory indicators to collect data, discerns erroneous readings, and repairs or replaces the instrument or indicator. Should have or shortly develop ability to log data, organize data, perform basic calculations, and develop some observations based on results. Must be diligent in monitoring/observing experiments and reporting significant responses. Troubleshoots operating problems and relays pertinent information to appropriate personnel. Instructs and trains new technicians in equipment operation and in basic principles behind operation. May be called upon to travel to support short-term assignments. Reports to the Lab Lead.

Qualifications: B.S. in Biology, Chemistry, or Engineering-based science. Zero to five years of industrial experience, preferably in a lab environment. Practical hands-on research expertise with industrial microbial fermentation processes and demonstrated mechanical aptitude are considered significant pluses. Possesses both mechanical skills and bench chemistry skills (i.e., calibration and operation of various lab equipment). Maintains the ability to offer suggestions for procedural improvements and clearly communicate process problems and results. Demonstrates good communication skills with all co-workers and a "can do" attitude. Establishes and maintains professional performance standards. Asks pertinent questions regarding the safe operation of their process.

Job Title: MARKET RESEARCH ANALYST (Millennium Research Group MRG)

Job Category: Biotechnology and Pharmaceutical

Description: Produce comprehensive market research reports and conduct custom consulting projects. Gather, interpret and synthesize data on market conditions, business opportunities and global trends in medical and healthcare industries. Will experience researching growing and dynamic medical markets across the globe, speaking with leading industry and medical specialists, presenting findings to company executives/investors, managing critical MRG clients, taking on leadership and management responsibilities and travel to industry events/client visits.

Qualifications: Undergraduate degree with a proven record of academic success (all disciplines). Strong critical thinking and analytical skills. Superior oral and written communication skills. Excellent creative problem-solving skills. Strong initiative and proven leadership capabilities. Proficiency in Microsoft Word and Excel. Knowledge of medical device industry an asset but not mandatory.

Job Title: CHEMISTRY TEACHER, Grades 7-12, independent school (Appleby College)

Description: Applicants should have a willingness to commit to the full co-curricular program. Appleby teachers are expected to integrate the use of information technology into the curriculum

Qualifications: Background in Biology, Chemistry and Environmental Science. Proven and relevant academic experience. Strong laboratory skills and experience. A proven ability to have a caring rapport

with students, Grades 7 to 12. Strong communication skills. An enthusiastic and productive work ethic. Ontario Teachers' Certificate an asset.

Other Relevant Resources

Selected Web Sites:

- The Chemical Institute of Canada <http://www.cheminst.ca/>
- Science Careers (from the journal Science) <http://sciencecareers.sciencemag.org> (incl. job postings, list of employers, articles, job market info, job profiles)
- Canada's Research-Based Pharmaceutical Companies – for the latest information about this industry as well as links to member companies <http://www.canadapharma.org/>
- Food Safety Network – this site provides information about the current hot topics related to the food industry. There is information for students, consumers, and researchers: <http://www.foodsafetynetwork.ca/asp/public/default.aspx>
- Canadian Institute of Food Science and Technology – the national association for food industry professionals <http://www.cifst.ca/>
- BIOTECCanada – “the national industry-funded association representing the broad spectrum of biotech constituents including emerging established and related service companies in the health, agricultural, and industrial sectors.” Find information about the different industries and companies within biotech. <http://www.biotech.ca/en/default.aspx>
- The PetriDish by BioTalent Canada <http://www.biotalent.ca/petridish/default.asp> (incl. job postings, bio-economy career profiles, and career planning tools)
- Strategis: Canada's Business and Consumer Site – search business information by sector.: http://strategis.ic.gc.ca/sc_indps/engdoc/homepage.html?categories=e_bis

Sample of Career Centre Library Resources:

- Alternative Careers in Science
- Canada's Top 100 Employers
- Career Cruising (electronic career guide)
- Career Information Binders
- The Big Guide to Living & Working Overseas
- The Canadian Student Employment Guide
- What You Can Do With A Science Degree
- Panel - Pharmaceutical and Related Careers: Tap into a Booming Industry that Saves Lives!
- Great Jobs for Biology Majors
- Clinical Laboratory Science Careers
- Careers for Animal Lovers and Other Zoological Types
- Careers for Nature Lovers and Other Outdoor Types
- Resource Guide for Careers in Toxicology
- and many more...



Keep up-to-date with all the latest information about career fairs, industry panels, networking events and more.

Sign-up for the Career Centre's e-mail newsletter via our home page or add 'Jimmi C' as a friend on Facebook!

Career Centre @ UT Mississauga
Room 3094, South Building
Tel: 905-828-5451
Email: careers.utm@utoronto.ca
Web: www.utm.utoronto.ca/careers

