

# STC

# NEWS/NOUVELLES

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

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

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

**Michael Prior**



## **FORTY YEARS LATER**

As a small animal veterinarian in the nineteen sixties, we vaccinated dogs against distemper and leptospirosis - the only canine vaccines then available. However, some vaccinated dogs would contract distemper in the second or subsequent year after vaccination. At the time, ownership was shifting from getting a dog from the local pound or pet store, to buying a pedigree breed. It was postulated this could mean there were fewer non-vaccinated dogs around, and thus a diminishing pool of field virus to provide naturally-occurring immunity boosts. This quickly led to the recognition for the need for booster shots for canine distemper. Last fall our household grew 50 per cent with the addition of a puppy. I was re-acquainted with canine vaccines when the time came for his "*shots*" against a wide range of canine diseases. I'm sure some of these had not even been invented (discovered?) back in the sixties! My, how things have changed in small animal veterinary practice!

These changes reminded me that, also during those sixties, a new tetanus toxoid became available for people. Since veterinarians in England were potentially exposed to tetanus bacilli every time they attended a horse, it was recommended that I receive this. So, like many others, I did; with a booster every six months until we emigrated to Canada. Where a routine occupational health examination found that any further exposure to tetanus toxoid could result in a severe and perhaps fatal reaction, so high was my titre. So I now wear a MedicAlert© bracelet at all times. That bracelet serves as my constant reminder that things can and do change.

Whilst in veterinary practice in England in the sixties, there was a smallpox scare, and many people were inoculated, me included. For the next week, I had a very high fever and could barely work. The fever abated as vesicles erupted over my body. The medics thought I might now be infectious to animals, and ordered me to stay home until they healed. Since I now felt well and the weather was good, this was a delightful time off from a very busy practice! However, I was one of the lucky ones, for approximately three people die for every million inoculated against smallpox. Today, that number could well be higher, for more people have suppressed immune systems due to AIDS, organ transplants or cancer treatments. Not only that, but such vaccines may not work against some of the nastier strains of smallpox that have been developed. According to Ken Alibek, a scientist who ran the Soviet Union's biological weapons laboratories before defecting to the USA a decade ago, Russia has developed 2,000 strains of smallpox. Many are impossible to treat or defend against with existing drugs; some cannot be detected with existing diagnostic tests. Smallpox was a scourge to native peoples after contact with European explorers. There are stories of contaminated blankets being shipped to healthy settlements, who then succumbed. Might this be an early form of biological warfare?

Back then we were wary about anthrax, as it was one cause of livestock death. In people, it could cause a chronic *malignant pustule*, which was difficult to heal. More serious was *wool sorter's disease*, a rapid and fatal infection from inhaling anthrax spores whilst sorting sheep fleeces. Again, the existing vaccine has some unpleasant side-effects, including pounding headaches, nausea, and memory loss. Again, a classic balance of risks. One where, since 1998, some 400 US soldiers have decided that a court martial was preferable to anthrax vaccination. In these present times, many are looking for vaccines and drugs to combat the potential of biological warfare. Neither comes with a 100 percent guarantee of safety, of course. In 1976 a soldier at Fort Dix, New Jersey, USA, died from a strain of influenza, known as "*swine flu*", which resembled the pan-epidemic of 1918-19 that killed 20 to 50 million people world-wide. Settlements for human adverse effects to the subsequently developed swine flu vaccine totaled about US\$90 million. No wonder manufacturers demand protection against litigation as part of vaccine or drug development against potential biological weapons.

If the topic of vaccines and their side effects depresses you, why don't we move to electromagnetic weapons. Which might be an emerging field for toxicology, if not for all the secrecy. Using different types of electromagnetic energy, these weapons can destroy electronic systems and temporarily incapacitate people. The potential effects on our high tech equipment are obvious. Another electromagnetic weapon can heat human skin to 55°C at distances up to 0.75 km. Long term health consequences are unknown. Look on the bright side: from the ethical standpoint is it acceptable to kill someone if you have the option to only disable them? Wonder if Odysseus considered that ethical question whilst he captured Troy using the Trojan horse? Certainly his troops disabled the inhabitants without too much structural damage. Of course, he did end a bloody war, even if in the same manner.

But last evening, when our dog curled up on my lap, utterly trusting, and gently licked my hand, forty years later some

things have not changed. Thank goodness.

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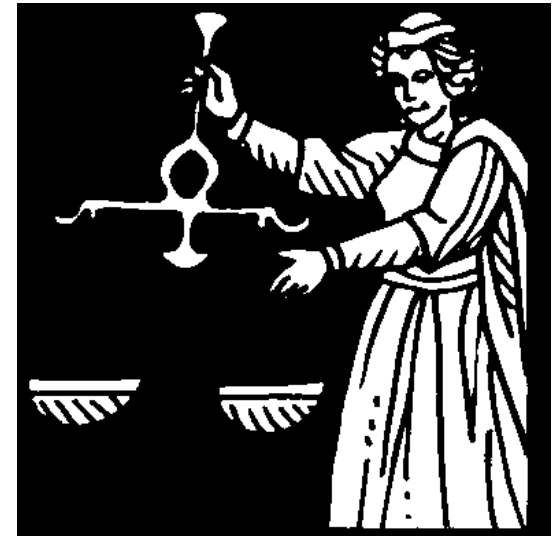
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## REPORT OF THE PRESIDENT

**Sheldon H. Roth**

*This Report was presented to the 2002 Annual General Meeting of the Society of Toxicology of Canada, December 5, 2002*



Welcome to the 35<sup>th</sup> Annual General Meeting. During the past year the STC Board of Directors has been very busy and has held three meetings. I would like to acknowledge each and every member for their dedication and time; Heather Durham, Past President; Barbara Hales, Vice-President; Jeff Kawamoto, Secretary; Michel Charbonneau, Treasurer; Gordon Krip, Executive Director; and the Councilors, Genevieve Bondy, David Josephy and Mark Goldberg. Len Lillie is an ex-officio member of the Board as a liaison for the ICT XI. Although Board meetings are traditionally held in Montreal, this year we held the September meeting at the Pfizer Laboratories in Mississauga. We thank Len Lillie for making all the arrangements.

Two members of the Board are retiring - Michel Charbonneau and David Josephy have completed their terms of office. David has been a very valuable member of the Board, always willing to take on extra responsibilities and providing a great deal of input. Michel has been Treasurer for several years, and has done an outstanding job of keeping our books and accounts in

order. I am happy to report that the STC is in a solid financial position, or at least that what Michel has reported. There have been some stories circulating that he and Gordon Krip are planning to move to the Cayman Islands, but I am sure that it is just gossip. I also want to extend our sincere thanks to Jules Brodeur for serving as auditor at no expense to the society. Michel and David, thank you for all your contributions, we will certainly miss your presence at the meetings, and wish you well. This year the Board decided to show their appreciation to members who have served as officers by presenting them with Certificates of Appreciation. These will be presented at the President's Reception.

We welcome the new Board members, and one of the first and most important items of business for the new Board is the planning and implementation of the Annual Symposium. This topic always occupies the major portion of our meetings; however, it is always a very enjoyable experience. The responsibility of developing the theme and attracting high quality speakers rests with the Program Committee, and once again the committee, consisting of Gordon Kirby (Chair), Bill Casley and Dino Manca has done an outstanding job - what an exciting, informative and timely program! Thanks also to Barbara Hales for keeping the Board aware of the progress and everything on schedule. External funding is essential to cover all the expenses for the Symposium, keep registration fees reasonable and to provide subsidization for our students and postdoctoral fellows. Although we raised the registration fees slightly this year, we still required extra funding, and we were fortunate this year to attract a number of generous sponsors listed in the program. I thank Mark Goldberg and Jon Daniels for their hard work in raising considerable funds this year.

The Editor of the STC News/Nouvelles, Michael Prior, attempted to complete his term of office this year. By ignoring and/or deleting his emails, he was convinced that his term was not over until 2024. Michael has graciously agreed to stay on as Editor for another year in order that we may acquire another individual to replace him. To Michael and the Editorial Committee, thank you for a superb publication that provides the membership with stimulating and interesting works of prose. Our Vice President will report on their activities in more detail.

This year we held a contest for the "best logo", and I congratulate Patricia Solbeck from the University of Guelph for providing the winning entry; runner up was Reimar Gaertner. Our new LOGO has been incorporated into our poster, program and registration forms. We plan to further develop the LOGO with professional assistance.

Once again, we have relied on Gordon Krip our Executive Director to deal with the countless large and small details concerned with the Symposium and daily business of the Society in general. We chose a new venue this year which created new tasks and problems. With the help of Barbara and Heather, Gordon has tackled almost every detail, and still remained somewhat sane. At times, he sent the most hilarious emails, insulting at times, but we understood and humoured him. Gordon, on behalf of STC, thanks and keep on trucking.

The ICT XI Organizing Committee has been very active under the competent leadership of Len Lillie, who will report to us later. I am happy to announce that Dr. Gabriel Plaa has accepted the position of President of the Congress. His international reputation will certainly assist in the success of our meeting in 2007.

Over the past year, the Board has maintained an active role in CFBS affairs. We have been participating in meetings of science policy and I want to thank Roger Keefe, Colin Rousseaux and Heather Durham for their involvement. Roger has agreed to stay on as Chair of the Science Policy Committee and will be assisted by Bernard Robaire who is now an official member of STC.

Bill Racz and Don Ecobichon accepted the task of preparing a manuscript for a special issue of Toxicology, and I am pleased to announce that their paper "On-Line Sources of Information in Canada" has been completed. We have continued our relationship with CIHR and Jack Bend will report on a research agenda on Environmental Influences on Health.

In an attempt to keep up to date with our membership, as well as to provide members with contact information, we are in the final stages of preparing an electronic directory. This should be available for members early in the New Year. We are also in the process of drafting a one page brochure to ensure more effective promotion and fund raising. The Board is committed to enhancing the awareness of STC and attracting new members. This requires the help of all members, and we hope that everyone is encouraging their colleagues and students to join STC. We will now hear reports from other members of the Board and Committee Chairs.

As we begin another year, I invite everyone to become more active in STC, and wish everyone a new year of health, happiness and peace.

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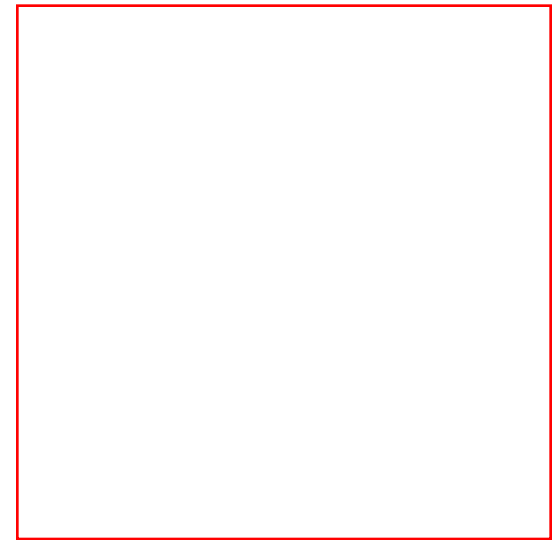
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## **REPORT OF THE PAST PRESIDENT**

**HEATHER DURHAM**

*This Report was presented to the 2002 Annual General Meeting of the Society of Toxicology of Canada, December 5, 2002*



Two major responsibilities of the Past President are nominations and awards. I would like to thank Suzanne Desjardins and David Riddick for serving with me as members of the nominating committee for 2002. We were pleased to submit our report to the Board nominating Ed Krol from the University of Alberta and Dan Sitar from the University of Manitoba for Councillor (academic), and Daniel Cyr from INRS for the position of treasurer. I sincerely thank each of these individuals for graciously agreeing to serve. I congratulate Dan Sitar on election as councillor and welcome Dan Cyr to the treasurer's position. We look forward to working with you.

For the Award of Distinction, Genevieve Bondy and myself served as the evaluating committee. This was an extremely easy and pleasant task. [The award was presented to Bill Racz later at the President's reception. We congratulate Bill for the numerous contributions he has made to the discipline of toxicology over his career. He's not bad at drinking beer and curling either]. We thank Pfizer for sponsoring the award.

For the STC travel awards, Genevieve Bondy and myself served on the awards committee. Applicants were rated on the abstract (clarity of hypothesis, methodology and results and a conclusion consistent with results), CV, and departmental ratings. Funds were awarded based upon the overall ranking and on estimated travel expenses. The following students received travel awards: Guosheng Chen, University of Guelph; Leanne Bedard, Queen's University; Wei Zhang, University of Saskatchewan; J. Wan, Queen's University; C. Y.Y.Chan, Queen's University; Joanna Summerscales, University of Guelph; Francisco Ucan-Marin, Dalhousie University.

Genevieve also organized the poster session and, along with Gerry Cooke and Jeff Kawamoto, had the difficult job of judging the posters for the CanTox sponsored student poster awards. This year two awards were sponsored and presented at the

President's reception. [The two winners were Isabelle Plante (INRS, Université du Québec) and Joanna Summerscales (Department of Chemistry and Biochemistry, University of Guelph), Their abstracts are reproduced in this edition of the newsletter.] For all of these committees, Gordon Krip provided executive support and spent considerable time interacting with the students and putting together the documentation. Thanks all for their time and to CanTox for their sponsorship of this important activity of the Society.

Again this year, it has been a pleasure to serve on the STC Board of Directors. In closing I would like to recognize Sheldon Roth for the enthusiastic way he has approached the Presidency.

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## **THE 2002 AWARD OF DISTINCTION: William John Racz, B.S.P., M.Sc., Ph.D.**

**Thomas E. Massey**



*(Right) President Sheldon Roth presents the 2002 STC Award of Distinction to Dr William Racz. The STC Award of Distinction is sponsored by Pfizer Global Research and Development and Pfizer Canada.*

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 to the Society of Toxicology of Canada. It is my pleasure to briefly summarize the reasons why Dr. Bill Racz has been chosen to receive the Award of Distinction for 2002.

A native of Saskatchewan, Bill obtained his B.Sc. in Pharmacy from the University of Saskatchewan. After practicing as a pharmacist for three years, he decided to return to school, and obtained a Master's degree in Medicinal Chemistry and then a PhD in Pharmacology, both from the University of Alberta. His first direct exposure to toxicological research occurred during his doctoral work with Gerald Marks, when he established a new system to examine the abilities of chemicals to disturb heme biosynthesis.

Bill joined the Department of Pharmacology at Queen's University in 1969. He worked his way through the ranks, making valuable contributions to all aspects of academic activity. He is currently Professor of Pharmacology & Toxicology and Associate Dean of the Life Sciences program, which is the largest program in the Faculty of Arts and Science at Queen's.

Bill's lab has made important contributions to toxicological research, both working independently and in collaboration with others. Among the findings that have resulted, include:

- The first detailed ultrastructural examination of acetaminophen hepatotoxicity, and appreciation of hepatic congestion as an important component of acetaminophen toxicity.
- Demonstration of the beneficial effects of N-acetylcysteine as an acetaminophen antidote, and revelation that the principal mechanism by which N-acetylcysteine acts, is as a source of cysteine for glutathione synthesis.
- Demonstration that disturbance of calcium homeostasis actually occurred as a consequence of cell damage in acetaminophen toxicity, rather than as the initiating event, which had previously been the dogma. For this, Bill and Kuldeep Grewal received the Pharmacological Society of Canada's Award for best CJPP paper of the year.
- Identification of mitochondrial disruption as a very early event in acetaminophen toxicity.
- Delineation of methylmercury-induced alterations in neurotransmitter release as a mechanism of CNS toxicity.
- Currently, Bill is a valued co-investigator in our studies of the mechanism by which amiodarone causes lung fibrosis.

Bill Racz's contributions to the toxicology community and the STC in particular, are truly numerous. I can't describe them in detail here, but a few of the highlights follow:

- STC Councillor, from 1984 to 1987; Consecutively Vice-President, President, and Past-President from 1988 to 1994;

STC Representative on the Board of the Canadian Federation of Biological Societies; chair and/or member of numerous *ad hoc* STC committees, the most recent being charged with generating a compendium of internet-based Canadian toxicology databases.

- •As an officer of STC, Bill increased involvement of students in Society activities, including establishing funding for students to attend the annual symposium, and to make it as accessible as possible to as many students as possible. He also insisted on emphasizing the educational value of the annual symposium, making it a valuable experience for a broad a segment of the Society.
- •Bill has served on several MRC and CIHR grant committees, including Pharmaceutical Sciences and University-Industry, and he recently chaired the Fellowship Committee.
- •Bill was a long-time member and then consultant on the Ontario Drug Quality and Therapeutics Committee, and has served on several expert panels for CIHR and Health Canada.

Specific examples of Bill Racz's contributions to toxicology education and training include:

- •Introduction of undergraduate and graduate toxicology courses at Queen's, and an associated change in the Department name from Pharmacology to Pharmacology & Toxicology, in 1982.
- •Bill has trained over 20 graduate students in toxicology, and he considers this aspect of his career to be particularly rewarding.

Numerous students have been initially intimidated by Bill's apparently gruff exterior, and then come to find that he is the person to go to for fair and sound advice.

As a thesis supervisor or co-supervisor, Bill Racz has trained a number of scientists who have gone on to become active full members of STC. Examples include Robin Walker, James Reynolds, Kuldip Grewal, and yours truly.

For those who have had the opportunity to work closely with Bill, I think many of us would argue that some of his most valuable contributions have been in his role as a wise mentor and colleague. He is an ongoing source of sage advice. When professors or graduate students have a problem that we can't figure out, we regularly end up saying, "Let's go and ask Dr. Racz".

Bill Racz's broad expertise and willingness to answer questions actually is now causing concern for members of his Department at Queen's. After he retires, who's going to take the phone calls that occasionally come to academic departments, in which people ask bizarre questions such as, "Am I in any danger of toxicity from the aluminum foil helmet I'm wearing to keep out the cosmic rays?"

Bill's generosity with his time, expertise, and tools, is not restricted to the laboratory. On one occasion (many years ago), Bill and I rebuilt the carburetor on my 1964 Acadian. When we were finished reassembling it, we only had one extra part.

After hearing that Bill was going to receive this honour, a number of colleagues and former students sent me anecdotes, including one sent by Rick Stewart, a former Ph.D. student in our Department, that I can't resist relating.

Rick says, "One memory I can't seem to shake to this day is when Dr. Racz would poke his head into the centrifuge room and bellow something like, *"WHAT THE #@!%\$ DO YOU THINK YOU'RE DOING?!"*. This of course would happen at the end of the day, when you were in your 8th or 9th hour of preparing subcellular fractions and therefore in your own little universe, and Dr. Racz's bark would startle you such that you'd bounce your head off the lid of the ultracentrifuge that you were bent over. Then he'd stand just behind and watch how you installed the rotor, comment how incorrectly you were doing it, and then casually mention the story of the poor schmo who didn't follow proper procedures, and the rotor came loose at 40,000 rpm, blew through the top of the ultracentrifuge and proceeded to buzz around the ceiling, destroying everything in its path and raining debris down on the unfortunate grad student. Then Dr. Racz would say 'goodnight', and leave for the evening. The next rotor always took twice as long to balance before the spin. Come to think of it, this explains why I never want to load the dishwasher, washing machine and dryer at home."

Since the Award of Distinction specifically refers to the discipline of toxicology, I haven't mentioned anything about Bill Racz's active involvement in the community in which he lives, his dedication to his family, and his great fondness for canoeing and curling. I'll leave it to him to discuss the relative merits of winning the Brier versus the Nobel Prize.

In conclusion, Bill Racz clearly has had a long-standing impact on the discipline of toxicology in Canada, in terms of important research, education, and service contributions, and he is truly deserving of the STC Award of Distinction.

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## **THE VIEW FROM MY CANOE**

**Don Ecobichon**



The December Annual Meeting was a good one, the new venue ideal for the large number of participants it attracted, lots of good posters to give the Awards Committee headaches, good lunches and an excellent dinner, despite difficulties with the latter. I even received a number of solicitous inquiries about my canoe. It now resides inside our cabin since all of the water around here has gone hard. My musings arise from gazing out at the snow we have generously received so far this winter.

A milestone came in my life in November with my resignation as a member of the American Association for the Advancement of Science (AAAS) after 40 years of membership. The cost, on a fixed income (and in US currency at that), is prohibitive and while I like to keep current, they keep piling up under my desk unread. Now, if I could just get the AAAS to stop sending them each week!

Acrylamide in your fast food - fried chips, oven-cooked foods, etc. has caught the attention of the media recently, including a couple of items on TV, with Bruce Holub of the University of Guelph as guest expert. Bruce used to be a member of STC. Apparently, acrylamide, considered to be a carcinogen, is formed at certain temperatures in a Maillard reaction between amino acids and sugars. Two papers discussing this can be found in [NATURE](#) [419](#), pp.448-450, 2002. In potatoes and cereals, the culprit appears to be asparagine, a major amino acid in these products. Acrylamide will form at temperatures of 120-170°C when mixed in solution with equimolar concentrations of glucose. It brings back memories of some "old chemistry" as I sit here munching on my potato chips.

Speaking of carbohydrate, I noted that Zambia rejected thousands of tons of corn donated by the USA to assist in their famine relief because it is likely to contain genetically modified (GM) kernels. An estimated 2.9 million people are at risk of

starvation (**SCIENCE** 298,1153-1154,2002). The government was only following the advice of its own experts. The GM aspect was the protein exotoxin produced by *Bacillus thuringiensis* (Bt), such corn being grown and consumed around the world for about 6 years now. Some 35,000 Zambians will die of starvation by March, 2003, if food cannot be provided. Obviously, little risk-benefit assessment was done on this issue!

Every so often, libraries pile up "withdrawn" books - those no longer used or wanted - asking everyone to help themselves and not to bring them back. I was lucky to find a small volume entitled "Milestones in Micro-biology", edited by Thomas Brock and published by Prentice-Hall in 1961. What is wrong with Ecobichon, you say? Actually, this book was an experiment on the history of the discipline carried out by undergraduate students (first year of microbiology) of Dr. Brock. They gathered the original, classical, milestone papers, in whatever language, the translations were done when necessary from French and German to English and were published with succinct commentaries. As Dr. Brock stated, "there is little opportunity for the student to become aware of just what these men did, what their experimental work was actually like, and to consider their theories, often still credible today. It has always amazed me just how lucidly many of the older scientists wrote, e.g. van Leeuwenhoek, Liebig, Pasteur, Lister, Semmelweis, Koch, Ehrlich, Jenner, etc. The most interesting chapters, for me at least, were those of Paul Ehrlich (Modern Chemotherapy), Alexander Fleming (Antibacterial Action of Cultures of a Penicillium), Domagk (Chemotherapy of Bacterial Infections) and Woods (PABA and Mechanism of Action of Sulphanilamide), the "fathers" of chemotherapy. The presentation of the actual experimental results and the direction in which they led these investigators was most revealing. It was not a waste of time reading these original, early papers and meeting communications. Should such a volume be done for Toxicology? Any candidates?

The attack on the theatre in Moscow held by Chechen terrorists was of considerable importance, given that a volatile incapacitating agent based (possibly) on fentanyl (an opiate) was used by the military. Despite the criticisms related to 118 hostage deaths (they could have had over 700 deaths) and the surprise use of this chemical, little light has been shed on the incident. I would not have thought fentanyl derivatives would be that volatile to be easily aerosolized. There is suspicion that halothane may have been a part of the chemical cocktail, this based on blood and urine samples obtained from two German patients flown to Munich within 24 hr of the raid. Halothane would be a good solvent for other drugs. The hostages did report a "sweet smell" and a "bluish-gray colour (**SCIENCE**, 298,1150-1151,2002), both properties possibly associated with halothane. The Russians have been very reluctant to discuss this, for obvious reasons. However, think of the toxicological challenge - figuring out the volume of the building interior; how to get sufficient quantity of whatever it was into the environment quickly so as not to tip off the terrorists; the inhaled, absorbed dosage necessary to immobilize the terrorists from responding to the attack. With these criteria facing them, it is not surprising that there was an overdose.

The **ECONOMIST** (Dec.21<sup>st</sup>,2002,pp.87-88) ran an article entitled "In Praise of Clutter" that warmed my heart. I am always being chastized about my messy desk, my cluttered office, etc. Many companies want to run "clean desk" policies,

requiring employees to remove all evidence of work from their desktops by the end of the day. They cite "security reasons" - burglars less likely to find anything of interest, etc. Any burglar would find more interesting "stuff" in an organized filing system than on a desk whose logic is comprehensible only to its creator. As stated in the article, people spread stuff over their desks not because they are too lazy to file it, but because the paper serves as a physical representation of what is going on in their heads - a temporary holding pattern for ideas and inputs which they cannot categorize or even decide how they might use. "Pilers" leave paperwork on their desks in concentric circles. There is a "hot" area of stuff that needs attention in the next few days (and may be there as a prompt). There is a "cold" area, at the edges of the desk, of stuff which could just as well be filed or "in the bin". Interfering with people's desktops may interfere with their thinking. Filers not necessarily can find stuff on demand, are less likely to access a given piece of data and are more likely to acquire extraneous data. Usually, pilers can find the exact item(s) with a minimum of problems (Bill Racz is a good example). All of this diatribe has to do with the paperless world the computer nerds told us we were heading toward. Excuse me while I pile my notes on this column in the "warm" area of my desk. Pilers unite!

Before Stephen Jay Gould died, he left a legacy, now in print, entitled "The Structure of Evolutionary Theory", Harvard University Press, \$40 U.S., all 1,433 pages of it. It is his distinctive vision of evolutionary biology - as it should be, as it is, and as it has been. Always readable, he has left enough hot coals around to challenge the next generation of biologists and ethnologists. Way to go, Stephen!

Lastly, I must share a good joke that came to me via Betty's e-mail from a friend of mine. Enjoy!

A man runs into the vet's office carrying his dog, screaming for help. The vet rushes him back to an examination room and has him put his dog down on the examination table. The vet examines the still, limp body and after a few moments tells the man that his dog, regrettably, is dead.

The man, clearly agitated and not willing to accept this, demands a second opinion. The vet goes into the back room and comes out with a cat and puts the cat down next to the dog's body. The cat sniffs the body, walks from head to tail poking and sniffing the dog's body and finally looks at the vet and meows. The vet looks at the man and says, "I'm sorry, but the cat thinks that your dog is dead too."

The man is still unwilling to accept that his dog is dead. The vet brings in a black Labrador. The Lab sniffs the body, walks from head to tail, and finally looks at the vet and barks. The vet looks at the man and says, "I'm sorry, but the Lab thinks your dog is dead too." The man, finally resigned to the diagnosis, thanks the vet and asks how much he owes. The vet answers, "\$650".

"\$650 to tell me my dog is dead?" exclaimed the man... "Well," the vet replies, "I would only have charged you \$50 for my initial diagnosis. The additional \$600 was for the cat scan and lab tests."

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## HOW WOULD YOU RESPOND

Just how would you respond if you read one of the following? They are examples culled from around the world by New Scientist staff.

PCs can be dangerous, as the newspaper headline said: "*Help save the world from your desktop*"

Unusual sight described by sign at zoo: "*Monster man eating shark*"

Warning notice in public place: "*Caution. Do not run on stairs. Use the handrail*"

Road sign: "*Wildlife drive slowly at night*" (shouldn't we all?)

Sign at road works: "*Pedestrians look right*" Well, don't we?

In a national capital: "*Boring machine ahead*" No comment

Thanks to Dolly? On a farm: "*Sheep, please keep dogs under control*"

Did you find the "*Fish and chips left at lights*"?

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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 oeuvrant 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'obtention 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 part d'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,  
Beaconsfield, Québec  
H9W 5V1

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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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# **SOCIÉTÉ DE TOXICOLOGIE DU CANADA / SOCIETY OF TOXICOLOGY OF 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<sup>er</sup> 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 veront 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

## BOOK REVIEW

### Don Ecobichon

*Rosalind Franklin. "The Dark Lady of DNA". Brenda Maddox. Harper Collins Publishers, 2002. \$45CDN.*

In the Dark Ages when I was taking graduate courses in biochemistry at U of T, one of my favourite professors, Gordon Dixon, was still fuming about the shoddy treatment of Dr. Franklin and the manner in which her research data, essentially one picture, was purloined by Maurice Wilkins and shown to Drs. Watson and Crick. Recognition that "her" x-ray crystal-lographic picture fitted a double helix had eluded Rosalind but was quickly realized by the two theoreticians who had been building models. By the time the Nobel Prize was awarded to Watson, Crick and Wilkins in 1962, she had died of ovarian cancer in 1958, and it is one of the rules of the Nobel Committee that the "prize" cannot be given posthumously. How convenient for the winners! An excellent copy of the "picture" can be seen in **DISCOVER**, Dec., 2002, p.85.

This marvellous biography puts a number of things in proper perspective, e.g. "of a brilliant woman trying to make her way in a man's world, having her work used behind her back, and finally being churlishly misrepresented in a book published when she was no longer alive to reply". That book, of course, was Watson's "The Double Helix".

Her early crystallographic work was on forms of carbon obtained by heating coal - she worked for the British Coal Utilization Research Association. She had international fame from this work alone, since various carbons produce different matrices when heated, and she had "discovered" the first molecular sieves. After DNA, she carried out essential research on tobacco mosaic virus, and, once the correct structure was established for it, and a model was built, she and her group of colleagues went on to examine other plant viruses - potato, turnip, tomato and pea. The virus work alone was worthy of a Noble Prize.

There is no doubt that she was a prickly person who did not suffer fools or weak science. The "dark lady" reference pertains to the fact that she was very reticent about talking about her research, partly because she was unsure of her results and was always searching for the penultimate confirmation of her work. She wrote and published an amazing number of papers for

that time of scientific endeavour. The impression that people did not like her is not borne out by the devotion of her "group", all males, many of whom hold high positions in scientific institutions today. Crick, and especially Watson, have spent a scientific lifetime apologizing for their treatment of Rosalind Franklin. It has even surfaced again with the publication of this book, a good read for cold winter nights by the fireplace and worth the price.

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## NEW MEMBERS OF STC BOARD OF DIRECTORS

*Two Directors were elected to the STC Board at the 2002 Annual General Meeting. Please welcome Dr Cyr (Treasurer) and Dr. Sitar (Councillor) to their roles on the Board of Directors. Brief biographies follow.*

**Dr. Cyr** received his BSc (Hons Biology) and MSc (Toxicology) from Concordia University and PhD (Endocrinology) from the University of Manitoba. Following postdoctoral studies in molecular reproductive biology at McGill University he was employed as a scientist with the federal government at the Maurice-Lamontagne Institute before joining INRS as an assistant professor and where he currently holds a position of associate professor. Dr Cyr's laboratory focuses primarily on the molecular aspect of male reproductive toxicology and in particular on cellular interactions in the epididymis and the effects of endocrine disruptors on these interactions. He is also involved in several ecotoxicology projects which attempt to demonstrate the link between effects on the aquatic ecosystem and their potential for adversely affecting human health. Dr Cyr is a member of the Board of Directors of FRSQ Environmental Health Network and is the director of the network's newly established Toxicogenomics Unit.

Le Dr Cyr a reçu son BSc (Hons en biologie) et MSc (Toxicologie) de l'Université Concordia et son PhD (Endocrinologie) de l'Université du Manitoba. Il a, par la suite, complété ses études postdoctorales à l'Université McGill en biologie moléculaire du système reproducteur et a été embauché comme chercheur au gouvernement fédéral à l'Institut Maurice-Lamontagne. Il s'est joint par la suite à l'INRS à titre de professeur adjoint et détient présentement le poste de professeur agrégé. Le laboratoire du Dr Cyr travaille principalement sur les modulateurs endocriniens et sur les effets des contaminants environnementaux sur les interactions cellulaires du système reproducteur mâle, et en particulier sur l'épididyme. Le laboratoire est aussi impliqué dans plusieurs projets d'écotoxicologie dans lesquels on essaie de démontrer les conséquences des effets sur l'écosystème aquatique et leur potentiel d'effets néfastes sur la santé humaine. Le Dr Cyr est membre du Réseau FRSQ en santé environnementale et agit à titre de directeur de l'Unité de toxigénomique du RRSE.

Dr. Sitar has BScPharm, MSc and PhD degrees from the University of Manitoba. He is currently Professor and Head of the Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba. He is also Professor of Internal Medicine (Clinical Pharmacology Section), Professor of Pediatrics and Child Health, Professor in the Faculty of Pharmacy, and a research affiliate of the Centre on Aging. He has served on the Editorial Board of Clinical Pharmacology and Therapeutics since 1986, and is the Editor of "The Forum" for the Journal of Clinical Pharmacology. He is also a member of the Expert Advisory Committee on Bioavailability to Health Canada. His major current areas of research related to toxicology include studies on functioning of renal tubule cationic transporters, clinical toxicology studies on gastrointestinal tract decontamination strategies, and pharmacokinetic studies to explain variability in drug disposition at the extremes of age. He has served STC as co-developer of the bylaws and constitution, member of the nominating committee (1987/8) and member of the education committee (2001/2).

**Le docteur Sitar** a obtenu un BscPharm, un MSc et un Ph.D. de l'université du Manitoba. Il est présentement professeur et chef du département de pharmacologie et de thérapeutique de la faculté de médecine de l'Université du Manitoba. Il est également professeur de médecine interne (section de pharmacologie clinique), professeur de pédiatrie et de santé de l'enfant, professeur à la faculté de pharmacie de même qu'associé de recherche au *Centre of Aging*. Il fait partie du Comité éditorial de *Clinical Pharmacology and Therapeutics* depuis 1986 et est éditeur du "*The Forum*" du *Journal of Clinical Pharmacology*. Il est également membre du Comité consultatif d'experts sur la biodisponibilité de Santé Canada. Ses intérêts majeurs en recherche en toxicologie incluent les études sur le fonctionnement des transporteurs cationiques des tubules rénaux, les études de toxicologie clinique sur les stratégies de décontamination du tractus gastro-intestinal et les études de pharmacocinétique pouvant expliquer la variabilité de la disposition des médicaments à l'âge avancé. Il a occupé diverses fonctions au sein de la STC en tant que coauteur des règlements et de la constitution, membre du comité des nominations (1987-88) et membre du comité d'éducation (2001-02).

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## **STC BOARD OF DIRECTORS December 2002 - December 2003**

### **Dr Genevieve Bondy (Councillor)**

Toxicology Research Division  
Postal Locator 2204D2  
Food Directorate

### **Dr Daniel Cyr (Treasurer)**

Centre de recherché en sante humaine  
INRS-Institut Armand-Frappier  
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E-mail: [Genevieve\\_Bondy@hc-sc.gc.ca](mailto:Genevieve_Bondy@hc-sc.gc.ca)

**Dr Heather Durham (Past President)**

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**Dr. Barbara Hales (Vice President)**

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**Dr. Gordon Krip (Executive Director)**

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**Dr Mark Goldberg (Councillor)**

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**Dr. Jeff Kawamoto (Secretary)**

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**WINNERS OF THE CANTOX GRADUATE STUDENT POSTER AWARD 2002**

*This year at the annual symposium, two poster awards were sponsored by CanTox. Left to right: Dr. Genevieve Bondy (Chair of the review committee), Isabelle Plante (winner), Joanna Summerscales, and Sheldon Roth (President STC). The abstracts of the winning posters are reproduced in this edition of the newsletter.*

## **UP-REGULATION OF THE INTEGRIN-LINKED KINASE PATHWAY IN HEXACHLOROBENZENE-TREATED FEMALE RATS: A MECHANISM FOR DECREASED GAP JUNCTIONAL INTERCELLULAR COMMUNICATION?**

**Isabelle Plante, Daniel G. Cyr and Michel Charbonneau, INRS-Institut Armand-Frappier, Université du Québec, Montreal, Quebec H9R 1G6**

Hexachlorobenzene (HCB), is a widespread environmental contaminant that causes gender-specific liver tumor promotion in rat. Modulation of gene expression is the hallmark of epigenetic carcinogens such as HCB. We have previously shown that in female rats, HCB decreases intercellular communication. This is accompanied by a decrease in connexin 26 and connexin 32 (Cxs) which form hepatic gap junctions. The aim of this study was to assess the mechanistic basis for HCB-induced decrease in intercellular communication by focusing on intracellular signaling pathways. The Integrin-Linked Kinase (ILK) phosphorylation pathway, which is overexpressed in many tumors, causes transformation of epithelial cells by disrupting cell-cell interaction. Activation of ILK leads to a translocation of b-catenin (b-cat) into the nucleus where, as a co-factor, it modulates the expression of genes involved in cell proliferation and cell adhesion. We hypothesize that HCB modulates the expression of the ILK pathway in female rats, an effect proposed to be linked to the down-regulation of GJIC. Rats were exposed to HCB by gavage for five consecutive days and killed 45 days after the last dose, i.e. when Cxs are decreased. Western blot analysis indicates a significant ( $p < 0.05$ ) increase in levels of ILK in treated rats as compared to controls. Using flow cytometric analysis, our results demonstrate that the nuclear translocation of Akt, a signaling target for ILK, is increased in HCB-treated females as compared to controls. This suggests that HCB, via Akt, is involved in the regulation of hepatic gene expression. Cytosolic protein levels of Akt and its

phosphorylation were significantly ( $p < 0.05$ ) decreased in HCB-treated females suggesting that the ILK phosphorylation involves another target protein, such as GSK3. ILK is known to phosphorylate GSK3 leading to translocation of b-cat from the cytoplasm into the nucleus. Nuclear b-cat levels were higher in HCB-treated females as compared to controls. In the nucleus, the b-cat-Lef1 complex can down-regulate the expression of E-cadherin (E-cad), a cell adhesion molecule. Western blot analysis indicated that E-cad is significantly ( $p < 0.05$ ) lower in HCB-treated rats as compared to controls. Overall, those results show that the ILK pathway is overexpressed in HCB-treated female rats. We propose that HCB promotes liver tumor formation by modulating GJIC and cell-cell interactions via an activation of the ILK pathway. (supported by NSERC and TSRI)

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## SCREENING AND CHARACTERIZATION OF HUMAN NAT2 (N-ACETYL COA: ARYLAMINE N-ACETYLTRANSFERASE) VARIANTS

**J.E. Summerscales and P.D. Josephy, Dept. of Chemistry & Biochemistry, University of Guelph, Guelph, Ontario N1G 2W1. e-mail: [djosephy@uoguelph.ca](mailto:djosephy@uoguelph.ca)**

Bioactivation of mutagenic nitroaromatic compounds proceeds via reduction to the hydroxylamine metabolites. Acetyl CoA-dependent *O*-acetylation of the hydroxylamines generates reactive *N*-acetoxy esters. Enzymes catalyzing this acetylation step (EC 2.3.1.5) are found in organisms ranging from bacteria to humans (NAT1, NAT2). Using a targeted gene knock-out strategy, we constructed an *E. coli* strain devoid of NAT activity, which provides a clean background for expression of recombinant NATs (Josephy *et al.*, *Biol. Chem.* 383: 977-982, 2002). This strain also carries a *lacZ* frameshift target for mutagen detection; *lacZ* revertants are selected by growth on lactose minimal medium. Expression of recombinant human NAT2 greatly increases the mutagenicity of nitroaromatic compounds in *E. coli* tester strains (Josephy, *Mutat. Res.* 455: 71-80, 2000).

NAT2 is a highly polymorphic gene and enzyme in humans. We are using random mutagenesis to study the effects of amino acid substitutions on NAT2 enzyme activity. Libraries of random NAT2 variants were constructed by PCR-based random mutagenesis (ClonTech Diversify™). The extent of mutagenesis was adjusted by varying the concentrations of  $Mn^{2+}$  and dGTP in the reaction mix. The mutagenized pool of NAT2 open reading frames was sub-cloned into the expression vector pKK223-3 (Pharmacia), using the *EcoRI* and *HindIII* restriction sites; the wild-type (NAT2\*4) sequence was used as positive control. The pool was recovered by transformation into highly competent *E. coli* DH10b cells (Invitrogen). Plasmid DNA prepared from the

pooled transformants was then transformed into the *lacZ* mutagenicity tester strain. These transformants were screened by the high-throughput DAVERAMA (Detection of Active Variant Enzymes by Reversion Assay/Mutagen Activation) approach previously developed in our laboratory (Josephy, *Toxicology*, in press; available on-line July 25, 2002). Individual clones were grown in 96-well plates and aliquots spotted onto minimal lactose plates containing nitro-IQ (2-nitro-3-methylimidazo[4,5-*f*]quinoline), which requires NAT activation for mutagenicity. After a 48-hour incubation, the number of revertant micro-colonies in each spot was counted and compared with positive and negative controls present on each screening plate.

Approximately 300 random NAT2 mutants were screened. From this pool, approximately 20 variants with apparently altered nitro-IQ responses were chosen for further study. Subsequent analyses included DNA sequencing to identify the sites of the mutations; *lacZ* mutagenicity assays with nitro-IQ and 2-nitrofluorene; NAT enzyme assays with the substrate 2-aminofluorene; and, for some variants, determination of  $K_M$  for 2-aminofluorene. Each of the 20 variants was found to bear a single amino acid substitution in the NAT2 sequence; two had an additional silent base-substitution. In most cases, enzyme activity was lower than for the wild-type NAT2. Our data are interpreted with respect to the roles of individual amino acid residues in NAT2 structure and function, with reference to published site-directed mutagenesis studies and models of NAT2 protein structure. (*Supported by a grant from NSERC Canada.*)

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## REPORT OF THE 2002 STC ANNUAL SYMPOSIUM

### Gordon Kirby

Last year's annual symposium on "*Toxicology of Sensitive Populations*" was an unmitigated success. Symposium participants were treated to two days of captivating presentations covering various risk factors, mechanisms, methods of monitoring and regulation of health risks in populations that are susceptible to toxicity for reasons of gender, age, ethnicity, genetic polymorphisms etc. At this point, a summary of the entire conference would be redundant and would certainly not do the speakers justice, however, to give those who were unable to attend an indication of what they have missed here are some of my personal highlights

- Bill Nelson's (Johns Hopkins) demonstration that loss of glutathione S-transferase Pi expression in inflamed prostatic

epithelium and prostatic carcinomas is due to CpG island hypermethylation suggesting an important link between prostatitis and prostate cancer development.

- Rachel Tyndale's (University of Toronto) discussion of the prominent role of CYP2A6 in nicotine inactivation and suggestion that differences in CYP2A6 allele frequencies may contribute to individual and ethnic differences in tobacco dependence and may allow individualization of nicotine replacement therapy.
- Jan Hoeijmakers' (Erasmus University) elegant explanation of nucleotide excision repair mechanisms and his demonstration, through the use of DNA repair-deficient mouse models, that reduced transcription-coupled repair compromises transcription, triggers apoptosis and increases symptoms of premature aging. He also showed that reduced global genome repair enhances mutagenesis that correlates with increased carcinogenesis.
- Chris Bradfield's (University of Wisconsin) comparison of custom cDNA microarrays from dioxin-treated and untreated mice and demonstration that chemically induced changes in liver gene expression correlates with specific toxic events. He showed that clustering of gene expression data based on dose-response can give reliable information on coordinately regulated sets of genes whose expression profiles are predictive of groups of chemicals that produce toxicity through similar mechanisms.

I am sure that most other participants irrespective of their origins in industry, academia, or government had their own personal highlights and took home interesting ideas and valuable information from these excellent presentations.

Finally, thanks to Jack Bend for bringing us up to date on the developments of the CIHR initiative to develop a National Research Agenda on the Environment and Health. I would also like to thank the other members of the program committee, Bill Casley and Dino Manca, as well as members of the STC executive committee for their help in organizing this fascinating conference.

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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**

*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.

# ELEVENTH INTERNATIONAL CONGRESS OF TOXICOLOGY / LE ONZIÈME CONGRÈS INTERNATIONAL DE TOXICOLOGIE

*(Right) Some logos from previous gatherings of the International Congress of Toxicology.*



## ELEVENTH INTERNATIONAL CONGRESS OF TOXICOLOGY

### *An Open Invitation to all STC Members:*

As your ICT XI Organizing Committee and its various sub-committees start to gear up for ICT XI in Montréal in 2007, I would like to bring to your attention one of the Communication Committee's (CC) assignments. Specifically, the CC has been asked to come up with a logo that can be used to instantly signify either the country (i.e. Canada) or the city (i.e. Montréal) in which ICT XI is being held. The Aussies with their platypus, the French with the Eiffel Tower and the Italians with the Arch of Constantine all managed to convey their message very well. And now we are looking for a logo that will instantly and unmistakably indicate Canada and/or Montréal to one and all. And if we can incorporate some toxicological imagery so much the better. In short, the logo is a truly critical part of our ICT XI endeavours because it will be used on all of the Congress' promotional materials and correspondence.

Therefore, the Organizing Committee would like to tap into the vast creativity of STC's members by proposing a "Create the Logo" contest for ICT XI. While we cannot yet announce what prize the winning designer will receive at this time (the STC Board is considering the committee's suggestions for an appropriate prize), **it will be a substantial prize!** We would like to have

the winning logo available for finalization by a commercial artist in September. Therefore, we would request that you either mail your logo(s) to

STC  
C.P./P.O. Box 517,  
Beaconsfield, Québec H9W 5V1

or e-mail them to me [doug\\_arnold@hc-sc.gc.ca](mailto:doug_arnold@hc-sc.gc.ca) by **August 1, 2003**.

When the STC Board decides upon an appropriate prize, an announcement will be sent to everyone who is on STC's e-mailing list. If you are not on the list and wish to have your name added, please e-mail me.

Good luck and keep those logos coming.

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## **LE ONZIÈME CONGRÈS INTERNATIONAL DE TOXICOLOGIE**

### **Une invitation ouverte aux Membres de la ``STC``:**

Puisque votre Comité d'Organisation CIT XI et les autres sous-comités variés commencent à se préparer pour le CIT XI à Montréal en 2007, je voudrais diriger votre attention vers l'un des exercices qui a été attribué au Comité de Communication (CC). Spécifiquement, il a été demandé au CC de créer un logo qui pourrait être utilisé pour représenter un pays (ex. Canada) ou une ville (ex. Montréal) dans lequel le CIT XI aura lieu. Les Australiens avec leur 'platypus', les Français, leur Tour Eiffel ainsi que les Italiens avec leur Arche de Constantine ont très bien passé leur message. Nous recherchons donc un logo qui pourra instantanément et sans équivoques représenté le Canada et/ou Montréal, encore mieux si on introduisait une image faisant allusion à la Toxicologie. Bref, le logo est un point essentiel pour le CIT XI puisqu'il sera utilisé dans tous les matériaux de promotions ainsi que dans toutes correspondances du Congrès.

Le Comité d'Organisation voudrait donc encourager la grande créativité des membres du STC en leur proposant un

concours dans lequel ils devront créer un logo pour CIT XI. Nous ne sommes pas encore en mesure d'annoncé quel prix sera attribué au gagnant, (les membres du SCT considèrent les suggestions du Comité afin de trouvé un prix convenable), nous pouvons tout de même assurer tous les participants (es) que le prix sera important! Nous aimerions avoir le logo gagnant dès septembre afin de pouvoir finaliser le tout avec un artiste commercial. Nous vous prions donc de nous envoyer votre logo à

STC,  
C.P./ P.O. Box 517,\  
Beaconsfield, Québec H9W 5V1

ou de l'envoyer par courriel à moi-même [doug\\_arnold@hc-sc.gc.ca](mailto:doug_arnold@hc-sc.gc.ca) avant le 1<sup>er</sup> Août, 2003.

Lorsque les membres du STC auront décidés du prix gagnant, un message (courriel) sera envoyé à tous ceux et celles qui figurent sur la liste de courrier électronique du STC. Si vous n'êtes pas sur cette liste et désirez y être, S.V.P. m'envoyé un courriel à l'adresse mentionné ci-haut.

Tout en espérant recevoir plusieurs logos, je vous souhaite bonne chance.

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## CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY

- Volume 80 Number 10 October 2002 is now available at [http://researchpress.nrc.ca/cgi-bin/cisti/journals/rp/rp2\\_tocs\\_e?cjpp\\_cjpp10-02\\_80](http://researchpress.nrc.ca/cgi-bin/cisti/journals/rp/rp2_tocs_e?cjpp_cjpp10-02_80)
- Volume 80 Number 11 November 2002 is now available at [http://www.nrc.ca/cgi-bin/cisti/journals/rp/rp2\\_tocs\\_e?cjpp\\_cjpp11-02\\_80](http://www.nrc.ca/cgi-bin/cisti/journals/rp/rp2_tocs_e?cjpp_cjpp11-02_80)
- Volume 80 Number 12 December 2002 is now available at [http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2\\_tocs\\_e?cjpp\\_cjpp12-02\\_80](http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_tocs_e?cjpp_cjpp12-02_80)
- Volume 81 Number 1 January 2003 is now available at [http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2\\_tocs\\_e?cjpp\\_cjpp1-03\\_81](http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_tocs_e?cjpp_cjpp1-03_81)

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# 46<sup>th</sup> ANNUAL MEETING CANADIAN FEDERATION OF BIOLOGICAL SOCIETIES



**June 11-15, 2003**

*Meeting Theme: Cardiovascular & Metabolic Disease*

## *Symposia*

- KATP Channels in Heart, Vasculature & Pancreas;
- Peroxisome Proliferator-Activated Receptors in Cardiovascular Regulation;
- Inflammatory Heart Diseases & Cardiac Failure;
- Diabetes & Atherosclerosis;
- New Insights into Obesity & its Complications;
- The Adipocyte, Thermogenesis & Metabolism;
- Protective Effects of Nutrients in CVD - Addressing Recent Controversies.

## *Additional symposia*

- From Genes to Imaging - New Diagnostic Approaches to CV Diseases;
- Nutrition, Functional Foods & CV Disease;
- Summary of Macronutrient DRI Report;
- The Aging Skeleton.

## *Poster Sessions & Exhibits*

***Abstract Deadline: March 17, 2003***

*Venue: Ottawa Congress Centre, Ottawa, Ontario, Canada*

*Contact: Ms. Wafaa Antonious, [e-mail](#) or web site [web site](#)*

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## **FACULTY POSITION IN BIOLOGICAL CHEMISTRY**

### *Department of Chemistry and Biochemistry*

The Department of Chemistry and Biochemistry of the University of Guelph invites applications for a full time tenure track position at the rank of Assistant Professor in the area of Biological Chemistry. All areas of biological chemistry will be considered with preference for research in bioorganic chemistry or toxicology. Candidates must have a Ph.D. degree and postdoctoral experience. The successful candidate will be expected to develop a productive research program, to teach and advise graduate students within the Guelph-Waterloo Centre for Graduate Work in Chemistry and Biochemistry, and to have a strong commitment to teaching at the undergraduate level. Additional information on the Department of Chemistry and Biochemistry may be found at <http://www.chembio.uoguelph.ca/>. Salary will be commensurate with qualifications and experience.

Candidates should submit by **March 15 , 2003**, a curriculum vitae, a statement of research experience and a research proposal, and arrange to have three letters of reference sent to: Dr. Robert J. Balahura, Chair, Department of Chemistry and Biochemistry, University of Guelph, Guelph, Ontario N1G 2W1. Fax: (519) 766 1499.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

*The University of Guelph is committed to an employment equity program that includes special measures to achieve diversity among its faculty and staff. We therefore particularly encourage applications from qualified aboriginal Canadians, persons with disabilities, members of visible minorities and women. This appointment is subject to final budgetary approval.*

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## CONFERENCES, MEETINGS AND WORKSHOPS

### 2003

March 9-13 42<sup>nd</sup> Annual Meeting of the Society of Toxicology. Salt Lake City, UT, USA. Contact: SOT, 1767 Business Centre Drive, Suite 302, Reston, VA 22090-5332, USA. Tel: 703-438-3115. Fax: 703-438-3113, e-mail: [annette@toxicology.org](mailto:annette@toxicology.org) Web site: <http://www.toxicology.org/>

March 27 Colloquium Workplace Chemical exposure Standards, Montreal, Quebec. Contact: Joann Dunn, IRSST, Tel: 614-288-1551 ext 205 E-mail: [joann@irsst.qc.ca](mailto:joann@irsst.qc.ca) Website: [http://www.irsst.qc.ca/htman/4\\_9.htm](http://www.irsst.qc.ca/htman/4_9.htm)

April 21-May 2 Advanced Principles of Toxicology, Guelph, Ontario. Contact: Office of Open Learning, University of Guelph, 159 Johnston Hall, Guelph, Ontario N1G 2W1 Tel: 519-824-4420 ext 4737 Fax: 519-767-1114 E-mail: [gjoseph@open.uhuelph.ca](mailto:gjoseph@open.uhuelph.ca) Website: <http://www.open.uguelph.ca/toxicology>

Apr 27-May 1 International Society for the Study of Xenobiotics, 8<sup>th</sup> European ISSX Meeting. Dijon, France. Contact: ISSX Office, PO Box 3, Cabin John, MD 20818, USA. Tel: 301-983-2434, Fax: 301-983-5357. E-mail: [nholahan@issx.org](mailto:nholahan@issx.org) Website: <http://www.issx.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 9<sup>th</sup> International European Association for Veterinary Pharmacology and Toxicology (EAVPT), Lisboa, Portugal. For more information visit the [EAVPT web site](#) or [e-mail](#)

July 19-21 30<sup>th</sup> Annual Meeting of the Japanese Society of Toxicology, Azabu University, Sagamihara (Tokyo Area), Kanagawa, Japan. Contact: Prof. Fumiakii Akahori, Dept of Pharmacology, School of Veterinary Medicine, Azabu University, 1-17-71 Fuchinobe, Sagamihara 229-8501, Japan. Tel:0081-42-754-7111, Fax: 0081-42-752-3415, or [E-mail](#)

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](#)

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, Toxinology Department, Women's and Children's Hospital, North Adelaide SA5006, Australia

## **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](#)

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](#) Websites: [SOFT](#) or [TIAFT](#)

## **2007**

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

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