



ANCHOR

Congratulations and thank you to Saikat Basu for naming our eNewsletter! From here on, you'll be reading the **CAANCB/ACANBC ANCHOR...**

A for Anatomists

N for Neurobiologists

C for Cell Biologists

H for harmony and integration of all the different members brought from different disciplines together on a common platform to share and exchange their collective knowledge.

O for Organization of hope, sharing, knowledge and participation as the newsletter will highlight a lot of organizational information and activities.

R for Research and recreation as the newsletter will not only provide science and research information but will also be a source of general information and pleasure reading and hence a source of recreation too.

Saikat will receive a \$50.00 gift certificate from HMV for his fine efforts! Thanks to Saikat and also to everyone who voted!

<p>What's inside...</p> <p><i>Imaging Contest Details and Update</i></p> <p><i>Student and Faculty Members' Perspectives</i></p> <p><i>Department Report</i></p> <p><i>CAANCB Order of Canada Recipient Profile</i></p> <p><i>Science in the Media</i></p> <p><i>The Science Skinny</i></p> <p><i>PhD Comic</i></p>	<p><u>CAANCB EXECUTIVE</u></p> <p>President Dr. Bernie Juurlink Past President Dr. Ric Devon Vice President Dr. Elliot Scott Secretary Dr. Michael Kawaja Treasurer Dr. Maxwell Hincke</p> <p><u>COUNCILORS</u></p> <p>Dr. A.W. Hrycyshyn Dr. Elliot Scott Dr. Sandra Miller</p> <p><u>SCIENCE POLICY COMMITTEE</u></p> <p>Dr. Ric Devon – Chair Dr. Steven Pang Dr. Peter Cauwenbergs</p> <p><u>PROGRAM COMMITTEE</u></p> <p>Dr. Anne Croy - Chair</p> <p><u>AWARDS COMMITTEE</u></p> <p>Dr. Hugo Bergen – Chair Dr. Peter Haase Dr. Ron Leslie Emma Turner Dr. John H. Youson</p>	<p><u>GRAD STUDENT SOCIETY</u></p> <p>Sarah Rigley MacDonald Emma Turner Nicole Cox Hortense Nsoh Tabien Jeff Leiter</p> <p><u>E-NEWSLETTER EDITOR</u></p> <p>Michelle Black</p> <p><u>DEPARTMENT REPS</u></p> <p>University of Lethbridge Biological Sciences: Saikat Basu University of Manitoba Human Anatomy and Cell Science: Jeff Leiter University of Saskatchewan Anatomy and Cell Biology: Nicole Cox</p> <p><u>WANTED!</u></p> <p>Graduate student department reps. Contact us for more details CAANCBGS@gmail.com</p>
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Keep sending in your entries for our imaging contest!

Thanks to everyone who has already submitted an image...keep it up and you could win a Sony™ Digital Camera (featuring a Zeiss lens), courtesy of Zeiss.

<http://www.zeiss.ca>

See below for contest details.



<p>Imaging Contest Rules</p> <p>All images submitted must be original, unpublished images. Images can be captured with a microscope, MRI, etc. The means of capturing the image is up to the entrant.</p> <p>Information regarding the equipment used and a description of the image must accompany the submission.</p> <p>Contest is open to any member of CAANCB.</p> <p>Email images (as a TIFF document [please use an LWZ compression file] to CAANCBGS@gmail.com.</p> <p>Entry date is by 5pm on the 25th of each month.</p> <p>There will be one first place winner per quarter. Other honourable mention will be given to second, third, and fourth place images. A grand prize winner will be selected from the four first place winners at the end of the contest year.</p> <p>Each winner will have their image on the cover of the enewsletter.</p> <p>Entries will be judged by our qualified judges who will be blind to the origin of the entry.</p> <p>Judging based on technical difficulty of acquiring the image, aesthetic of the image, uniqueness of the image.</p> <p>All decisions are final.</p> <p>Winners will be notified by email and their names will be announced in the enewsletter.</p>

Student Member Perspective:

Suggestions for an all-round grad course at Canadian Universities

Contributed by Saikat Kumar Basu

Department of Biological Science, University of Lethbridge, Lethbridge, AB, Canada T1K 3M4

It is essential for a graduate student to develop well rounded skills during his/her graduate training in order to best prepare for the highly competitive professional world awaiting them after graduation. Research work is only one of the many skills that a graduate student needs to develop during his or her studentship. Hence, it is important to provide the students with opportunities for better learning of several other associated and related areas that are important and are an integral part of the academic life they would pursue in the long run.

The aim should be to integrate university and institute community members, primarily faculty members from multiple departments to design a well rounded course and a curriculum for practical training for the graduate students representing different disciplines. Being a graduate student is a great opportunity to learn and enjoy the diverse area of knowledge available. However, at the same time it is also important for the university to design practical courses which would better train them for a successful academic career and that does not include only lab and field work but a wide array of different aspects to master.

I sincerely look to the appropriate authorities for their kind support and help in near future for introducing such curricula and training workshops with respect to allotment of instructors, mentors, resource materials and other associated facilities, not to mention financial and administrative support. The proposed, tentative focus areas for such practical training oriented courses for grad students could be as follows:

1. **Teacher training:** how to effectively convey information; class room handling; interacting and dealing with students; troubleshooting
2. **Editorial skills:** how to effectively edit your work; technical skills necessary for publishing your work
3. **Thesis/Scientific or Professional Report writing:** (including how to create a strong and effective CV)

4. **Academic/scientific writing (the currency of modern science):** proper use of grammar and technical language in scientific writings and presentations; how to effectively represent your work simply and technically
5. **Writing reviews:** quite challenging! how to master the art of summarizing the works of others; how to summarize series of papers into effective, readable information for others
6. **Art of critical reviewing:** how to review the works of others without being only negative
7. **Grant/Research proposal writing:** one of the greatest art or skill essential for successful survivors in the academic and the research world
8. **Public presentations:** how to transfer your work from the lab to the “land” and to the general public; writing popular science
9. **Scientific presentations:** what skills do you need to communicate your work effectively and efficiently
10. **Research analysis and synthesis methods:** how to analyze and summarize your results and interpret them
11. **Research design and methods:** skills to select the most appropriate methods for your study
12. **Library resource skills:** to make efficient use of available library resources; advanced search techniques

Comments on Saikat's suggestions? Let us know what you think. E-mail CAANCBGS with a letter to our editor.

Faculty Member Perspective:

Dr. Ben Rosser, Professor

Dept. Anatomy and Cell Biology
University of Saskatchewan

The thing I enjoy most about being a tenured professor in the Department of Anatomy and Cell Biology at the University of Saskatchewan is that I am my own boss. I have the freedom to follow my own ideas in both my research and teaching. It did, however, take a while to arrive at this place in my career.

I received my training in the biological sciences at five universities: Bachelor at the University of Alberta; Master's at the University of Regina; Doctorate at the University of Guelph; Postdoctoral at the University of

Maryland; and Research Associate at Washington University. I have had my own lab and research program at the University of Saskatchewan for about 16 years, gradually working my way through the professorial ranks. It has been my great privilege to have studied under some remarkable mentors, and to have benefited from the thoughtful guidance and help of many others. I have also survived several difficult situations. In the end, all experiences served to strengthen my academic and scientific skills.

Gross anatomy has been a constant in my training. My undergraduate years featured gross anatomy, with a brilliant and ambidextrous professor who wrote on the blackboard with a piece of chalk in each hand. Lacking those same skills, it was very difficult for me to take notes in that class. My MSc thesis was a gross anatomic description of the wing and leg muscles of a particular species of bird. During my PhD studies, I was a teaching assistant in comparative vertebrate anatomy. In my postdoctoral position, I served as an instructor of medical gross anatomy. With my position at the University of Saskatchewan came teaching duties in human gross anatomy and, even though my research had long been in muscle cell biology, I was on familiar terrain.

I like to think that I have retained elements of all the roles that I have been lucky enough to have had: the undergrad staying up all night to study for the exam next morning; the twenty-five year old working alone, peering at formalin-fixed bird wings and over old manuscripts to discern avian musculature; the PhD student eagerly trying to get yet another publication from his thesis; the research associate working in several labs at a university that had produced more Nobel laureates in science than had all of Canada, and competing there against peers in an annual research presentation; the assistant professor trying to get his modest lab up and running. I bring all of these experiences to every meeting, and to every committee of which I am a member.

I enjoy my interactions with students, both undergraduate and graduate. As a professor, I have an opportunity to help them grow and fulfill their dreams and potential. Research has also been a source of great satisfaction. It is a chance to be creative, and few things compare with the feeling of accomplishment that I have when receiving the reprints of my most recent publication. I have witnessed great erosion in the anatomical sciences in Canada. Over the last thirty plus

years, course hours in anatomy have been slashed, anatomy departments have been integrated into other academic units, and numerous faculty positions have been lost.

Certainly in science and elsewhere nothing stays the same. When I started university we used slide rules, and almost none of us could type. Now, sitting at my computer, I not only perform statistical calculations and prepare my own manuscripts, but I also finalize electronic micrographs for publication. Yes, things do change and evolve. However, I feel that with deemphasizing the anatomical sciences we are neglecting and losing something invaluable. What is being lost is an appreciation for the fundamentals of how organisms function at the gross anatomic and even cellular levels in their environments. The Canadian Association for Anatomy, Neurobiology and Cell Biology is, in my opinion, performing a vital role in helping the anatomical sciences to evolve and adapt to the changing Canadian scientific climate.

Departmental Report:

University of Ottawa, Division of Clinical & Functional Anatomy

At University of Ottawa, the *Division of Clinical & Functional Anatomy* has an overriding mandate of excellence and leadership in teaching the anatomical sciences. The anatomical sciences are delivered by lectures and prosected cadaver laboratory sessions that are reinforced by electronic learning resources developed over the past few years as part the innovative laptops/e-curriculum program of the Faculty of Medicine.

Altogether, 2006 has been a very pleasing and eventful year for the *Division of Clinical & Functional Anatomy*. We are delighted to welcome our newest faculty member **Dr Nadine Wiper- Bergeron** who joined the Division this year as a devoted, enthusiastic, and compassionate professor.

One of our excellent and dedicated prosectors, **Ms Shannon Goodwin**, was acknowledged for her contribution and is the 2006 recipient of *Faculty of Medicine Award of Excellence*.

Head of our Division and Acting Chair of Cellular

molecular medicine department, **Dr Max Hincke** was also honoured this year by the Faculty of Medicine for his *Outstanding Contribution in Undergraduate Medical Education*.

Mr. Vijay Kapal has been teaching histology and embryology to medical students since 1991. Not only was **Mr. Kapal** recognized for his exceptional effort in winning the *2005 Capital Educators' Award*, but also the Medical students graduating class (Meds 06) has nominated him as their *honorary president*.

Our Gross Anatomy Laboratory Instructors have also been very productive this year.

Dr Edith Abou-Said joined the Division of anatomy last year as a dedicated and intellectually vibrant teacher. She was honored as the recipient of the *2006 Excellence Award of Division of Anatomy*.

Dr Hossein Aleyasin has been with our division since 2002. This year he received the *Eli Lilly/CAN Young Neuroscientist Award* from Canadian Association for Neuroscience, and the Silver award for the best poster in neuroscience at the *CIHR Student Poster Competition*, Winnipeg, Manitoba.

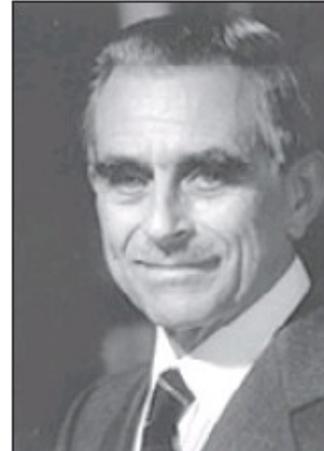
All of us at the *Division of Clinical & Functional Anatomy* would like to congratulate **Dr Youssef Wassef** on his recent retirement. **Dr Wassef** has taught at the University of Ottawa since 1987. He participated in the development of innovative electronic material to teach anatomy, histology and embryology. His passion, his humor, his enthusiasm, and his colourful examples have animated the classroom and helped to demystify matters as complex as embryology.

Submitted by:
Dr. Ali Jalali
Assistant Professor

What would you like to see in the next e-newsletter?
Want to become a CAANCB member?
Want to contribute?
Check your award eligibility?
Please check out
[HTTP://CAANCBGS.GOOGLEPAGES.COM](http://CAANCBGS.GOOGLEPAGES.COM) for
more info!

CAANCB Emeritus Member to Receive Order of Canada

JULIE OLIVER, THE OTTAWA CITIZEN



MCGILL UNIVERSITY

Dennis Osmond

The now-retired McGill professor who lives in Manotick is a rare breed in the medical and academic worlds, credited with developing internationally renowned medical breakthroughs and innovative teaching methods for his students.

“It’s increasingly difficult for professors to do research and embrace teaching,” Dr. Osmond said.

Dr. Osmond, 76, began his research in the 1950s, when “we still really didn’t know how the immune system worked.” He became intrigued by tiny mysterious cells called lymphocytes.

Dr. Osmond’s research found that bone marrow produces a type of lymphocyte linked to immune disorders such as leukemia and lymphoma; his work shed light on how the diseases begin and develop.

While traveling all over the world with his research, and chairing McGill’s department of anatomy and cell biology for a decade, he still kept teaching close to his heart.

“I taught a generation of medical students and was very concerned with their professional development.”

Dr. Osmond created a special anatomy program at McGill that focused on developing students’ compassion and understanding as much as their medical knowledge. The program includes an innovative memorial service during which students honour the

lives of those who donated their bodies for research to McGill's anatomy labs.

“For most students, it's a challenging experience but an important one.... They think about who the person was and how they will do justice to that person's gift later in their career.”

Although still involved at McGill, Dr. Osmond retired six years ago and moved to Manotick with his wife, Ann, where they are very much involved in the local community. He is vice-president of the Manotick branch of the Royal Canadian Legion and chairs the community's annual poppy campaign.

Dr. Osmond is an emeritus member of CAANCB and has remained active in its affairs.

I Am A Scientist!

Contributed by **Nick Neufeld**

I Am A Scientist! is a radio show on CKUW 95.9 FM showcasing science education and research in Winnipeg, with an eye to national and international science. That's the formal synopsis. Formality, however, is not the best fit for I Am A Scientist! Think of it as a casual encounter with a long-lost colleague—a big fat “Hey hey, Jimmy! Long time no see!”, and if things start getting too heavy, Japanese surf rock fades in and the jargon fades out. The gist of the show is to increase awareness of the world-class education and scientific research taking place in our own backyard.

Moving from the airwaves to the ground, I Am A Scientist! is collaborating with the Manitoba Science Café and bringing concerns raised by health care professionals and those touched by patient safety issues to the broader public. The format of the show is quite flexible and upcoming shows include everything from a phone interview with a geologist at the Department of Industry and Resources in Western Australia to a discussion about science and the Internet. With Brain Awareness Week fast approaching (March 12-18), I Am A Scientist! plans to highlight neuroscience in the prairies with interviews of neuroscientists involved in everything from fMRI to cognitive training. If you'd like to be interviewed or have an idea for a science news story, don't be shy! Send an email to nick@iamascientist.net.

I Am A Scientist! can be heard every Sunday at noon

(CST) on CKUW 95.9 FM, the University of Winnipeg's Campus/Community radio station, and online at ckuw.ca. An archive of previous shows and links to information and publications related to any given show are also available online at iamascientist.net.

The Science Skinny

Contributed by **Heather Angka**, Dalhousie University

Health Update

An article was published in December's *Applied Physiology, Nutrition, and Metabolism*, which reports on the dietary intakes of Canadians. Based on provincial nutrition surveys conducted between 1990 and 1999, the report uses both protocols designed by Health and Statistics Canada and 24 h recall assessment methods.

The study indicates that Canadian adults appear to have lower intake levels than what is currently recommended of potassium, calcium, magnesium, and dietary fiber. Both women and men show a decrease in their energy intake with age while women, but not men, show an age-related increase in the intake of dietary fiber. On the other hand men, but not women, show a decline in the intake of several different vitamins with age. For women <50 years of age, iron and pantothenic acid (B₅) intake is a concern, whereas women >50 have low intake of both folate and vitamin B₆. It is, however, important to realize that the results obtained on folate (a lack of which is responsible for neural tube defects in newborn infants) are not a true representation of the folate intake in the 1990s due to the ten-year time span of the provincial surveys across the country and the relatively new implementation of mandatory folate fortification in flour and other foods in 1998. (Along with other beneficial effects, folate fortification led to a major reduction in the incidence of neural tube defects.)

The authors advise that the study should be construed neither as representative of the Canadian population due to a lack of data from the province of Manitoba, nor should it be taken as an indication of the “prevalence of inadequacy” for any of the nutrients presented in the study. Statistical significance, while not necessarily an indicator of importance, could not be determined in this study. For the link to this article see: http://nicodev.com/heather/caanCB/Dietary_intakes_of_Canadians.pdf

Big Things Come in Small Packages

The world of science and technology is moving in a new direction, and it's small! Very small. Nano science, which works with materials on the scale of 10^{-9} (or $1/10,000^{\text{th}}$ the width of a human hair) and which is said to be the foundation for the next major technological revolution, is predicted to have an even bigger impact than the computer revolution. The economic impacts alone are expected to be in the range of \$1 trillion per year within ten to fifteen years.

Implications for this kind of discovery, and further innovation, means potential benefits for industries including cosmetics, pharmaceuticals, biomedicine, and technology. Just imagine having equipment (a nanobiosensor, to be exact) that is many times smaller than the smallest existing cell phones and that could be used as a portable lab. This kind of technology would provide, for example, the ability to assess the potential damage from a chemical spill right there at the scene without the need for transportation of samples!

The microscope technology that will complement this tiny-tech movement is currently being developed at the University of Alberta and McMaster University. However, when "introducing lumps of imperfect, impure material into a vacuum chamber, letting atoms evaporate, and growing from them strikingly perfect crystals of defined shape, size, and orientation" it is important to realize the responsibilities involved with the manipulation of natural matter. An article addressing a recent study, posted on CBC.ca on December 19th, discusses the findings that a carbon nanomaterial (carbon nanotubes, or cylinders) with multiple industrial applications could, due to its

conductivity and strength, pose a serious hazard if released in lakes or rivers. When nanomaterial is added to water full of organic material (e.g., that of lakes and rivers) the mixture turns dark and cloudy and, if the material consists of some multi-walled cylinders, the suspension of the materials in the water can last up to one month. Findings like these indicate the importance of continuing with stringent safety measures. In fact, nanotoxicology is a newly emerging field involved with studying the uptake of nano-matter into cells (potentially affecting nuclear and mitochondrial function) of the skin, circulatory system, intestinal, and respiratory tracts and reaching sensitive areas such as bone marrow, lymph nodes, and heart. The central nervous system is not precluded from this danger since observations of translocation along axons and dendrites of neurons have been made. This could, on the other hand, be considered good news when one considers the potential to improve medical treatment by being able to carry drugs, proteins, and growth factors, directly into specific cells of the body. For more information see: <http://www.innovationcanada.ca/25/en/> and <http://nicodev.com/heather/caancb/Nanotoxicology.pdf> <http://www.cbc.ca/technology/story/2006/12/19/nanotubes-environment.html> and <http://www.cbc.ca/news/background/science/nanotechnology.html>.

Joyeux Anniversaire!

The NRC is celebrating its 90th birthday with the launch a new web link that depicts images and information on some of the scientific and technological advancements spanning the last eleven decades. See: http://www.nrc-cnrc.gc.ca/highlights/2006/0612nrc90_e.html



<http://www.phdcomics.com>