

# STC

# NEWS/NOUVELLES

**OFFICIAL  
NEWSLETTER OF THE SOCIETY OF TOXICOLOGY OF CANADA**

**BULLETIN OFFICIEL DE LA SOCIÉTÉ DE TOXICOLOGIE DU CANADA**

C.P./P.O. Box 517, Beaconsfield, Québec, Canada H9W 5V1 [STC Home Page](#)

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## **FROM THE EDITOR'S DESK**

**Michael Prior**



April was a very wet month here on the Sunshine Coast. A visitor from England thought our descriptions of great views were "wet"! However, the rain did fill the reservoirs, flush the streams, and feed the forests and gardens. Walking through the forest after a shower, our Jack Russell puppy spent lots of time sniffing; reminding us that the moisture had released a host of aromas associated with firs and cedars, and other sources. He does the same thing in the garden, finding snails, cats, bulbs, you name it! His actions remind us of the world of smells, a world we barely sense. Unless, as an example, you drink wine.

Have you ever had a bottle of corked wine? The incidence of corked wine is estimated to be around five per cent. So it is not an insignificant problem for the oenophile, winery, or restaurant. The taste and smell are quite distinctive, often described as wet newspaper, or something equally unappealing. Just what is corked wine? More correctly, it should be called cork taint - a set of aromas imparted to the bottled wine following contact with chemical compounds from the cork. The main culprit compounds are guaiacol, geosmin, 2-methylisoborneol (MIB), octen-3-ol, octen-3-one, and primarily 2,4,6 trichloroanisole often referred to as TCA (not to be confused with trichloroacetic acid). TCA can be detected at a concentration of 2 ppt in white wines, or 5 ppt in red and port wines. The sensory threshold is approximately 5 ng/L in wine. One gram of pure TCA is sufficient to taint the annual Australian wine production (1). Although at very low concentrations, TCA can be detected chemically by supercritical fluid extraction or solid-phase microextraction, with quantification via gas chromatography-mass spectrometry with selected ion monitoring (2,3,4). Interestingly, continued sniffing of a TCA-affected wine can result in reduced perception of its perceived mustiness. But the taste doesn't go away, so don't use it for cooking instead (5).

Culinary cookbooks take up lots of shelf space in bookstores, libraries and kitchens. But what about a different type of cooking, such as the manufacture of biological weapons by terrorists? Should potential "*recipes*" be published? Anthrax has long been known as an occupational health hazard, e.g. *woolsorter's disease* and *malignant pustule*, with effects from peracute to chronic. More recently it is being regarded as a potential biological weapon. Recently the gene sequence for *Bacillus anthracis* was published in Nature (6). The genetic sequence was determined at the Institute for Genomic Research. The bacillus was originally isolated from a Texan cow in 1981. It contains over 5,000 genes and possible functions for approximately 65-70 per cent have been identified. Some of these are associated with virulence; which could be an aid to treatment or the development of a vaccine. The core information had already been published in the on-line GenBank. A condition of the funding for this project from the American government is that gene sequences are deposited in GenBank soon after they are discovered (7). Handling micro-organisms like anthrax requires special clothing, as does the handling of certain chemicals.

So how about smart clothing that adapts to your needs in the laboratory? Or clothing that senses the presence of noxious materials? These examples may not yet be available, but smart clothing using conductive textiles is already here. Surgical teams wear footwear made of conductive material to guard against sparks. There are jackets for skiers that capture and release body heat according to changing conditions. Hearsay evidence has it that one can buy pageable panties and T-shirts that change colour in bars and clubs. Of more interest to toxicologists could be the Smart-Shirt manufactured by Sensatex, which can record data like the wearer's respiration rates or precise location. The Audi and Porsche racing teams are currently testing it. What about a smaller version for laboratory animals, with continuous monitoring of a range of biological parameters? Gorix makes an electro-conductive textile with wide uses in heating and sensing applications; for example, wound care, solution warming, patient bedding, and other medical applications. Though there is a down side: batteries are required to power conductive clothing (8, 9,10).

Batteries are one thing our Jack Russell doesn't need, they were included in the original design! And April would have been an ideal time to test a cloth made by Nano-Tex, which uses whiskers only nanometres long to bind fibres tightly enough to shrug off liquids (9).

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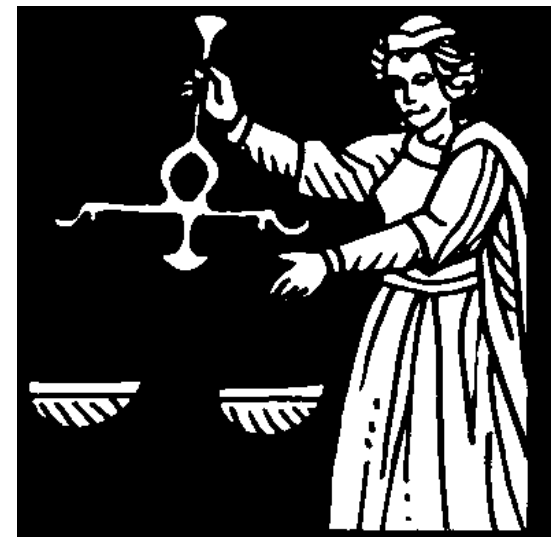
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## FROM THE PRESIDENT'S DESK

Sheldon Roth



On my return from the April 13<sup>th</sup> Board of Directors meeting in Montreal, I had planned to stop in Toronto before returning to Calgary. Since our Board meeting adjourned at a reasonable time, Jeff Kawamoto and I thought we would be able to catch an earlier flight. On our arrival at Dorval airport, we were surprised to see throngs of people in serpentine lines waiting to approach the check-in counters. Approximately 45 minutes later, we learned that all flights to Toronto were cancelled due to "computer" problems.

We were given three choices; wait an unknown period of time at the airport, stay over in Montreal or take the train. We decided that the train would be our best bet. During the 4.5 hour trip, I was able to reflect on the business discussed during our Board meeting, however the matters of STC seemed to be so minuscule compared to what was happening in the real world; the war in Iraq, the possibility of biological warfare; anthrax exposures and of course SARS. Prior to leaving for Montreal to attend the STC Board meeting, I was frequently asked why I was traveling in the first place and why I would even consider stopping in Toronto, the Canadian centre of SARS. I tried to explain that visiting Toronto was not as great a concern as perhaps flying itself. Perhaps I was naive or ahead of the times. Recall that this was prior to the WHO declaring Toronto a centre for travelers to avoid, but later retracted their decision. What was interesting to me was that many of these national and international events had a great deal of relevance to toxicology, and that many of the activities of STC are indeed very relevant to the "real" world.

A meeting of the ICT XI Organizing Committee was held on the Saturday, April 12<sup>th</sup>, prior to the Board meeting. Planning for ICT XI is proceeding very well under the capable leadership of Drs. Len Lillie and Heather Durham. Organizational activities are underway, and it was recognized that the Scientific Program and Fund-raising Committees are of prime importance at this time. A call for participation by members will be announced, and I urge everyone to take part in the planning and volunteer for a committee of their choice. I am certain the planning of the Congress will be as exciting as the meeting itself.

The Board approved the NRC/STC contract regarding the ICT XI Congress and I, as President, signed the contract on behalf of STC. In addition, the Board agreed to provide \$3000 per annum for the next five years as a financial commitment to the Congress. The Congress of 2007 will need a Logo, and the Board is supporting a contest open to all members (see this issue of the Newsletter for further details). Note that the prize for the best submission is \$500! The concept logo will be further developed by a commercial graphic artist.

One of the major items of the agenda was the upcoming 36<sup>th</sup> Annual Symposium. It will be held on the Monday and Tuesday, December 8 & 9<sup>th</sup>, 2003 at the Delta Centre Ville, Montreal. The change from the end of the week (Thursday/Friday) to the beginning (Monday/Tuesday) was necessary because of availability of the facilities. We are striving to build on last year's success, and based on the draft program that was submitted by Dr. Bill Casley on behalf of the Program Committee, the 2003 meeting will also be exciting and informative. The theme for the 2003 Symposium is *"Evolving Models in Toxicology"*. More information about the symposium is presented by Dr. Bill Casley in this issue of the Newsletter, and on the website. Stay tuned,

and be certain to advertise the Symposium to all your colleagues, students and friends. The meeting last year was a great success. We were able to maintain a low registration fee, invite excellent speakers and make a small but significant profit that will help sustain the Society. In the near future we will be preparing a Poster announcing the 2003 Symposium. It will be posted on the STC web, as well as distributed electronically to all members. Please place the poster on your bulletin boards, and distribute it freely. The Delta hotel is an excellent facility and large enough to accommodate many participants. I look forward to seeing everyone at the meeting.

As stated in my previous messages, the Board is committed to enhancing awareness of the Society, attracting new members and encouraging members to become active on various committees. There is always a need for new faces on committees; please do not hesitate to volunteer. Contact any member of the Board and indicate your willingness to serve the Society. I guarantee a rewarding experience. It is also essential that we encourage the junior members to become active. I urge every member to help us achieve these goals. Membership has not increased during the past few years, and I request that everyone persuade their colleagues in toxicology (or related sciences) to become members of our national society. Application procedures have been simplified and can be easily obtained from the website. There will also be vacancies on the Board for the positions of VP and councilor (industry). If you have any suggestions or would like to be considered, please contact the Past President, Heather Durham.

There has been some discussion about publishing advertisements for job postings on the web and in the Newsletter. The Board decided that this activity would not continue since it is difficult to guarantee a timely publication of the advertisements. Employment advertisements will be sent out electronically via email to the membership until a more sophisticated website is developed. Advertisements are free for members, but others (e.g. headhunters) will be charged \$500.

We now have an electronic membership directory and this will soon be distributed to the membership at large. When received, members should check for accuracy of information.

The Board is actively preparing for the 2003 Annual Symposium. The next few years promise to be even more exciting, with plans developing for the ICT XI Congress in 2007. This is a critical time for members to become active and the Society to attract new members. Let's work together to make STC a truly great Canadian society.

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# 2003 SOCIETY OF TOXICOLOGY OF CANADA SYMPOSIUM

## Bill Casley, Chair of the STC Program Committee

The 2003 Society of Toxicology of Canada Symposium will be held December 8<sup>th</sup> and 9<sup>th</sup> at the Delta Hotel in Montreal.

This year's symposium addresses the theme of "*Evolving Models in Toxicology*", and promises to be an exciting and informative event.

The completion of the mouse and human genome sequences, and the anticipated completion of the rat genome, has provided toxicologists with powerful new resources to explore these classic model organisms.

At the same time, toxicological research is expanding in new animal models, and significant progress has been made in *in vitro* alternatives to whole organisms as model systems and new technologies are providing opportunities to ask questions from new perspectives.

This year's symposium will explore these developments, as well as present informed views on the changing environment for animal research.

The opening session will feature presentations on emerging toxicological models, to be followed by a session dedicated to exploring developing technologies that are coming to the fore in modern toxicological science. Tuesday will begin with an exploration of the exciting developments in *in vitro* alternatives to animal testing, followed by our closing session on the changing regulatory environment affecting animal research.

Among our excellent slate of speakers, we are very pleased to have Dr. Edward Calabrese of the University of Massachusetts at Amherst who will present his work on the phenomenon of low dose hormesis and its implications for interpreting dose response data in model systems, Dr Frank Gonzalez of the US National Cancer Institute, who will describe the exciting developments in the use of humanized transgenic mice in toxicology and Dr Clement Gauthier, Executive Director of the Canadian Council on Animal Care, who will discuss developments affecting animal research in Canada.

In addition, we will have poster presentations of the exciting new research coming from the Canadian Toxicology community.

As in years past, the symposium offers an opportunity to hear leading researchers in their fields present their work, gain new insights into regulatory issues affecting our discipline and maintain or renew ties with colleagues from around the country.

The provisional program follows:

***Monday, December 8<sup>th</sup>, 2003 - AM***

Session 1: *Emerging Models*

- Dr. Ed Calabrese, U Mass., Amherst: Low dose hormesis: Implications for toxicological models
- Dr. Bevin Engelward, MIT: A mouse model to detect homologous recombination by fluorescent reporters
- Dr. Sean Kennedy, Canadian Wildlife Research Centre, Ottawa: Toxicogenomics in wild bird populations
- Dr. Alice Hontela, Uqam: Environmental toxicology in aquatic systems

***Monday, December 8<sup>th</sup>, 2003 - PM***

Session 2: *Developing Technologies*

- Dr. Frank Gonzalez, NCI, Rockville MD: Humanized transgenic mice for toxicological research
- Dr. Carole Yauk, Environmental Health Centre, Health Canada, Ottawa: Development of biomarkers of genotoxicity using DNA micro arrays
- Dr. Dan Chelsky, Caprion Pharmaceuticals, Montreal: Proteomic approaches to biomarker identification

***Tuesday, December 9<sup>th</sup>, 2003 - AM***

Session 3: *Alternatives to Animal Testing*

- Dr. Daniel Sauder, Johns Hopkins University, MD: Molecular approaches to contact hypersensitivity: Implications for *in vitro* systems
- Dr. Malle Jurima Romet, Phoenix MDS, Montreal: Validation of *in vitro* bioassays
- Dr. May Griffith, U of Ottawa: An *in vitro* model of the cornea suitable for toxicological testing
- Dr. Tim Zacharewski, MSU: *in silico* toxicology

*Tuesday, December 9<sup>th</sup>, 2003 - PM*

Session 4: *The Changing Regulatory Environment for Animal Research*

- Dr. Bessie Borwein, U. Western Ontario, London: In defence of animal research in toxicology
- Dr Clement Gauthier, Canadian Council on Animal Care: Emerging perspectives on the regulation of animal research in Canada
- Dr. Andrew Rowan, American Humane Society: A perspective on the regulation of animal research in the USA.

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## **ELEVENTH INTERNATIONAL CONGRESS OF TOXICOLOGY - CALL FOR INTEREST**

### **Len Lillie, Chair, ICT XI Organizing Committee**

As most of you know, STC in partnership with the NRC and the Palais des Congrès de Montréal is hosting the Eleventh International Congress of Toxicology (ICT XI) in Montréal in July, 2007. Although ICT XI is still 4 years and 3 months away, this is a major undertaking for STC and an initial Organizing Committee is already hard at work to lay the foundation for a scientifically and financially successful Congress. Preliminary organizational work will take us to ICT X in July 2004 in Tampere, Finland, following which the full-scale organization of ICT XI will begin.

At this time, the Organizing Committee would like to invite expressions of interest from STC members in participating in the organization and hosting of ICT XI. Although a relatively few members will be needed between now and ICT X in July 2004, after that time and particularly as we get closer to July 2007, many members will be needed.

Four principal Committees have been struck to manage the various ICT XI planning activities. The general responsibilities of each of the principal Committees are outlined below. The Chairs of these Committees are currently identifying the specific tasks that fall within their areas of responsibility and the time lines needed in order to ensure that all the necessary pieces are in place for a successful Congress.

### *Scientific Program Committee*

Scientific Program Committee, chaired by Gaston Chevalier and co-chaired by Robin Walker will be the largest Committee with the most important job. The scientific program is the core of a successful Congress and all other activities are ultimately in support of the scientific program.

Specifically the Scientific Program Committee is responsible for planning and organizing the scientific program including the keynote Diechmann Lecture, plenary and platform sessions, poster sessions, pre and post Congress courses and workshops, coordination of satellite meetings and other special scientific events. Their responsibility also includes identifying themes or topics consistent with the overall general theme\* of the Congress, identifying and contacting appropriate speakers for the various sessions and arranging for the publication of the Proceedings.

(\*The current working theme of the Congress is *Science in Service to Society* but that is under review)

### *Local Arrangements Committee*

The Local arrangements Committee, chaired by Heather Durham, is responsible for working with the Congress Secretariat (NRC), to ensure all the necessary logistical support for the Congress including accommodation, transport, audiovisual support, commercial exhibits, liaison with the Palais, social and cultural events, accompanying persons and family programs, pre and post Congress tours, and liaison with local, provincial and federal governments and academic institutions.

### *Communications and Public Relations*

The Communications and Public Relations Committee, chaired by Doug Arnold, is responsible for working with the Congress Secretariat to ensure all necessary communications in support of the Congress including, establishing and maintaining communications with other member societies of IUTOX, the design and production of the Congress image including the logo (details for logo contest elsewhere in this issue) and letterhead, design and production of all promotional material including posters, banners, and pamphlets, managing the design and operation of booths at appropriate pre ICT XI scientific meetings, and managing appropriate internal (STC) and external electronic and conventional communications including the Congress website.

### *Fund-raising Committee*

As part of the bid for ICT XI, STC committed to raise \$ US 100,000 (c. \$ CDN 145,000) in support of the Congress. This

is a critical function essential to meeting our commitments to IUTOX. While the structure of the Fund-raising Committee is still to be defined, potentially subcommittees will be required to identify and pursue funding sources in the following sectors: provincial and federal governments, academic and other scientific institutions, Canadian industrial and international.

As part of the organization of ICT XI, STC would like to encourage participation from members in all regions of Canada and from all sectors of the Canadian Toxicology community, and in particular of newer members of STC.

**If You Are Interested, /STRONG>please forward the following information to Dr. David Josephy, Secretary ICT XI Organizing Committee at [djosephy@uoguelph.ca](mailto:djosephy@uoguelph.ca)**

- **Name:**
- **Address:**
- **Telephone:**
- **Fax:**
- **E-mail:**
- **Committee or Area of Interest:**
- **Willing to Do:**
- **Comments:**

**Again, most volunteers will be needed in the period July 2004 to July 2007. We cannot promise to have a role for everyone in his or her particular or primary area of interest, but we do sincerely appreciate each and every volunteer. We will establish a mailing list of volunteers and communicate with you right through to July 2007.**

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## **DEATH AND ILLNESS IN MAINE CONGREGATION DUE TO ARSENIC POISONING**

**W. Reid Morrill, a 78-year-old member of Gustaf Adolph Lutheran Church in New Sweden, Maine, died April 28. Maine health officials have identified arsenic poisoning as the probable cause of his death and of illnesses experienced by**

**a dozen other members of the congregation. Gustaf Adolph is a congregation of the Evangelical Lutheran Church in America.**

**Members of the congregation in northeast Maine became sick Sunday afternoon, April 27, several hours after drinking coffee and eating sandwiches and sweets at the church. The suspected cause of the illness is arsenic poisoning, said Dr. Dora Anne Mills, director, Maine Bureau of Health.**

**Investigations are being conducted into how the parishioners ingested the arsenic, Mills said. An autopsy was conducted April 29, with the cause of death reported as pending but investigators are considering the possibility of criminal intent. Morrill was one of several Gustaf Adolph members taken to Cary Medical Center, Caribou, Maine. Others were hospitalized at the Eastern Maine Medical Center in Bangor, Maine. Seven were treated without being hospitalized.**

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## **HOW'S STC NEWS/NOUVELLES DOING?**

**It is always helpful to evaluate what we are doing. For one thing, it stops us getting into ruts. And it would really help the Editorial Committee if you would please take the time to send us your comments and suggestions for improvement to the Editor (Michael Prior) by e-mail or phone.**

**Thank you.**

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## **COMMENT STC NEWS/NOUVELLES PERFORME-T-IL ?**

Il est toujours utile de faire une évaluation de ce que nous faisons. À tout le moins, cet exercice nous empêche de nous enliser dans nos habitudes. Ainsi, le Comité éditorial apprécierait grandement vos commentaires et suggestions pour améliorer le bulletin de nouvelles. Veuillez faire parvenir commentaires et suggestions à l'Éditeur (Michael Prior) par courriel ou par téléphone.

Merci.

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## **SOCIÉTÉ DE TOXICOLOGIE DU CANADA / SOCIETY OF TOXICOLOGY OF CANADA**

### **STC PRIX VEYLIEN HENDERSON**

Par ce Prix, la STC cherche à reconnaître l'importante contribution à la toxicologie d'un chercheur ou d'une chercheuse œuvrant au Canada. Les conditions d'éligibilité sont les suivantes:

1. être citoyen(ne) canadien(ne).
2. être age(e) de moins de 45 ans en dat du 1 Juillet de l'année de l'oblation du Prix.
3. être mis(e) en nomination par un membre régulier en règle de la Société. Ce membre devra faire parvenir au secrétaire:
  1. une lettre d'appui à sa recommandation,
  2. un résumé de deux pages soulignant la contribution remarquable du candidat ou de la candidate,
  3. un curriculum vitae complet et une liste des publications du candidat ou de la candidate,
  4. des lettres de recommandation de au plus cinq (5) publications reflétant bien les activités de recherche du candidat ou de la candidate.

Le tout doit être transmis au secrétaire, à l'adresse habituelle de la société, avant 1 Juillet de l'année de la remise du Prix.

Secrétaire de la STC  
CP/PO 517,

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## VEYLIEN HENDERSON AWARD

**This STC Award honours an individual who has made a significant contribution to the discipline of toxicology in Canada. The conditions of the award are as follows:**

- 1. The candidate must be a Canadian citizen.**
- 2. The candidate must be under 45 years of age as of July 1 of the year in which the award is given.**
- 3. The candidate must be nominated by one ordinary member of the Society (in good standing) who will supply the Secretary with:**
  - 1. a supporting letter of recommendation,**
  - 2. a two page resume describing the significant contribution made,**
  - 3. a complete curriculum vitae and publication list, and**
  - 4. reprints of not more than 5 papers best reflecting the candidate's research.**

**All of the above should be sent to the Secretary, at the STC address by July 1 of the year of application for this award.**

Secretary STC  
CP/PO Box 517,  
Beaconsfield, Quebec  
H9W 5V1

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# **CANADA**

## **STC AWARD OF DISTINCTION**

### *Purpose:*

**The purpose of the STC Award of Distinction is to honour those individuals who have made outstanding and sustained contributions to the science of toxicology in Canada and/or the Society of Toxicology of Canada.**

### *Selection Committee:*

**Recipients shall be chosen by a committee of four members drawn from the Society: the Past-President who will act as chairperson, one of the Councillors, and two members appointed by the Board from the general membership and who are not members of the Board.**

### *Nominations:*

**Nominations must be made by two regular members of STC, in good standing, but no member may nominate more than one candidate during any one year. Nominations for the Award shall be made to the Chairperson of the Selection Committee before July 1 of the year of the award.**

**Nominations must be accompanied by:**

- 1. A summary, not to exceed two pages, describing the nominee's contribution to the science of toxicology and/or to the STC;**
- 2. Copies of no more than five manuscripts and other documents considered by the sponsor to be pertinent to the award.**
- 3. The nominee's curriculum vitae and a brief biographical sketch suitable for press release**

**Nominees who are not granted the award in the year of the nomination will be automatically included among the nominees in the two subsequent years unless the sponsors explicitly express otherwise. Sponsors will be invited to update previously submitted information.**

## *Award and Presentations:*

**The award will be in the form of a plaque or other suitable memento.**

**Presentation of the award will be made at the President's Reception during the Annual Meeting.**

## *Criteria:*

**The following criteria will guide the Selection Committee:**

- 1. The recipient should have demonstrated outstanding and sustained contributions to the science of toxicology in Canada and/or the recipient should have provided outstanding and sustained service to the Society of Toxicology of Canada**
- 2. The Selection Committee will exercise discretion regarding the relative contribution of the recipient to the science of toxicology in Canada and service to the Society of Toxicology of Canada.**
- 3. The decision of the Selection Committee shall be final. Only one award may be made annually, and there is no obligation or duty to make the award when, in the opinion of the Selection Committee, there is no qualified candidate.**

**Information about STC's activities, awards and/or membership application forms may be obtained by contacting**

**Secretary STC  
CP/PO Box 517,  
Beaconsfield, Quebec  
H9W 5V1**

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**STC PRIX DU MÉRITE**

*But*

**Le but du Prix du mérite est d'honorer les personnes qui ont apporté une contribution remarquable et soutenue au domaine de la toxicologie au Canada ou à la bonne marche de la Société de toxicologie du Canada.**

### *Comité de sélection*

**Les récipiendaires seront choisis par un comité de sélection formé de quatre membres de la Société: le président sortant de la Société qui présidera le comité, l'un des conseillers, ainsi que deux membres réguliers choisis par le bureau de direction, mais qui ne font pas partie du bureau de direction.**

### *Candidatures*

**Les candidatures doivent être soumises par deux membres réguliers de la Société, aucun membre ne peut soumettre plus d'une candidature chaque année. Les candidatures doivent être déposées auprès du président du comité de sélection avant le 1 Juillet de l'année de la remise du Prix.**

**Les documents suivants doivent être soumis à l'appui des candidatures:**

**un résumé de deux pages décrivant la contribution du candidat ou de la candidate au domaine de la toxicologie ou au fonctionnement de la STC,**

- 1. des copies d'au plus cinq manuscrits ou documents pertinents produits par le candidat ou la candidate,**
- 2. un curriculum vitae du candidat ou de la candidate, ainsi qu'une notice biographique à l'intention du monde de la presse.**

**À moins que les parrains des candidats ou des candidates ne souhaitent qu'il ne soit autrement, les candidatures non retenues l'année de leur dépôt seront réactivées automatiquement lors des deux années suivantes. Les parrains seront alors à mettre à jour les dossiers soumis.**

### *Le Prix et sa remise*

**Le Prix consistera en une plaque ou en toute autre marque tangible de reconnaissance. Le remise du Prix se fera lors de la réception du président, à l'occasion du Colloque annuel de la Société.**

### *Critères*

**Le comité de sélection se basera sur les critères qui suivent:**

- 1. le ou la récipiendaire devra avoir apporté une contribution remarquable et soutenue au domaine de la toxicologie au Canada; à ceci pourrait se substituer une contribution sous la forme d'états de service remarquable et soutenues au sein de la Société de toxicologie du Canada,**
- 2. c'est au comité de sélection qu'il incombera de porter un jugement éclairé sur le mérite de la candidature,**
- 3. la décision du comité de sélection sera finale et un seul prix sera remis chaque année. Si, de l'avis du comité de sélection, aucune candidature n'est méritante, le Prix ne sera pas remis.**

**On peut obtenir des informations sur les activités et les prix de la STC ainsi que sur la façon de joindre les rangs de la Société, en écrivant à l'adresse suivante:**

**Secrétaire de la STC  
CP/PO 517,  
Beaconsfield, Québec  
H9W 5V1**

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## **NOMINATION AND ELECTION OF STC VICE-PRESIDENT AND ONE COUNCILLOR**

**Heather Durham, Past President STC, Department of Neurology/Neurosurgery, Neurotoxicology Laboratory, Montreal Neurological Institute, 3801 University Street, McGill University, Montreal, Quebec H3A 2B4 Fax: (514) 398-1509 E-mail: [heather.durham@mcgill.ca](mailto:heather.durham@mcgill.ca)**

*Please send nominations for the following positions as soon as possible to Heather Durham (Past-President and Chair of the Nominating Committee)*

**Vice-President: This person automatically becomes President at the end of the two-year term as V.P. and then Past**

**President for an additional two-year term. Besides filling in for the President when necessary, the major duties of the V.P are to oversee the development of the plans for the Annual Symposium and to function as the liaison of the Board of Directors with the Editor of News/Nouvelles and Executive Director to ensure smooth and timely publication of the newsletter.**

**Vice-président / vice-présidente : la personne qui assume ces fonctions accède automatiquement au poste de président / présidente au terme de son mandat de deux ans. Elle devient ensuite présidente sortante ou président sortant pendant deux années supplémentaires. Outre remplacer la présidente ou le président en cas de besoin, les principales responsabilités de la vice-présidence consistent à superviser l'élaboration des plans pertinents au Colloque annuel et à effectuer la liaison entre le Conseil d'administration, l'éditeur de News/Nouvelles et le directeur exécutif afin de garantir la publication opportune et sans heurt du bulletin d'information.**

**Conseillère / conseiller : Au cours de son mandat de trois ans, la conseillère ou le conseiller participe aux réunions du Conseil d'administration au cours desquelles il ou elle communique avis et conseils; assure la liaison avec les comités spécifiques en fonction des demandes de la présidence; met à jour le Guide d'Orientation ainsi que le Guide des Politiques de la STC (pendant un an) et siège au Comité des Prix au Mérite (pendant un an également). En outre, la conseillère ou le conseiller mène à bien les tâches spécifiques qui peuvent lui être assignées par la présidence dans le cadre de la gestion du Conseil. Nous cherchons cette année à obtenir des nominations de la part du secteur de l'industrie.**

**Councillor: during a three-year term of office, the Councillor participates in meetings of the Board of Directors, providing advice and counsel, acts as liaison with specific committees as directed by the President, updates the STC Orientation Guide and Policy Manual (for one year) and is a member of the Awards Committee (for one year). In addition, the Councillor may be assigned a specific task by the President to assist in the management of the Board. This year we are looking for nominations from the industrial sector.**

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**CONCOURS "CRÉEZ UN LOGO" POUR LE ONZIÈME CONGRÈS  
INTERNATIONAL DE TOXICOLOGIE (ICT XI)**

*À tous les membres de la Société de toxicologie du Canada (STC)*

**Le comité des communications d' ICT XI a organisé un concours "Créez un logo" pour le congrès d'ICT de 2007. L'auteur du logo gagnant recevra un prix substantiel de 500\$ ,puisque le logo d'ICT XI sera un élément de référence pour toutes les communications d'ICT et les activités de relation publique, comme par exemple, le matériel publicitaire tel les affiches, les bannières et les brochures. Le logo apparaîtra également sur l'en-tête des lettres et du courrier électronique d'ICT XI.**

**Le concours est ouvert à tous les membres de la STC. Les lignes directrices suivantes vous serviront de guide pour la préparation de votre logo:**

- 1. Le logo doit identifier le pays (c'est-à-dire le Canada), et/ou la ville où se tiendra ICT XI (Montréal).**
- 2. L'allusion à la toxicologie n'est pas nécessaire, mais serait un élément propre au logo de la STC par rapport à ceux qui ont été produits dans le passé.**
- 3. Les seuls mots contenus dans les logo précédents étaient ICT et le nom de la ville. Si des mots additionnels étaient ajoutés au logo, ils devraient être bilingues.**
- 4. La prudence à l'égard de l'utilisation de caractéristiques animales est de mise, celles-ci pouvant être mal interprétées.**

**Tous les logo seront jugés par un panel du Comité organisateur d'ICT et par un(e) graphiste qui sera engagé(e) pour "commercialiser" le logo. La STC se réservera les droits sur le logo et aucune redevance ne sera payée pour l'utilisation de celui-ci. De plus, le logo pourra être re-dessinée par un(e) graphiste professionnel(le).**

**Veillez faire parvenir votre logo:**

- par courrier électronique: [doug\\_arnold@hc-sc-gc.ca](mailto:doug_arnold@hc-sc-gc.ca)**
- par la poste: Doug Arnold  
C.O./P.O. Box 517  
Beaconsfield, Québec H9W 5V1**
- par fax: Doug Arnold  
Fax: 613- 941-6959**



## **CREATE THE LOGO CONTEST FOR THE ELEVENTH INTERNATIONAL CONGRESS OF TOXICOLOGY (ICT XI)**

**The Communication Committee of ICT XI is holding a 'Create the Logo' Contest for the 2007 ICT Congress. The creator of the winning logo will receive a substantial prize of \$500.00, since the ICT XI logo will be a focal point in all the ICT communication and public relation activities; e.g. promotional materials such as posters, banners and pamphlets. In addition, it will be incorporated into the ICT XI letterhead and all email correspondence.**

**The contest is open to all STC members. The following guidelines are provided as guidance for preparing your logo.**

- 1. The logo must signify either the country (i.e. Canada) and/or the city where ICT XI will be held (Montréal).**
- 2. Toxicological imagery is not imperative, but would make STC's logo very distinctive from previous logos.**
- 3. The only wording contained in previous logos was ICT and the name of the city. If you chose to include additional wording in your logo design, it must be bilingual.**

4. Caution is advised if animal characterizations are used due to possible misinterpretations.

All entries will be judged by a panel of the ICT Organizing Committee plus a graphic artist who will be hired to "commercialize" the logo. The Society of Toxicology of Canada will retain the rights to the winning entry and royalties will not be paid for the use of the logo. The logo may be redesigned by a professional graphic artist.

Your logo can be submitted by:

- Email to: [doug\\_arnold@hc-sc-gc.ca](mailto:doug_arnold@hc-sc-gc.ca)
- Mail to: Doug Arnold  
C.P./P.O. Box 517  
Beaconsfield, Québec H9W 5V1
- FAX to: Doug Arnold  
Fax 613-941-6959

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## BOOK REVIEW ONE

**Michael Prior**

*"The Common Thread"* John Sulston and Georgina Ferry. Bantam 310 pp.

Fifty years after the discovery of the DNA helix came publication of the details of the human genome. Should this be patented? Dr John Sulston argued against such action. This core of this book is his version of this battle. He is reported to be a gentle man, but the book is not always so gentle. Read it for yourself. By the way, the portrait of Dr Sulston in London's National Portrait Gallery is rows of glistening transparent beads set in a cloudy matrix and framed, and was created from data from his own DNA.

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## A NEW CANCER DRUG, PART 2

David Josephy

In last fall's STC newsletter, I told the story of my sister-in-law's treatment for gastrointestinal stromal tumour (GIST), a rare sarcoma. A breakthrough drug for GIST - previously considered incurable - was introduced in 2000. The discovery that the c-kit oncogene is mutated in GIST cells made rational molecular therapy possible. Glivec (imatinib; Novartis) is a specific inhibitor of c-kit protein. Now I want to give you an update on the patient and the drug. I will also describe the development of an Internet-based support group which has changed the course of the clinical trials of GIST therapies.

This past February, I visited my brother and his family in Costa Rica. Elsie shows few signs of her illness. The liver metastases remain but they are not growing. She has to cope with side effects of the drug, including edema and episodes of intra ocular bleeding, which looks worse than it actually is. But to see her swimming, dancing, or riding a horse, more than two years after her cancer surgery, is very heartening.

Glivec was developed as an inhibitor of the bcr-abl oncogene product, for treatment for chronic myelogenous leukemia (CML). In vitro studies showed that the drug also inhibited c-kit. The first person treated with glivec for GIST was a 50-year-old Finnish woman who had already undergone multiple surgeries and rounds of cytotoxic chemotherapy, to no benefit. As a final recourse, her oncologist contacted leading sarcoma investigators in Boston, to see if any experimental therapies might be available. Although no clinical trial of glivec in GIST had yet been approved, she was administered the drug in March 2000. (The patient's husband was the CEO of a major multi-national corporation, which seems to have had some catalytic effect!). Within a month, she experienced more than 50% reduction in tumour volume, a result which astonished the doctors. Multi-centre clinical trials were begun in USA and Europe. In Feb. 2002, glivec was approved as the first effective chemotherapy for GIST.

More and more patients are now taking glivec, for CML, GIST, and two other very rare cancers found to respond to the drug. It's clear that glivec, while perhaps not a cure for GIST, is a life-saving therapy. Most patients respond and achieve at least stability, if not tumour shrinkage (Demetri, G.D., Targeting the molecular pathophysiology of gastrointestinal stromal tumors with imatinib. Mechanisms, successes, and challenges to rational drug development,

Hematol. Oncol. Clin. North Am. 16: 1115-1124, 2002). In several cases, the drug has rescued patients who had been close to death.

Some patients have relapsed, possibly because of acquired drug resistance. But the cohort of patients who are living with GIST, rather than dying from it, is increasing, and we can perhaps hope that this cancer is becoming a chronic condition rather than a life-threatening emergency.

One sarcoma specialist recently remarked: "*Today, if a patient presents with an abdominal sarcoma, I'm actually \*hoping\* that the pathologist will diagnose GIST - because I know that I can treat that disease. Just a couple of years ago, I dreaded that diagnosis.*"

The success of glivec has had an electrifying effect on cancer drug development. In 2002, the pills were shown on the cover of Time magazine. The front cover of the program book for the 2003 AACR cancer meeting - the conference which was postponed at the last moment, due to the SARS outbreak in Toronto - features a crystal structure image of glivec, bound to its abl protein target. New small-molecule inhibitors are being developed for c-kit (O'Farrell, A.M., SU11248 is a novel FLT3 tyrosine kinase inhibitor with potent activity in vitro and in vivo, Blood, in press) and other tyrosine kinase targets (Dancey, J., and Sausville, E.A., Issues and progress with protein kinase inhibitors for cancer treatment, Nat. Rev. Drug Discov. 2: 296-313, 2003). Clinical trials of several of these agents are ongoing.

In my earlier Newsletter article, I explained that Elsie could not have obtained glivec treatment so quickly without the aid of the Internet. Beginning in 2000, a small group of GIST patients and their relatives came together over the Internet, to form the LifeRaft support group (<http://www.liferaftgroup.org/>). An email server was established, so that patients could, on a daily basis, share information about all aspects of their battles with the disease, especially the progress of the clinical trials of glivec. A few people in the New York City area spearheaded the effort. As you might expect, the most active participants were often computer buffs who had medically-relevant professional expertise. For example, one of the leaders is a retired public health official from New York City.

GIST was so little-known in 2000 that even most oncologists were unfamiliar with it. There simply weren't any information sources for patient to access. So the Internet became a crucial resource for patients to find and exchange information. Patients needed to find out how they could get to a clinical trial centre as quickly as possible. In Elsie's case, e-mail enquiries led us to Columbia-Presbyterian Hospital in New York City, where Elsie became patient #6.

There are now hundreds of patients and care givers involved in LifeRaft, including people in Europe, Asia, and Africa. As the science of GIST developed, differential diagnosis became easier. The incidence of the disease has turned

**out to be considerably higher than previously believed. Clearly, a lot of cases had been going undiagnosed or misdiagnosed.**

**The development of the Internet group began to influence the course of the glivec clinical trial. Because patients from all corners of North America could check the Internet and learn about the NCI USA trial, the rate of enrollment of patients picked up remarkably. NCI was able to recruit the patients it required in six months rather than the anticipated two years. Before LifeRaft group, patients on a clinical trial were isolated individuals; results of the trial would only become clear much later, as data were assembled by the investigators. Now, many of the patients are in daily contact over the Internet. A different paradigm has emerged. The patients themselves gather information about response rates and**

side effects, and can quickly feed suggestions back to the doctors. There are potential dangers to this approach: premature, misleading, or simply incorrect information may be disseminated, because peer-review is short-circuited. However, to the patients, there are obvious advantages. For example, if someone experiences an unusual side effect, they can immediately report it to the entire group, determine whether other people have had the same problem, and seek advice on how to mitigate it (see sidebar).

In May 2002, the LifeRaft group met in person rather than just in virtual space. A weekend meeting was held at a hotel in Cambridge, Massachusetts. About 80 people attended, from the U.S., Canada, and Europe. The location was chosen so that some of the key doctors from the Dana-Farber Cancer Center could also take part. Remarkably, the CEO of Novartis came to the meeting, from Switzerland. At the opening banquet, the group presented him with a plaque honoring his leadership in bringing glivec to the clinic, despite the limited commercial prospects of a drug for such a rare cancer. More impressive than the citation was the opportunity for Dr. Vasella to have his photo taken, surrounded by dozens of people who, quite directly, owed their lives to him.

The LRG continues to champion the cause of patients with GIST. Last month, I joined several LifeRaft group members in a meeting with ten senior staff from Novartis Oncology, in New Jersey. The Life Raft group showed Novartis our most recent data and information about relapse rates and resistance. And we learned more about the research under way. It was a very positive meeting which proves that the relationship of patients and drug companies can be constructive, not just adversarial.

Many important questions simply cannot be answered yet. How long patients will have to remain on the drug? Will drug resistance become an increasing problem? Will combination therapies be even more successful than glivec alone? Will side effects lessen or worsen with time? Patients like my sister-in-law are in the leading wave and their experiences will provide the answers.

## THE VIEW FROM MY CANOE

Don Ecobichon



As I begin to put pen to paper, we are seeing spring for the second time. With the first "visit", the geese and ducks arrived, but there was very little open water available to rest on (in) except below the spillway at Chaffey's Lock. We often see strange gatherings: scaup, buffleheads, Canada geese, mallard ducks, loons still in winter plumage, all being watched by an American bald eagle sitting high above them in a dead pine tree. For over a week this year, there were four adult Tundra swans, huge birds with deep, "honking" voices.

With the deep snow we had this year, whitetail deer were coming to our bird feeders, but there is not much nutrition in empty sunflower seed shells. The birds and squirrels took great exception to the deer, but what could they do with a big buck and a doe standing there! I have a few good pictures of the deer. With the exceptionally cold weather, nothing began to form buds, the normal browse for deer at this time. However, they did enjoy the apple pomace treats

available for horses and the odd carrot when the squirrels and raccoons did not get there first. The rest of the spring will be spent keeping the deer out of Betty's flower garden which they consider a salad bar.

I returned from Southeast Asia on March 5<sup>th</sup> to a big snowstorm and the uproar over SARS which, fortunately I missed, although I was a week in Bangkok and a week in Hanoi. There was nothing in the press over there on this epidemic even though the WHO claimed to be "watching" this since February 1<sup>st</sup> and had issued at least two bulletins in mid-February about the virulence and the spread of this problem. It is obvious that everyone has forgotten about quarantine procedures and have only heard about them in a few lectures. I am old enough (as some of you are) to remember scarlet fever quarantine signs on houses, placed there by the town MHO. We have not had such "events" since those times.

In NATURE (April 25<sup>th</sup>,1953), Watson and Crick presented their "evidence" on the structure of DNA. This is the 50<sup>th</sup> anniversary of the discovery. In the last issue of NEWS/NOUVELLES, I reviewed B. Maddox's book "Rosalind Franklin. The Dark Lady of DNA". There is another book - "*Watson and DNA: Making a Scientific Revolution*" by Victor McElheny (Perseus Publishing, 2003,\$27.50 US) - giving another account of the "discovery" that is equally blunt in its treatment of Watson, "biology's bad boy". I have not read McElheny's book yet, but it has been extensively reviewed in NATURAL HISTORY (Apr.), comparisons being made with the Maddox book. Both the SMITHSONIAN (Apr.) and SCIENTIFIC AMERICAN (Apr.) have articles concerning the anniversary of genetics.

With the SARS problem, the genome now identified which may lead to a more rapid diagnostics test and a treatment regimen, the media (and scientific) hype regarding a vaccine does not ring true. Obviously, many people have no idea how long it takes to develop a vaccine and to test it. The recent reports (ECONOMIST (Mar.31<sup>st</sup>), SCIENCE (Feb.28<sup>th</sup>;Mar.7<sup>th</sup>) of VaxGen's failure with their AIDS vaccine in the Phase III clinical trial(4-year study in 5,000 people) is a case-in-point. No statistical differences were seen between placebo and vaccine for all subjects, but subset analysis of ethnic groups (blacks, Asians, other minorities) showed clear differences but fell to the curse of statistics - small numbers. What does it all mean?

There is an excellent article in Betty's CANADIAN LIVING (May,2003,pp.97-102) - one of my sources for scientific information these days - on the West Nile virus (WNV) problem that, most assuredly, will reach epidemic proportions in Canada this coming summer. We will all need to know more about WNV, treatment, vector control, etc. Already, MARKET PLACE has done a feature on DEET - new insect repellent formulations (no more than 30% a.i.), dosage regimens (not on children younger than 6 months, twice a day for those 6 months - 2 years, etc). I talked to a MARKET PLACE researcher but, living in the country, you are beyond their reach for video-taping. I provided recent references, but they do not really want to go to a medical library. Once again, the "idea" of a vaccine has been raised - it

won't happen this year! How to control mosquitos - possibly surfactants on stagnant bodies of water (marshes, etc.), *Bacillus thuringiensis* (Israeli strain) which is specific for mosquitoes or good, old, reliable, organophosphorus and carbamate ester insecticides. The spread of WNV - 40 states, all provinces from Saskatchewan eastward (except Nfld) - has been truly remarkable given that it appeared in New York City only in 1999. Interestingly, the strain (NY99) is genetically identical to the one circulating in Israel from 1997 (Isr98). It is felt that someone(s) visiting Israel or, perhaps an imported bird (unlikely) brought WNV to the Queens area of New York. It is worth searching out this article as it contains lots of information. Surprisingly, this is not a new virus, has been known since 1937, and there have been other "epidemics". All of this is something to think about while I am out fishing in my canoe this summer surrounded by hordes of mosquitos.

I see that Mr. Chretien is providing more funding for graduate students - the Canada Graduate Scholarships at \$23,100/yr, some 4,000 of them - in an attempt to offset (and replace) the estimated 5,000 professors retiring each year over the next decade. However, this infusion of special funds creates a double standard since, currently, graduates earn \$13,800/yr when funded through CIHR or NSERC. This will pressure the research councils to raise their fellowship stipends. However, neither Mr. Chretien nor any of his colleagues has considered the next step - e.g. the incentive to keep young scientists, etc. as professors in universities - is that you have to fund them and the current, and I daresay future, environment is not conducive for this. Time will tell, but only if the research councils receive major infusions of funds now to support otherwise disintegrating departments. Notice of this initiative can be found in SCIENCE (Feb.28<sup>th</sup>, pg.1298).

In the last column, I discussed Singapore's approach to becoming inter-nationally recognized for medical research, attracting individual scientists and entire laboratories to conduct stem cell research both within universities and industry. In SCIENCE (Feb.7<sup>th</sup>,p.811) comes the announcement that, with government support, Novartis is setting up a private, nonprofit institute dedicated to discovering better treatments for neglected diseases that are ravaging countries. Called the Novartis Institute for Tropical Diseases, it will be housed in temporary quarters until April, 2004 when it will move to the new research park for life sciences called Biopolis. Initially, it will focus research on multidrug-resistant tuberculosis, as well as dengue fever caused by four closely-related flaviviruses. New drugs are needed for the former while the challenge of dengue fever is to produce a vaccine to cover more than one serotype of the virus. With population mobility, the once-isolated serotypes now overlap, and a second infection with a different serotype is the biggest risk in the affliction progressing to life-threatening dengue hemorrhagic fever. Novartis is to pick up the major part of the \$14.8 million annual budget for 10 years, with some assistance from Singapore's Economic Development Board. The Institute has already filled its initial 30 research openings with people from various laboratories. Any advances on the above two "fronts" will be available to developing countries without royalties being paid.

Recently (Apr.21<sup>st</sup>), the GLOBE AND MAIL reported the death of a Dutch veterinarian exposed to an avian flu virus from chickens. He did not take the antiviral drug(s) prescribed by the authorities. Virus was found in his lungs. A recent article in SCIENCE (Mar.7<sup>th</sup>) discusses the agricultural problems of large swine-rearing operations and swine flu virus genetically interacting with human and avian viruses to cause viral types with half of the internal genes being "snatched" whole from these other viruses. The swine influenza virus is made of eight single-stranded segments of RNA that code for 10 proteins. Swapping genes results in new viral types. It is thought that at least some of the problems may result from large swine producers (18% in 1993 with more than 5,000 hogs, up to 53% in 2002). Novel viruses have been found everywhere there are pigs, and there is better opportunity to replicate in 5,000 than in 100 pigs. Inter-state shipping has not helped either. A virus found in Ontario pigs, which came from local ducks, has already acquired genetic mutations with the potential to bind to human cell receptors.

Sitting in my canoe, I ruminate on all of this as the problem(s) of the next decade - monoculture, whether it be in grain crops, green (glass, vinyl)house vegetables, large swine, deer or elk operations, fish farming, etc., all potentiate the appearance of chemical-resistant organisms, some with the potential to "jump" to humans. Has anything happened in these 50,000-80,000 head-of-cattle operations in Alberta yet?

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## BOOK REVIEW TWO

Don Ecobichon

*"Uncle Tungsten. Memories of a Chemical Boyhood"* by Oliver Sacks. Vintage Canada, 2002, pp.1-337. \$21.00 CD.

Written by the distinguished neurologist, this delightful paperback relates his early upbringing in an enlightened and highly educated family (both parents were physicians) and his further mental nourishment by a coterie of aunts and uncles and two older brothers. His Uncle Dave, Uncle Tungsten of the book, provided much of the stimulus for curious Oliver. Dave manufactured light bulbs containing fine tungsten wire but also had a "research" laboratory where he tinkered around and, of course, had an unlimited supply of various metals in bottles which he made freely available to young Oliver, along with advice and endless discussion concerning the periodic table and the properties of elements.

Oliver was certainly a precocious youngster, some of his experiments are hilarious, the grass in the garden scorched and stained from catalysis-gone-wrong that had to be heaved out an open window. Eventually, a fume hood was installed to reduce the obnoxious odours pervading the home. From simple chemistry (vinegar on chalk - fizzing); red cabbage pickled with vinegar and adding household ammonia to neutralize the colour), to growing crystals, this leading to "chemical gardens" - sowing a gelatinous solution of sodium silicate (waterglass) with coloured salts of iron, copper, chromium and manganese and watching them grow. Remember chemical gardens as a kid? Do you remember how they worked? His experiments with radioactive elements - glowing in the dark - are only surpassed by his one great experiment of dropping a large lump of sodium (3.0 lb) from a bridge into Highgate Pond in Hampstead Heath - his description "took fire immediately and sped around on the surface like a demented meteor with a huge sheet of yellow flame above it". Chemistry with a vengeance! More controlled experiments were conducted with other alkali metals (potassium, rubidium, cesium) with an appreciation being gained concerning their properties. Cesium doesn't burn, it explodes.

Discussing Oliver's book with a friend, we decided that it would be excellent ancillary reading for a chemistry course in which the periodic table is discussed along with the properties of the elements. He covers all the bases. Why did Sacks not become a chemist? His mother was a surgeon and introduced him to human dissection through an anatomist friend. His father, a family doctor, took him along on house calls on the weekend. However, Oliver had not forgotten his chemistry, his interest being rekindled in 1997 with the receipt of an unusual parcel containing a periodic table with photographs of each element and a small bar of a very dense greyish metal that he recognized at once as being sintered tungsten. This jogged his memories and what started out as a brief sketch of his Uncle Tungsten developed into this fascinating book of a "young mind springing to life". Read it and enjoy!

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**WELCOME - BIENVENUE Membership Applicants 2002 STC Demande d'adhesion 2002**

**Regular/Régulier**

*Sponsors/Parrains*

Jane Alcorn D.V.M, M.Sc.  
Assistant Professor, University of Saskatchewan  
College of Pharmacy and Nutrition  
110 Science Place  
Saskatoon, Saskatchewan S7N 5C9

Gerard M. Cooke Ph.D.  
Research Scientist  
Toxicology Research Division  
Health Canada  
2202D1 Tunney's Pasture  
Ottawa, Ontario K1A 0L2

Rita K. Coshan M.Sc.  
Toxicologist, Government of Saskatchewan  
Occupational Health and Safety  
Saskatchewan Labour  
1870 Albert Street, 6<sup>th</sup> Floor  
Regina, Saskatchewan S4P 3V7

Alice Hontela Ph.D.  
Professeure, Directeure Centre TOXEN  
Département des sciences biologiques  
Université du Québec à Montréal  
Case postale 8888, succursale Centre-Ville  
Montréal, Québec H3C 3P8

B. N. Nayak Ph.D.

E. Krol  
A. Nazarali

D. Arnold  
G. Bondy

F. Kelada  
K. Liber

G. Chevalier  
B. Hales

G. Krip

Associate, Preventive Dental Sciences  
Faculty of Dentistry  
University of Manitoba  
780 Bannatyne Avenue  
Winnipeg, Manitoba R3E 0W2

R. Leeder

.  
Bernard Robaire Ph.D.  
Professor, McGill University  
Department of Pharmacology and Therapeutics, Obstetrics and Gynecology  
3655 Promenade Sir William Osler  
Montreal, Quebec H3G 1Y6

.  
H. Durham  
B. Hales

.  
Glenn R. Washer B.Sc., D.A.B.T.  
Director, Toxicology and Safety  
Department of Preclinical Research  
Theratechnologies Inc.  
2310 boulevard Alfred Nobel  
Saint - Laurent, Quebec H4S 2A4

.  
C. Copeman  
R. Salame

.  
Nadia Abdelouahab M.Sc.  
Agent de recherche, Zone d'Intervention - Montréal  
681 Fleury ouest  
Montréal, Québec H3L 1W5

.  
D. Mergler  
J. Zayed

#### **Associate/Associé**

#### *Sponsors/Parrains*

Jacqueline A. Walisser Ph. D.

G. Bellward

Post - Doctoral Fellow, University of Wisconsin S. Bandiera

McArdle Laboratory for Cancer Research

1400 University Avenue

Madison, Wisconsin 53706

U.S.A.

### **Student/Étudiant**

#### *Sponsors/Parrains*

Jennifer L. Billinsky B.Sc. (Hons)

M.Sc. Candidate, University of Saskatchewan

College of Pharmacy and Nutrition

110 Science Place

Saskatoon, Saskatchewan S7N 5C9

.

Erin E. Carpenter B.Sc. (Hons)

M.Sc. Candidate, University of Toronto

Department of Clinical Pharmacology & Toxicology

Hospital for Sick Children, Room 8511

555 University Avenue

Toronto, Ontario M5G 1X8

.

Clara Yuen Yu Chan B.Sc. (Hons)

M.Sc. Candidate, Queen's University

Department of Pharmacology and Toxicology

Botterell Hall, Room 557

Kingston, Ontario K7L 3N6

.

E. Krol

A. Nazarli

.

A. Okey

D. Riddick

.

W. Racz

L. Winn

.

Guosheng Chen M.S.  
Ph.D. Candidate, University of Guelph  
Department of Chemistry and Biochemistry  
University of Guelph  
Guelph, Ontario N1G 2W1

N.J. Bunce  
D. Josephy

Satyan D. Chintawar M.Sc. (Pharm)  
Ph. D. Candidate, University of Western Ontario  
Department of Clinical Pharmacology  
Room # 650 E, Essex Hall  
1200 Western Road  
London, Ontario N6G 5E3

J. Bend  
G. Krip

Sharon Choi B.Sc. (Hons)  
M.Sc. Candidate, University of Toronto  
Department of Clinical Pharmacology & Toxicology  
Hospital for Sick Children, Room 8511  
555 University Avenue  
Toronto, Ontario M5G 1X8

A. Okey  
D. Riddick

Melissa Legrand B.Sc.  
M.Sc. Candidate, McGill University  
C.I.N.E.  
3516 de Bordeaux  
Montréal, Québec H2K 3Z3

L. Chan  
G. Krip

Ivy D. Moffat B.Sc. (Hons)  
M.Sc. Candidate

A.Okey  
D. Riddick

Department of Pharmacology  
University of Toronto  
1 King's College Circle  
Toronto, Ontario M5S 1A8

.  
Lorien E. Newell B.Sc.

M.Sc. Candidate

Department of Biology

York University

4700 Keele Street

Toronto, Ontario H3J 1P3

.  
Erzsèbet Papp - Szabo Ph. D.

Post-Doctoral Fellow, University of Guelph

Department of Biomedical Sciences

Guelph, Ontario N1G 2W1

.  
Steve R. Roblin B.Sc. (Hons)

M.Sc. Candidate, University of Toronto

Department of Clinical Pharmacology

Hospital for Sick Children, Room 8511

555 University Avenue

Toronto, Ontario M5G 1X8

.  
Ashraf El Sayed M

M.Sc. Candidate, Alexandria University

Souf Shamaa-Talon Street

1-House # 28

.  
J. Bielas

J. Heddle

.  
M. Goldberg

D. Josephy

.  
A. Okey

D. Riddick

.  
G. Krip

R. Leeder

Alexandria 21351

Egypt

·  
Beatrice Seguin M.Sc.

Ph.D. Candidate, University of Toronto

Department of Pharmaceutical Sciences

19 Russell Street

Toronto, Ontario M5S 2S2

·  
Chris Stamler M.Sc.

Ph. D. Candidate, McGill University

C.I.N.E.

MacDonald Campus

305 - 780 Lakeshore Avenue

Dorval, Quebec H9S 2C4

·  
Lisa M. Stroscher B.Sc.

M.Sc. Candidate, University of Calgary

Faculty of Medicine, Neurosciences

3330 Hospital Drive N.W.

Calgary, Alberta T2N 4N1

·  
Dave M. Taylor B.Sc. (Hons)

M.Sc. Candidate, McGill University

Neurotoxicology Unit

Montreal Neurological Institute

3801 University Street

Montreal, Quebec H2A 3B4

·  
A. Okey

J. Uetrecht

·  
L. Chan

G. Krip

·  
H. Durham

S. Roth

·  
H. Durham

J. Richardson

.  
Francisco J. Ucán Marin B.Sc.  
M.Sc. Candidate, Dalhousie University  
Biology Department  
Halifax, Nova Scotia B3H 4J1

.  
G. Krip  
R. Leeder

.  
Huijia Zhou B.Sc.  
M.Sc. Candidate, University of Guelph  
Department of Chemistry and Biochemistry  
Guelph, Ontario N1G 2W1

.  
M. Goldberg  
D. Josephy

.  
Wei Zhang B.Sc.  
M.Sc. Candidate  
Toxicology Graduate Program  
College of Pharmacy and Nutrition  
University of Saskatchewan  
Saskatoon, Saskatchewan  
S7N 5C9

.  
A.J. Nazarli  
E. Krol

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## **CAMPUS BUILDING BOOM**

### **David Josephy**

**Visit almost any Canadian university campus these days and you will see excavators and construction cranes: a building boom is under way. Provincial governments have belatedly recognized that many university buildings have deteriorated beyond the point at which it is cost-effective to maintain them, let alone bring them into compliance with**

building code requirements. This problem was most urgent with respect to laboratory buildings. Additionally, new lecture and laboratory space was essential to accommodate the demographic surge in university admissions (exacerbated, in Ontario, by the fall 2003 "double cohort", resulting from the elimination of high school Grade 13).

At Guelph, we are putting the finishing touches on a Classroom Complex containing several large lecture halls. (You can watch it growing at <http://www.uoguelph.ca/superbuild/images/still.jpg>). The largest hall will hold 600 students, an unprecedented size for Guelph. Excavation is just starting for a new Science Complex, which will house office space and undergraduate/ research laboratories for Biological Sciences. Staged demolition of the old Chemistry-Microbiology building and excavation for the new structure are going on simultaneously. Both processes distract one's concentration, with a jackhammer operating a few feet from my office window, and the entire building vibrating at about 20 Hz as a compacting machine tamps down the soil on the construction site.

I recently visited Queen's University and had a tour of their beautiful new chemistry building, Chernoff Hall (pictures are posted at <http://www.chem.queensu.ca/ChemBuilding/>). The structure is designed around a central atrium, reminiscent of buildings like the CBC Broadcasting Centre in Toronto . Faculty offices are on the north side of the atrium and research labs are on the south side, leading to a lounge with a panoramic view over Lake Ontario. The new undergraduate laboratories are very attractively furnished, complete with flat-panel display screens on the benches. (I wonder how well those monitors will survive a fumbled flask of fluoride?)

Toronto has recently opened the high-tech Bahen Centre for Information Technology (400,000 square feet; <http://www.newsandevents.utoronto.ca/bin3/021001a.asp>), at a cost of over \$100,000,000. A new medical research facility is being wedged in, right next to the existing Medical Sciences Building.

These new structures are going to define the campus landscapes of the next generation of students and faculty.

But there are aspects to this building boom that are very different from the last such "growth spurt", in the 1960s/1970s, and which give cause for concern.

Unlike the last wave of expansion, this one is not funded simply by provincial ministries of education signing large cheques. Almost all of the buildings are funded by complicated partnerships. Direct provincial contributions are being funnelled through flagship programs such as SuperBuild Ontario (<http://www.superbuild.gov.on.ca/>), designed to maximize the public relations impact of new spending. Other money is contributed by university fund-raising; private/corporate donations; federal government infrastructure programs such as CFI (Canada Foundation for Innovation;

<http://www.innovation.ca/>); and even by issuing long-term bonds, sold on the open market ([http://www.universityaffairs.ca/current\\_issue/articles/article02a\\_e.html](http://www.universityaffairs.ca/current_issue/articles/article02a_e.html)).

Universities may be over-committing their resources, to fund these large capital projects - to the detriment of future operating funding. As ever, governments and corporate donors prefer to fund high-profile "bricks and mortar" rather than maintenance and operating costs, which are "invisible". Putting up new buildings does not necessarily reduce the cost of maintenance of the existing structures. Guelph's decision to squeeze the new Science Complex into a very small footprint, on an existing parking lot, abutting half a dozen older buildings, seems odd. Why not use a larger greenfield site? But the tightly-constrained site plan allows the university to demolish the 1962-vintage Chemistry-Microbiology building as part of the project, and thereby reduce its deferred maintenance liabilities.

The new buildings will increase the universities' annual operating costs for maintenance, heating/cooling, lighting, and security. Have any of the university's proposed credible budget plans for meeting these additional costs?

Visit any 1960s-era lab./lecture hall building on a Canadian campus and you will surely observe some peculiar black pipes and odd dangling wires, protruding through the ceiling. These artefacts are remnants of closed-circuit TV systems, installed in an earlier wave of excitement about new teaching technologies for students of the first TV generation. Within a decade of their introduction, most of these systems already seemed old-fashioned and pointless, and they were abandoned. Today, the pace of technological change is even faster. The new Science Complex building at Guelph will be outfitted with a network of hard-wired internet ports. I bet they will be obsolete even before they are connected, with wireless networking taking over.

I also ponder the impact of the current building boom on public attitudes to the universities. Anyone walking past a Canadian campus can see the excavations, construction cranes, and the soaring glass-panelled buildings. They will assume that the Universities must be booming, despite the present sagging economy. But the construction projects have not solved the ongoing chronic under funding of university operating expenses. Public support for additional university funding will be harder to achieve, if the building boom gives a misleading impression of academic prosperity.

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**CONFERENCES, MEETINGS AND WORKSHOPS**

2003

**June 11-15 Canadian Federation of Biological Societies. Cardiovascular and Metabolic Disease. Ottawa Congress Centre, Ottawa, Ontario, Canada. Contact: Ms. Wafaa Antonious, e-mail: [wantonious@cfbs.org](mailto:wantonious@cfbs.org) or web site <http://www.cfbs.org/>**

**June 16-19 The Human Genome: Implications for Toxicologic Pathology and Carcinogenesis. Savannah, GA, USA. Contact: STP Meetings Department, 19 Mantua Road, Mount Royal, NJ 08061, USA**

**July 13-18 9th International European Association for Veterinary Pharmacology and Toxicology (EAVPT), Lisboa, Portugal. For more information visit the web site: <http://www.fmv.utl.pt/eavpt2003/congress.htm> or e-mail: [eavpt2003@fmv.utl.pt](mailto:eavpt2003@fmv.utl.pt)**

**Sept 4-9 North American Congress of Clinical Toxicology. Chicago, IL, USA. Contact: Contemporary Forums, 11900 Silvergate Dr. Dublin, CA 94568, USA. Tel: 925-828-7100. Fax: 925-828-2121. or e-mail: [NACCT@cforums.com](mailto:NACCT@cforums.com)**

**Sept 14-19 14<sup>th</sup> World Congress on Animal, Plant and Microbial Toxins. Adelaide, Australia. Contact: The Congress Secretariat, c/o Associate Professor Julian White, Toxicology Department, Women's and Children's Hospital, North Adelaide SA5006, Australia**

**Nov 15-19 54<sup>th</sup> Annual Meeting American College of Veterinary Pathologists & 38<sup>th</sup> Annual Meeting American Society for Veterinary Clinical Pathology, Banff, Alta. Contact: e-mail: [meetings@acvp.org](mailto:meetings@acvp.org) web site: <http://www.acvp.org/meetings/> Fax: 608-831-5485, Phoner: 608-833-8715 ext 145**

**Dec 8 - 9 Society of Toxicology of Canada. Evolving models in Toxicology. Montreal, PQ, Canada. Contact: Executive Director, Society of Toxicology of Canada, P.O. Box 517, Beaconsfield, Quebec H9W 5V1. Tel: 514-428-2676. Fax: 514-428-2676. Web site: <http://www.queensu.ca/stcweb/encont.htm>**

2004

**June 13-17 Non-rodent Species in Toxicologic Pathology, Salt Lake City, UT, USA. Contact: STP Meetings, 19 Mantua Road, Mount Royal, NJ 08061, USA**

**July 11-16 10<sup>th</sup> International Congress of Toxicology, ICT-X, Tampere, Finland. Contact: e-mail: [ictx@tsgcongress.fi](mailto:ictx@tsgcongress.fi)**

**Aug 28-Sept 3 FBI Laboratory Forensic Toxicology Symposium & Joint Meeting of the Society of Forensic Toxicologists (SOFT) and The International Society of Forensic Toxicologists (TIAFT). Washington, DC, USA. Contact: Marc A. LeBeau, Federal Bureau of Investigation, FBI Laboratory, Phone: 202-324-8472, Fax: 202-324-4633, E-mail: [mlebeau@fbi.gov](mailto:mlebeau@fbi.gov) Websites: <http://www.soft-tox.org/> or <http://www.tiaft.org/>**

**2007**

**July 14-21 11<sup>th</sup> International Congress of Toxicology, ICT-XI, Montréal, Québec, Canada.**

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