

Careers in Biology

Wednesday, January 26, 2005
Student Centre, 5:00-7:00 p.m.



Presented by:
Career Centre, University of Toronto at Mississauga
Room SE 3094. Tel: 905.828.5451
www.utm.utoronto.ca/careers

Co-sponsorship by:
Erindale Biology Society

Package prepared by: **Kim-Chi Tran**, Career Assistant
Panel Moderator: **Kim-Chi Tran**

Panelists:

Hassaan A. Basit	Watershed Communications Specialist Halton Region Conservation Authority
Tom Stewart	Special Project Biologist Ontario Ministry of Natural Resources
Yannie Meletopolous	Regulatory Affairs Apotex
Heather Cunningham	Librarian Gerstein Science Information Centre

Table of Contents



Overview of Skills Developed by Biology Students	p. 3
Examples of Industries Employing Biology Graduates	p. 5
How to Gain Experience	p. 10
UTM Career Centre Resources	p. 14
Career Profiles	p. 18

Overview of Skills Developed by Biology Students

In considering a career, it is necessary to identify what skills you have developed through whatever experience you might have, whether this be through past jobs, volunteer positions, or education. It is important to note that skills may have been acquired through past experiences relevant to your area of study (e.g. lab work), or they may be transferable skills that you might have obtained through part-time or summer jobs (e.g. communication skills developed by working in retail).

Skills acquired in a biology major fall into four categories: investigative, research-oriented, quantitative, and analytical. Students with biological science majors develop the ability to formulate concepts, allowing them to solve practical problems and to find better ways of meeting world needs. The following list presents some examples of the skills developed and used by students in the biological sciences. Each category is arranged so that a biology-specific skill that may have been obtained only through work/class-related experience is mentioned first and more general skills are at the bottom. Abstract skills are defined through usage of examples.

Investigation

Inspecting specimens

Defining expected/potential results

e.g. developing experiments, hypothesis testing

Assessing risks

e.g. biometrics, probability of gene combinations, examining impact of pollution on trophic levels

Identifying problems

Research

Designing experiments

Recording observations

Using computers for computation/simulation

Defining problems, critically evaluating research designs and results

e.g. identifying confounding variables in a study, analyzing scientific papers

Organizing ideas/information

Quantitative

Utilizing laboratory equipment
Preparing statistical reports
Utilizing statistical tests to predict outcomes
Determining probabilities
Applying scientific concepts to problems
Interpreting results

Analysis

Evaluating effects of phenomena
e.g. examining aspects of ecological problems
Examining components of problems/ideas
Making projections from data
Reasoning logically

These skills are applicable to job responsibilities in a variety of fields, such as the sciences, business, government, and education. For example, the ability to conduct investigations and to perform analyses may be employed differently on a daily basis by a director of biomedical communications, a genetic engineer, a curator of a natural history museum, and a teacher.

SOURCE: www.ukans.edu/~uces/major/bio.shtml

Examples of Industries Employing Biology Graduates

SOURCE: NOC Binders, available in Career Centre Resource Library

Industry: Biotechnology		
<p>biochemical engineering - the development of scale-up processes (for example, for fermentation) to produce larger quantities of a substance at one time</p> <p>biochemical production - the production of chemicals, hormones and other substances in high volumes</p> <p>down-stream processing - the separation and purification of chemicals and biological products produced by organisms</p>	<p>forensic sciences - the use of deoxyribonucleic acid (DNA) for identification purposes (for example, in criminal cases, paternity suits, mass disasters)</p> <p>genetic engineering - the transfer of genes from one species to another (in particular, the application of recombinant DNA in producing new substances) or the improvement of genetic properties of plants and animals</p>	<p>human cell culture - the production of antibodies and other useful biological substances</p> <p>industrial microbiology - the selection and improvement of genetic characteristics for the production of chemical products</p> <p>plant cell culture - the production of hormones or chemicals by plant cells and the modification of plant cells to improve plants (including plant genetic engineering)</p>
Educational Options		
<p>BSc generally required to perform technical functions in the laboratory (assist supervisor's research). Degree can be in Biochemistry, Microbiology, Cellular Biology, etc.</p> <p>Ontario College Advanced Diploma/Post-Graduate Certificate in the Biotechnology, Clinical Research, or Regulatory Affairs programs for more technical work in clinical research and regulatory affairs. e.g. Humber College, Durham College, McGill University, Michener Institute.</p> <p>MSc of Biotechnology for jobs in applied research/product development; regulatory affairs, clinical trials, intellectual property and technology transfer (please refer to profiles section). e.g. University of Toronto, McGill, Manitoba.</p> <p>PhD required for independent research and for research employment in biotechnology companies.</p>		

Biotechnology Positions (samples of jobs previously posted at UTM Career Centre)

Research Associate
(BSc in Chemistry, Biology, Microbiology, Biochemistry, Genetics, Molecular Biology, Biotechnology)
-Iogen Corporation

Quality Control Analyst
(diploma in Chemical or Bioscience technology)
-ID Biomedical Corporation of Quebec

Senior Technician/Junior Scientist
(BSc with 10+ years of experience/MSc with 5+ years of experience/PhD with 0-3 years of experience)
-Prolab Group

Quality and Assurance Auditor, Research and Development
(BSc plus 2 years of related experience in the Biotechnology industry)
-Aventis Pasteur

Associate Scientist, Microbiology
(BSc, MSc)
-Affinium Pharmaceuticals

Technical Product Specialist
(BSc with 2-5 years laboratory experience, MSc, PhD)
-BD

Industry: **Toxicology & Pharmacology**

(the science that studies the harmful effects of drugs, environmental contaminants, and naturally occurring substances found in food, water, air and soil)

biological research - perform experiments to determine way drugs interact with various living systems, and to define the mechanism involved with producing those interactions

human pharmacology - study the therapeutic and toxic actions of drugs in humans. Note: generally MD required

public service, regulatory affairs and consulting - communicate results of research, discuss implications of drugs. Assist development and enforcement of laws (e.g. disposal of chemicals)

product safety evaluation - perform safety evaluations for therapeutic drugs, food additives, cosmetics, agricultural chemistry, etc. Test whether or not product causes cancer, birth defects, reproductive effects, neurological toxicity, or other adverse effects

clinical - concerned with correct routes of administration of drugs, with assessing their side effects, with monitoring their levels in patients and with preventing or treating overdoses as well as consequences of interactions with other drugs. Involved with final stages of drug development

industrial research - generally positions are in the pharmaceutical industry; similar to biological research with the additional goal of discovering therapeutically useful molecules that are safe. Drug preparations' biological activity are measured to ensure effectiveness and standardization of measurements

forensic toxicologist - look for drugs and poisons in suspicious, unexpected and certain other types of deaths. They are concerned with the medical and legal aspects of drug-related deaths, and often testify in court.

Educational Options

BSc in Pharmacology, Toxicology, Physiology, Biology, Biochemistry, Chemistry, Microbiology, Molecular Biology, Zoology.

Note: though graduate studies are *typically* required for advancement, there are instances where jobs for BSc candidates are offered; however much work experience is required.

Certificate or **Post-graduate Certificate of Accomplishment** can lead to employment in pharmaceutical quality laboratories, quality assurance or research and development as laboratory technicians or specialists.

e.g. Seneca College's Advanced Pharmaceutical Instrumentation (HPLC) Recognition of Achievement (ROA) Certificate, Laurentian University, Laval University.

MSc required to be a research assistant or associate in the laboratory. Undertake research projects under the direction of a senior scientist.

e.g. Carlton University, Queens University, University of Toronto, University of Guelph, University of Ottawa, University of Western Ontario.

PhD (generally specializing in one of the above mentioned undergraduate fields, e.g. Microbiology) needed to direct research lab, conduct independent research.

e.g. Carleton University, Queen's University, University of Toronto, University of Guelph, University of Western Ontario.

PhD/MD needed for research in a clinical or pharmacological setting.

Sample Toxicology/Pharmacology Positions (from past Career Centre postings)

Aquatic Toxicity Technologist

(BSc, formal knowledge in biology, toxicology, or environmentally related discipline)
-Ontario Ministry of the Environment

Bilingual Pharmaceutical Marketing Specialist

(must have post-secondary studies in Pharmacology to understand complex nature of the products)
-Bilingual Source

Formulation Development Manager

(PhD with 5-10 years of proven drug development experience with emphasis in oral, topical or control release dosage forms, also 3-5 years in a management role. Will also consider MSc with 10-15 years of experience and 3-5 years in a management role.)
- Management Recruiters International (The Merwin Group, specialize in recruitment for the pharmaceutical industry)

Regulatory Affairs/Quality Assurance Manager

(BSc, 5 years experience; post-graduate certification and training an asset)
-Multec, Canada Ltd

Associate Scientist/Scientist Mass Spectrometry Group

(BSc/MSc + 0-2 years experience)
-Affinium Pharmaceuticals

Industry: Health		
*listed in order of increasing educational requirements		
<p>Medical Equipment/ Pharmaceutical Sales - responsible for visiting medical professionals in order to advertise medical products</p> <p>Patient Representative - liaises between patients and hospital staff and systems; responsible for receiving, investigating and responding to patients' inquiries, concerns and complaints regarding any aspect of care or service</p> <p>Public Health Inspector - investigate and correct health hazards. Make sure regulations regarding sanitation, pollution control, handling and storage of hazardous substances and workplace safety are being followed.</p> <p>Cardiovascular Technician/Perfusionist - operate extra-corporeal circulation equipment used to support or temporarily replace patients' circulatory/respiratory functions during cardiological surgery</p>	<p>Diagnostic Cytology - use microscopes to examine human cell samples to look for cancer, pre-cancerous lesions, infections, and other diseases.</p> <p>Medical Lab Technologist - perform and interpret diagnostic tests on specimens such as blood, tissue, and body fluids. Results are then used by doctors to diagnose, monitor, and treat illnesses and diseases</p> <p>Medical Illustration -"art as applied to medicine, a fusion of science and the graphic image". Involved in web design, photography, computer graphics, brochures, textbooks, courtroom exhibits, teleconferencing and distance education telecourses *only U of T offers MSc in all of Canada</p>	<p>Hospital Administrator - managers responsible for setting policy and balancing multimillion-dollar hospital budgets; may also be called chief executive officers, chief operating officers, presidents and vice presidents</p> <p>Optometry - diagnose vision problems and eye disease, prescribe eyeglasses and contact lenses, and prescribe drugs to treat eye disorders.</p> <p>Chiropractor - perform spinal adjustments and other manipulations on the skeleton to treat and prevent abnormal functioning of nervous system.</p> <p>Medical Officer of Health - in charge of the health of their region, keep track of illnesses, immunizations, make sure water is safe, give assistance during disasters; often hired by government</p>
Educational Options		
<p>BSc in Biology, Chemistry, Genetics, or Molecular Biology is required to become a laboratory/research technician assisting with research trials. BSc is typically required for sales and marketing positions.</p> <p>Post-graduate certification to become a certified technician (e.g. cardiovascular technician). Typically requires 11-12 months of classes plus clinical experience. e.g. Michener Institute, University College of the Cariboo</p>		

Advanced diploma may be required instead of post-graduate certification. Advanced diplomas take around 18 months for a program like diagnostic cytology (obtain National Certification in Cytogenetics, CLSp(CG)).

e.g. Michener Institute, Dalhousie University (School of Health Sciences)

Attending the **School of Optometry** is required to become an Optometrist. The only English speaking school in Canada is at the University of Waterloo, and a minimum of 2 years of undergraduate study is required. The length of the program is 4 years. The University of Montreal offers a French language Optometry program.

Attending the **Canadian Memorial Chiropractic College** or **l'Université du Québec à Trois-Rivières' Chiropractic program** is required. There is basic training in the biological and health sciences, specialized training in the chiropractic discipline, and extensive clinical training. Including 3 years minimum of undergraduate studies, becoming a Chiropractor takes 6-7 years.

MSc required for managerial positions in the health industry.

MD to become a doctor, or a Medical Officer of Health.

PhD/MD to direct laboratory research.

Sample Health Positions (from previous Career Centre postings)

Laboratory Technician

(BSc in Biology, must pass qualifying exam; preference may be given for academic standing)

-*Health Canada*

Territory Manager, Medical Sales

(Health-care related education, BSc, MSc, or PhD, with ultrasound training)

-*Genexa Medical Inc.*

Cytotechnologist

(National Certification in Cytogenetics required), 3-5 years experience an asset)

-*Soldier's Memorial Hospital*

Embryonic Stem Cell Facility Technologist

(BSc, MSc required)

-*Hospital for Sick Children*

How to Gain Experience

Graduate program supervisors and employers are looking for students with experience, both in lab protocols and also in a whole host of other skills. Experience is often the first asset they'll ask for. In order to prepare for your career or graduate studies, start thinking about summer programs such as **NSERC, NRC, work-study jobs, part-time jobs, and volunteer positions** to gain the experience that you need.

AROUND THE UNIVERSITY

Credit Research Courses

A great way to gain experience at UTM is by enrolling in a **Research Opportunity Program (ROP)**. ROP allows students in their second year (i.e. those who have completed at least 5 credits but not more than 9) to earn one full course credit by participating in a faculty member's research project. ROP courses are designated as BIO 299Y5Y, CHM 299Y5Y etc. More information is available at www.utm.utoronto.ca/research/rop/

Senior year students should consider **4th year research courses** such as BIO 481Y5Y. These courses allow the student, under the supervision of a faculty member, to do more independent research than the ROP.

ENV 400Y¹ is a practical internship for Biology and Environmental students. Through a part-time, unpaid work commitment, you will apply the expertise you have gained through your previous course work. Placements will be made at local conservation authorities, planning departments, consulting companies, corporations, federal agencies, and other relevant organizations. Please consult the website or the Biology Department for further information.

A good *word of advice* for all the above positions: start getting to know your instructors and professors well so that if and/or when you decide to do a research course it'll be easier for you to approach and find a supervising professor!

NSERC (Research Award for Undergraduate Students)

SOURCE: www.nserc.gc.ca

These awards are meant to stimulate your interest in research in the natural sciences and engineering. They are also meant to encourage you to undertake graduate studies and pursue a research career in these fields. Students at UTM are encouraged to find a professor who will agree to sponsor them for 4 months

¹ <http://www.utm.utoronto.ca/824.0.html>

(typically this is over the summer). The student then, in conjunction with the professor, will fill out a form detailing what their research goal for the summer will be. For more information, please contact the NSERC website or Biology faculty.

NRC

SOURCE: www.nrc-cnrc.gc.ca

NRC provides a wide range of programs designed to create challenging work opportunities for all levels, from undergraduates working in summer programs, to graduate students and post-doctoral fellows. In 2002-2003, NRC student programs provided direct, hands-on training and development work for some 731 graduate, co-op and summer students. One example of a program is the NRC's Women in Engineering and Science Program. It matches promising students with world-class researchers and facilities. It provides summer and co-op work placements for women pursuing undergraduate studies in science, engineering or mathematics.

OSAP Work-Study Jobs

The OSAP Work Study Program provides students with an opportunity to work on campus during the academic year and gain academic/career related experience. These career-related jobs, including lab research positions, are posted through the Career Centre the day after Labour Day. UTM students are eligible for positions at all 3 campuses at U of T. Some examples of postings are:

- Ecological Research Assistant
- Research Assistant, Centre of Addiction and Mental Health
- Bioinformatics/Genome Research
- Fruit Fly Research Assistant

In general, students are eligible to participate in Work-Study if they have qualified for OSAP and are registered in at least 60% of a full course load for the current school year (40% for students with a permanent disability). Complete eligibility requirements and information about consideration for special circumstances are available at www.utm.utoronto.ca/careers/workstudyprogram.html

Part-Time and Summer Jobs

If you are not eligible for OSAP, you can still find part-time work on campus or otherwise through checking listings either at the Career Centre or on your Career Centre account. Examples recent job listings include:

- Research Analyst, Toronto Western Hospital
- Research Assistant, UofT, Department of Zoology
- Summer Research Program, UofT, Banting and Best Institute
- Science Outreach, UTM

On-Campus Volunteer Positions

Search for volunteer opportunities online with your Career Centre account. Volunteer information is also available in the “On-Campus Volunteer Opportunities” Binder at the UTM Career Centre.

e.g. Volunteering for lab positions – these are not always listed online or in the binder, but it is possible to approach professors on your own and inquire if there are any volunteering positions open in the lab. Some examples of duties may include: helping to restock fruit fly food, helping with graduate students’ research, other basic tasks around the lab. This is a first step both in developing and demonstrating your skills. But it also gives you the opportunity to become known within the department/lab. Then, when paid positions become available, grad students or other lab staff can vouch for your skills and work ethic.

e.g. AccessAbility Centre – perfect if you are interested in pursuing a career in physiotherapy, occupational therapy, rehab medicine, or would like experience helping those with special needs.

UTM Clubs

An excellent way to gain experience is to join clubs around campus. In obtaining leadership roles in clubs, such as EBS, students will be able to hone their communication, teamwork, and organizational skills. These transferable skills are also required by employers of Biology grads. On-campus groups like ECSPERT also provide specific First Aid training and experience for students interested in health careers.

OFF-CAMPUS OPPORTUNITIES

There are also many opportunities to gaining experience off-campus!

Internship Directory

A valuable resource for searching for internships is the Internship Directory, available online by logging on to your Career Centre account. Examples of internships that might be of interest to Biology students are: Oxfam Quebec - assisting in humanitarian aid; Summer Fellowships in Genomics with the Genomic Institute.

UTM Internship Fair

Held in early February (the 2005 fair will be held on February 9, 2005 from 11-2 in the Student Centre). Past participants include: Biotechnology Human Resources Council; Natural Resources Canada (NRC): Science & Technology Internships.

Science & Technology Internships

There are several internships available for students in Life Sciences, such as the Science and Technology Internship Program. This program provides structured work terms to unemployed or underemployed recent graduates in the science and technology sector. As an intern, you will have the opportunity to obtain transferable skills, and possibly your first glimpse of a field that you might want to end up specializing in.

Some examples of internships² are:

- Science and Technology Internship and Apprenticeship Program (STIAP)
- Science and Technology Internship Program – Horticultural
- Science and Technology Internship Program – Natural Resources Canada
- Science and Technology Internship Program with SMEs (small and medium-sized enterprises throughout Canada)
- Science and Technology Internship Program – Fisheries and Oceans Canada
- Science Collaborative Research Internships Program

Off-Campus Summer and Part-Time Positions

Register with the Career Centre Online (www.utm.utoronto.ca/careers) to view summer, part-time and temporary work opportunities. Samples of recent part-time and summer job listings include:

- Laboratory Technician (Microbiology), Pepsi Bottling Group
- Summer Student Lab Technician, Conagra Foods
- Field Biologist, Toronto and Region Conservation Authority
- Botanists, Biologists, Ecologists - Ministry of Natural Resources

Off-Campus Volunteer Positions

Depending on the career that you want to pursue, volunteering can also help you develop relevant skills and allow you to better understand a possible career environment e.g. a health environment, or a particular disease. The Career Centre has a large collection of volunteering positions available near UTM and the GTA. You can visit the Career Centre to access this information from the “Off-Campus Volunteer Opportunities” binder or register online at www.utm.utoronto.ca/careers to search online. For example, both Greenforce Conservations Expeditions and Alzheimer Society Peel have volunteer postings. As well, the UTM Career Centre hosts a Volunteer Fair the last Wednesday in September. Some relevant volunteer groups that attended last year include Trillium Health Centre and the Canadian Red Cross.

² further information can be found in *Youthlink: Helping You Make the Transition from School to Work, 5th Ed.* The book is available in the Career Centre Library. All internship information can also be found at www.youth.gc.ca

UTM Career Centre Events, Resources & Services

Workshops

A number of small group workshops and seminars have been specifically designed for students in Biology and Life Sciences at UTM. Participation in these sessions will help you begin your career planning and sharpen your work search skills. They include:

- Explore Career Options in Biology
- Science Summer Job Search
- Breaking Into Science
- Medical School Information Sessions
- Medical School Interview Preparation (individual practice interviews available after workshop participation)

Other workshops include: Resume & Cover Letter; Networking; Effective Interviews. Those students who are graduating may be interested in “Now That I’m Graduating, What’s Next?” and the new “Work It!” program, aimed at fine tuning skills required for finding a job upon graduation.

Individual Career Counselling

If you are unsure about your career direction or how your academic major relates to work after graduation, you may find it helpful to make an individual appointment with a career counsellor. Call 905-828-5451 or drop by SE3094 to book an appointment.

Job Coach

Once you have focused your job targets, book an appointment and the Career Centre’s professional Job Coach will assist you in obtaining that job that you have your eye on.

Resume Critiques

Get feedback on your resume or cover letter by attending an individual 30 minute critique with one of our professional staff.

Extern Program

A career exploration program that offers you the opportunity to job shadow and/or meet with people working in your preferred career area for placements of 1-5 days during the study week in February or after the exam period in May. The deadline for May 2005 applications is February 25th, 2005. Past students have been able to meet with Dentists, Surgeons, Physiotherapists, Medical Microbiologists and more!

UTM Alumni Mentorship Program

Students in their 3rd or 4th year are “matched” with an alum in their desired career field of interest (applications due late September). Some examples of past UTM mentors are: Chiropractor, Dentist, Health Administrator.

PRINT RESOURCES

NOC Binders

The following are a list of NOC codes pertaining to careers in Biology:

HEA 310 – General Health

HEA 311 – Medical Specialties

HEA 312 – Chiropractic, Naturopathy, Alternative Medicine

HEA 313 – Pharmacy and Nutrition

HEA 314 – Therapists

HEA 315 – Nursing, Public Health

HEA 316 – Medical Technologists

NAT 212 – Life Sciences (includes toxicology, etc.)

Plus many more!

Networking Binder

Looking to do an information interview or speak with a professional to learn more about your career of choice? Consult the networking binder for more contact information. Some examples of professions include: Chief Scientific Officer (NAT 210), Optometrist (HEA 311).

Books

Some useful books (of many others) available in the Career Centre Library:

- *Great Jobs for Biology Majors*, Blythe Camenson
- *Careers for Scientific Types and Other Inquiring Minds*, VGM Career Horizons (e.g.: p.7 Botanist)
- *Youthlink: Helping you make the transition from school to work*, Government of Canada
- *Canada's Best Employers for Females*, Frank Communications (e.g.: p. 145, Credit Valley Hospital)
- *The Wetfeet Insider Guide to Industries and Careers for Undergraduates (2004)* (e.g.: p. 14, pharmaceuticals and biotechnology; p. 72, health care; p. 211, research; p. 218, sales). *American information

ELECTRONIC RESOURCES

Career Cruising

This Canadian website has information on over 400 careers, including actual profiles of professionals in the field. It is possible to search by school subject, cluster, index, or use career selector or matchmaker to see what careers might suit your interests the best. Only accessible from the Career Centre, come in and ask our Student Career Assistants to help you get access. A sampling of

positions from Career Cruising that might be of interest to Biology students include: Pharmacist, Genetic Counsellor, Paramedic, Food Scientist.

Biology Career Planning Websites

www.utm.utoronto.ca/careers - From the left-hand side menu bar, click on 'Career Info' to access past panel packages. In addition, click on 'Careers by Major', and then Biology for a guide to careers for students in Biology.

www.bhrc.ca - Canadian biotechnology internship programs. Lots of information about careers, education, training and demand within the field.

<http://nextwave.sciencemag.org/ca/> - *Science's Next Wave* is a weekly online publication that covers scientific training, career development, and the science job market. The Next Wave is published by *SCIENCE* magazine and the American Association for the Advancement of Science. The link above is to the Canadian edition.

www.torontobiotech.org - The Toronto Biotechnology Initiative (TBI) is a non-profit organization committed to promoting the growth of biotechnology in Toronto and the surrounding region. As such, it is possible to learn more about Biotechnology, or even join TBI under a student membership to attend events.

www.sciencewriters.ca – Canadian Science Writers Association, complete with job postings in scientific writing/communications/project initiation and management.

www.canadapharma.org – information about pharmaceutical research and development companies and organizations, publications, areas of new medicinal research.

Career Centre Fairs and Special Events

Volunteer Fair

Gain experience and make contacts. This fair is held the last Wednesday in September. Some relevant volunteer groups that attended last year include Trillium Health Centre and the Canadian Red Cross.

Teaching & Education Fair

Held in October at the Student Centre. Learn more about admission requirements for the Faculties of Education in Ontario and overseas and find out about the Early Teacher Program - a partnership with OISE/UT to attract and prepare teacher candidates in science and mathematics.

Professional Schools Fair

Held in October at the Student Centre, participants include schools/programs in Medicine, Dentistry, Pharmacy, Optometry, M. Biotech, graduate schools, etc.

Career Expo

Held each year in late October, Career Expo is an excellent opportunity to network with representatives from a range of industries about career paths within their organizations and what type of skills, experience and education are required. Past participants include: Kelly Scientific, Patheon and Stryker Canada.

Summer Job Search Fair

Held each year in mid-January, past participants have included: UofT Science Outreach and the Ministry of Natural Resources.

Internship Fair

Interested in gaining experience and developing your skills? Attend the Internship Fair to speak with representatives about opportunities to gain hands on experience and make contacts in your field here and overseas. Past organizations include: Biotechnology Human Resource Council, NRC and the Canadian AIDS Treatment Information Exchange (CATIE).

Special Events / Career Panels

Every year, the Career Centre organizes a series of career panels in January and February. Previous topics have included:

- Forensic Related Careers in Science, Business and Technology (2004)
- Careers in Environment (2004)
- Careers in Biomedical Research (2003)
- Finding Your Way in Canadian Forensic Science (2003)

Videos of these panels (and others) are available in the Career Centre. Panel handouts/packages are also available in the Career Centre or online at www.utm.utoronto.ca/careers (click on 'Career Info').

The Career Centre also organizes employer information sessions and educational information sessions, featuring post-grad programs at Ontario colleges and chiropractic/rehab/health-related schools.

**Sign up for the Career Centre's E-Mail Newsletter
(via a link on our home page) to keep informed of
upcoming jobs, events and related resources.**

Job Search Resources

Employer Directories

Many directories for Mississauga and the GTA and elsewhere are available. Some examples are:

Contact Toronto 2004: An Annual “Who’s Who” of Top Employers and Decision Makers in the Toronto Region, The Toronto Board of Trade

The Career Directory, 2005: Canada’s Best Employer for Recent Grads, Richard W. Yerema and Karen Chow

Researching Potential Employers?

www.profit100.com – most profitable up and coming Canadian businesses, in case you would like to do some networking of your own, but need more information on workplace environment and working conditions. An example includes: BioEnvelop, a company specializing in a revolutionary edible packaging film.

Employment Services

To access full-time, part-time, summer and volunteer opportunities, register online with the Career Centre at www.utm.utoronto.ca/careers

Full-time job listings are available via the Recent Graduates Employment Service for two years after graduation. Graduating students can access full-time listings through the Graduating Students Employment Service. Students at all three campuses access the same job database. Ask for details at the Career Centre!

Career Profiles of UofT and UTM Grads

Jeremy Cook³

Associate Scientist, University Medical Discoveries
BSc (Hon) (focus on Molecular Biology), McMaster University
PhD in Immunology, University of Toronto

After graduation, Jeremy had originally planned to run his own business as a science writer. However, UDMI had been given his name by an academic whom the company used as a scientific consultant. Jeremy was asked in for an interview and offered a position with the company shortly thereafter. The University Medical Discoveries Inc. (UDMI) is an early-stage venture capital company affiliated with MDS Capital Corp. As Associate Scientist, Jeremy is responsible for researching and analyzing the investment potential of companies in the biomedical industry. This position gives Jeremy the unique opportunity to combine his academic background in immunology with his interest in business and mutual funds.

Daniella Dhalla

³ SOURCE: University of Toronto Alumni Binders

Basic Research and Genetics Associate, GlaxoSmithKline Inc.
BSc (Hon) in Genetics, University of Western Ontario
M. Biotech (Master's of Biotechnology), UTM

Daniella Dhalla received her Honours Bachelors of Science degree in Genetics at the University of Western Ontario in 2001, and her Masters of Biotechnology at the University of Toronto in Mississauga in 2003. After working as an intern for one year in clinical development at GlaxoSmithKline as a Study Team Leader, she joined the Basic Research and Genetics Department as a Research Associate. Daniella currently manages GSK's animal toxicology studies, medical genetics studies and consults with the clinical development department for pharmacogenetics studies in Canada. Her current projects involve genetic research into Alzheimer Disease, Bipolar Disorder, Obesity and Metabolic Syndrome.

Hassaan Basit

Watershed Communications Specialist, Halton Region Conservation Authority
BSc (Hon) Biology/Psychology, UTM
MSc Science Communication, Queen's University of Belfast

After receiving his Honours at UTM, Hassaan pursued a degree in Science Communication at Queen's University of Belfast, in Northern Ireland. After a year, Hassaan accepted a job at UTM where he was a Biology Research Assistant and Teaching Assistant. As of 2004, Hassaan secured a position at Conservation Halton as a Watershed Communications Specialist. Conservation Halton is the community-based environmental agency that protects, restores and manages the natural resources in its watershed. Hassaan currently works mainly in writing science articles (whether that is pamphlets for tourists or articles about the region for newspapers) and giving tours

Mei Velasquez

Manager of Public Relations, Visa Canada Association
BSc (Hon), UTM

Before completing her Bachelor's degree, Mei found a job at a venture management company that focused on early stage biotech companies. It was an entry level position; however she wanted to be exposed to both the world of science and business. After a few months on the job Mei was asked to take on more of an accounting role, which she enjoyed, but it was not what she was looking for. She stayed on, but examined her career paths in the meantime. Mei enjoyed the investor relations area very much, and so she researched the field of Public Relations. Following her research, Mei decided to contact the owner of a company, and was hired; she spent four years at the job. A year and a half ago, Mei made the leap from PR consulting to working on the 'corporate' side. Currently she is the Manager of Public Relations at the Visa Canada Association, managing various projects within the PR group. She is mostly focused on the

corporate relations area (dealing with stakeholders, including the media) and is enjoying her job immensely.

Thomas Stewart

Special Project Biologist, Ontario Ministry of Natural Resources
BSc (Hon), University of Guelph
MSc Biology, York University
PhD Candidate, University of Toronto

After Tom completed his BSc at the University of Guelph, he was able to land a job as a Fisheries Technician at numerous fisheries, moving his way up to an Assessment Supervisor at the Ontario Ministry of Natural Resources. Having enjoyed the outdoors recreationally, a fisheries industry suited him well; Tom completed his Masters with his interest in mind. For a year Tom took a year off, traveling to Korea as a Visiting Professor to teach English at the Chungnam National University. Currently he is back in Canada as a Special Project Biologist at the Ontario Ministry of Natural Resources with the Lake Ontario Management Unit. He studies the impact of foreign organisms on trophic levels of the Great Lakes.

Yannie Meletopoulos

Regulatory Affairs, Apotex
BSc (Hon), UTM
Postgraduate Certificate in Regulatory Affairs, Humber College

Yannie attended UTM and completed his Bachelor's degree, minoring in Biology and Chemistry. At UTM he participated in the Career Centre Extern program, and was placed with Bayer. There he was able to see different facets of the pharmaceutical industry, and found that he preferred regulatory affairs over sales due to its highly structured nature. It was also at Bayer that he learned of internships being offered in the field of Regulatory Affairs. Yannie completed his BSc, and attended Humber College for his Regulatory Affairs Certificate, where he learned more about the profession that merges science and business. After a summer internship with Dimethaid Research Inc, Yannie was signed on full time at Apotex. At Apotex he is in charge of regulating pharmacies in International markets (Europe, Australia, Asia), maintaining pharmacy regulations, and acting as a liaison to regulatory authorities.