



# ANCHOR

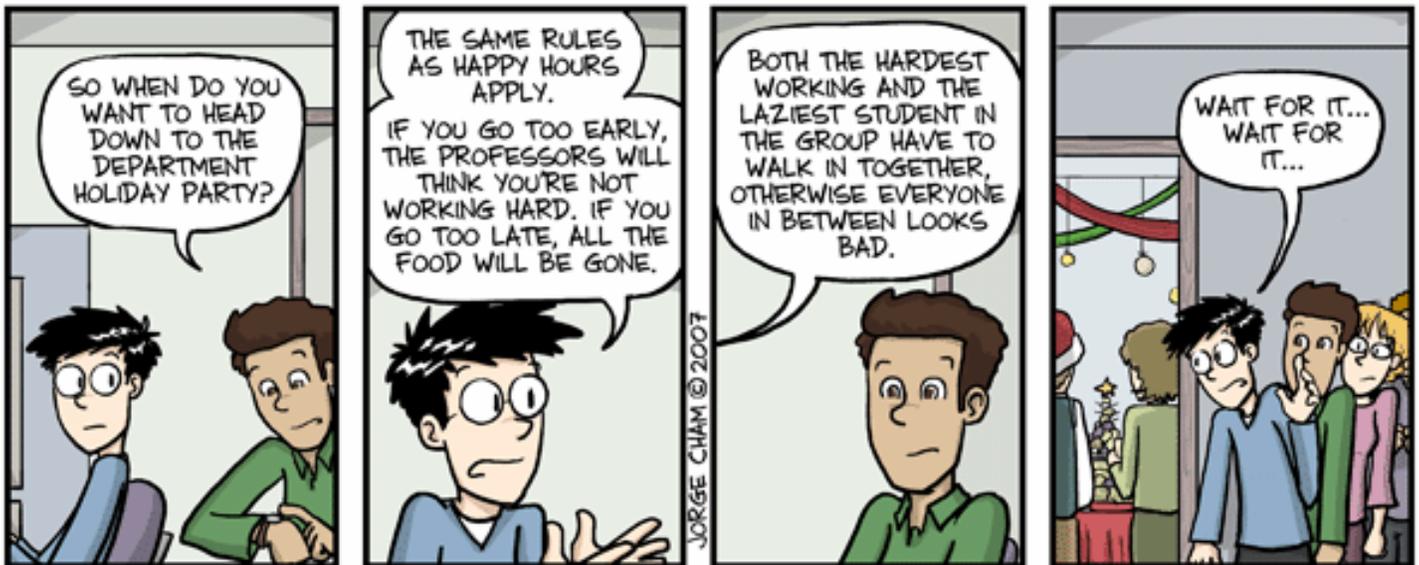
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**Cross  
Canada  
Check-in**

<p><b>What's inside...</b></p> <p><i>PhD Comic</i></p> <p><i>Imaging Contest - LAST CALL!</i></p> <p><i>Call for Executives</i></p> <p><i>Department Reports:</i></p> <p><i>Dalhousie University</i></p> <p><i>University of Ottawa</i></p> <p><i>Queen's University</i></p> <p><i>The Science Skinny</i></p> <p><i>What would YOU like to see in the next ANCHOR? Email the editor: <a href="mailto:blackma@dal.ca">blackma@dal.ca</a> with your suggestions!</i></p>	<p><b>CAANCB EXECUTIVE</b></p> <p>President Dr. J. Elliott Scott  Past President Dr. Bernie Juurlink  Vice President Dr. Michael Kawaja  Secretary Dr. William Baldridge  Treasurer Dr. Maxwell Hincke</p> <p><b>COUNCILORS</b></p> <p>Dr. A.W. Hrycyshyn  Dr. Elliot Scott  Dr. Sandra Miller</p> <p><b>SCIENCE POLICY COMMITTEE</b></p> <p>Dr. Ric Devon – Chair  Dr. Steven Pang  Dr. Peter Cauwenbergs</p> <p><b>PROGRAM COMMITTEE</b></p> <p>Dr. Anne Croy - Chair</p> <p><b>AWARDS COMMITTEE</b></p> <p>Dr. Hugo Bergen – Chair  Dr. Anne Croy  Dr. Peter Haase  Dr. Ron Leslie  Emma Turner</p>	<p><b>GRAD STUDENT SOCIETY</b></p> <p>Emma Turner  ...  See Inside for details on your future role as a member of the Grad Student Society Executive!</p> <p><b>E-NEWSLETTER EDITOR</b></p> <p>Michelle Black</p> <p><b>THE SCIENCE SKINNY</b></p> <p>Heather Angka</p> <p><b>DEPARTMENT REPS</b></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><b>WANTED!</b></p> <p>Graduate student department reps. Contact us for more details  CAANCBGS@gmail.com</p>
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HAPPY HOLIDAYS  
AND  
ALL THE BEST IN 2008!



WWW.PHDCOMICS.COM

# Last call for entries to WIN this camera!

Please forward your submissions to [caancbgs@gmail.com](mailto:caancbgs@gmail.com) by Jan. 25, 2008.



## Imaging Contest Rules

- 1) All images submitted must be original, unpublished images. Images can be captured with a microscope, MRI, etc.
- 2) The means of capturing the image is up to the entrant.
- 3) Information regarding the equipment used and a description of the image must accompany the submission.
- 4) Contest is open to any member of CAANCB.
- 5) Email images as a TIFF document [please use an LWZ compression file] to [CAANCBGS@gmail.com](mailto:CAANCBGS@gmail.com).
- 6) Entry date is by 5pm on the 25th of each month.
- 7) There will be one first place winner per quarter.
- 8) Other honourable mentions 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.
- 9) Each winner will have their image on the cover of the enewsletter.
- 10) Entries will be judged by our qualified judges who will be blind to the origin of the entry.
- 11) Judging will be based on technical difficulty of acquiring the image, aesthetic of the image, uniqueness of the image.
- 12) All decisions are final.
- 13) Winners will be notified by email and their names will be announced in the enewsletter.



# Cross Canada Department Reports

*Thanks very much to everybody who took the time to share their departmental activities with the rest of us!*

## Dalhousie University

*Contributed by Dr. William Baldrige*

### ***Farewell***

It has been a busy but exciting time for the Department since our last report. 9 graduate students successfully defended their thesis research: Colin Franz (PhD, supervisor Victor Rafuse), Claire Hamilton (MSc, William Baldrige), Gefeng Li (PhD, William Currie and Imtiaz Ali), Sean-Patrick Malone (MSc, Kazue Semba), Adam Marsh (MSc, Dan Marsh), Frank McMaster (PhD, Ron Leslie), Jeremy Murphy (PhD, David Clarke), Phil Nickerson (PhD, David Clarke) and Blair Williams (MSc, William Currie and Steve Morris). We wish all our graduates success with their future endeavors!

### ***Welcome & Congratulations!***

The Department welcomes the following new graduate students to the Department: Khalid Almutairi (MSc, Steve Morris), Michael Bezuhly (MSc, Steve Morris), Jason Meisner (PhD, Dan Marsh), Ellafi Mohammed (MSc, David Hopkins) and Stuart Trenholm (MSc, William Baldrige).

The Department has a number of awards that recognize graduate student accomplishments in research and teaching. The leading research award, the McNee Prize, was awarded to Praba Soundararajan (PhD, Vic Rafuse) and the Ian Mobbs Graduate Student Teaching Award was awarded to Karim Mukhida (PhD, Ivar Mendez).

### ***Graduate student sponsored speaker***

A highlight each year is the seminar speaker selected, invited and hosted by the graduate students in the Department. In 2007 the speaker was Dr. Joseph Fetcho, from the Department of Neurobiology and Behavior at Cornell University, who spoke about his work on brain and spinal cord motor circuitry in zebrafish.

### ***In memorium***

The Department was saddened by the passing of Dr. Peggy Hansell on May 2, 2007 at the age of 66. Peggy was a member of the Department for 35 years and continued in a post-retirement position until the spring of 2005. She was enormously caring, and passionately committed to teaching and to her students. Her passion was reciprocated with an adoration from her students that is legendary.



*Dr. Peggy  
Hansell*

## University of Ottawa

*Contributed by Dr. Max Hincke*



**Hair-raising experience: Division of Anatomy, University of Ottawa.**

Local anatomists supported a med student charity shave-a-thon for pediatric cancer in February 2007. Max Hincke (L) and Ali Jalali (R) donated their hair to this worthy cause. Front row (L – R): Barb Hincke, Shannon Goodwin, Henri Lescault.

## Queen's University

### Department of Anatomy and Cell Biology

*Contributed by Ms. Anita Lister*

In late June the Department hosted a party to honour and thank Dr. Stephen Pang for his eleven years at the helm and on July 1<sup>st</sup> Dr. Charles Graham assumed the position of Head.

In January the Department was pleased to welcome Dr. M. Yat Tse as an Adjunct Associate Professor.

#### **MSc Program in Anatomical Sciences**

In May 2006 the Department of Anatomy and Cell Biology at Queen's University offered its new MSc Program in Anatomical Sciences for the first time. This is a 16-month intensive program of courses and practicum focused on educating students in the art of teaching and designing anatomical curricula in health sciences. Courses include principles of teaching and learning,

curriculum design, microteaching, human gross anatomy, embryology, neuroanatomy, and histology. The practicum provides the students with "hands-on" experience in human gross anatomy dissection; techniques in embalming, freeze drying, and plastination; production and display of museum specimens; histological techniques; electronic media; digital imaging technology for anatomical sciences; and classroom (both large and small) and laboratory teaching. The students are also expected to complete an independent study with project topics selected from areas in either Anatomy and Cell Biology, Pedagogy in Anatomical Sciences or Instructional Technology. The first cadre will graduate in December 2007.

#### **Honours, Awards, Invited Lectures, Symposia Organized**

The Queen's University Research Group in Reproduction, Development and Sexual Function with support from the Department of Anatomy and Cell Biology hosted the 2007 meeting of the International Federation of Placenta Associations (IFPA) on the Queen's Campus in late August. The meeting was an outstanding success. A total of 368 delegates registered from 37 different countries. When combined with the speakers, the host group and their research trainees who served as volunteers, the total participant number was over 420. The meeting included 8 plenary sessions, 20 workshops an opening dinner with keynote address by Dr. David Haig, Harvard University, poster sessions for 287 abstract presentations and a junior investigator awards ceremony that honoured 70 scientists-in-training. The meeting received major sponsorship from the Canadian Institutes of Health Research and was supported by departments and research institutes nationally that have mandates relating to pregnancy and its outcomes. Excellent scientific presentations made this late summer event a resounding success. The meeting will be summarized in

Trophoblast Research, a supplement to the journal *Placenta*, in March 2008. This was the first IFPA meeting to be held in Canada.

The Queen's University Human Placenta Summer workshop was held in August 2007, just prior to the IFPA meeting in Kingston. Fourteen trainees from many countries attended including Brazil, Korea, Portugal, UK, China, USA and Canada. The goal of the summer school is to provide hands on laboratory experience in working with human placental tissue and cell lines. Dr. Robert Pijnenborg, KU Leuven, Leuven Belgium provides the lectures and laboratories on human placental structure and reading of placental bed biopsies. Human placental perfusions and cutting of human placental cryostat sections occurs in the laboratories in addition to histological study. Dr. Charles Graham (Queen's) provides the lectures and laboratories on placental cell isolation, culture and invasion assays while Drs. Chandrakant Tayade (Guelph) and Shawn Murphy (U. Rochester) lead the sessions on molecular biology that include laser capture microdissection and gene transfection laboratories. Clinical correlations are emphasized by laboratories and lectures given by pathologists, ultrasonographers and other clinical researchers. Dr. Augustine Ramakumar from Magee Womens' Research Institute was a featured speaker this year on regulation of fetal growth. This week long wetlab training program is for investigators needing background in the structural organization of the human placenta and analytical approaches used for its study. The 2008 summer workshop will be held July 27-August 2, 2008. The workshop is restricted to 12 trainees/year and is given by an international faculty and members of the Queen's University Research Group in Reproduction, Development and Sexual Function. For more information about the workshop directed by Dr. Anne Croy, please contact [placenta@post.queensu.ca](mailto:placenta@post.queensu.ca) or visit our website at <http://post.queensu.ca/~placenta>.

**Dr. Anne Croy**, Tier 1 Canada Research Chair in Reproduction, Development and Sexual Function continues in her leadership role. In 2007, Dr. Croy co-chaired the first international workshop on uterine Natural Killer Cells, held in Cambridge UK in April, was a member of the Scientific Organizing committee for the American Society of Reproductive Immunology meeting held in Toronto in May, led the IFPA2007 meeting "Placenta-Platform for Life" at Queen's in August and was the reviewer and site visitor for the European Commission of the 23 institution 6th Framework European Center of Excellence on Embryo Implantation Control in November. She delivered several international symposium addresses including the Blackwell Munsgaard Award Lecture that recognized her career publication record.

**Dr. R.A. Easteal** was successful in the University-wide competition and he was presented with the prestigious Charles Baillie Award for Teaching Excellence at the Fall Convocation.

**Dr. C.H. Graham** was invited to present at the 5<sup>th</sup> Meeting of the Canadian Oxidative Stress Consortium which was held in Montreal. His talk was entitled "Nitric oxide signaling and cancer: therapeutic potential of nitric oxide mimetics. In the Département de Gynécologie-Obstétrique, Université Laval (Quebec) he gave a seminar entitled "Role of abnormal placentation in the pathophysiology of pre-eclampsia." Dr. Graham was invited to London twice, the first time by the Department of Anatomy and Cell Biology where he presented "Nitric oxide signaling and cancer: therapeutic potential of nitric oxide mimetics and then later in the year to the Children's Health Research Institute to present the "Role of abnormal placentation in the pathophysiology of pre-eclampsia."

**Dr. L.W. MacKenzie** received two teaching awards this year: The Faculty of Health Sciences Education Award, Queen's

University and the Most Engaging Lecturer Award, Queen's University Life Sciences. He was also an invited participant in Visualizing the Future of Anatomy and Physiology/Microbiology Education. The Wiley Faculty Network, John Wiley and Sons, Inc. Washington, DC 2007.

**Dr. R.J. Oko** was invited to the Department of Obstetrics and Gynecology at Laval University where he gave a talk entitled "The role of the sperm perinuclear theca in fertilization". He was also an invited speaker at the Twenty-fifth Annual Reproductive Biology Workshop held in Ottawa where his presentation was entitled "Ontogeny of the mammalian sperm perinuclear theca and its role in fertilization." In July he was an invited speaker at the Gordon Research Conferences, Fertilization and Activation of Development Program, Session on Oocyte Arrest/Egg Activation where he presented "Ontogeny of PAWP and role in fertilization" for discussion.

**Dr. S.C. Pang** was invited to the Department of Anatomy and Cell Biology at the University of Western Ontario where he presented a seminar entitled "Endocrine function of the mammalian heart".

**Dr. C.W. Reifel** received the Aesculapian Phase I Lectureship Award for the seventh year in a row. Faculty members are nominated for this award and the medical students hold an election to determine the winner.

#### **Invited Speakers**

During 2007 the department hosted the following invited speakers:

**Dr. Gordon Laurie**, Department of Cell Biology, University of Virginia, "Dynamic Off/On Switch for Epithelial Growth and Secretion: Functional Versatility, Potential Lessons from Neurobiology and Clinical Relevance" and in conjunction with the Research Group in Reproduction, Development and Sexual Function.

**Dr. Guillermina Girardi**, Hospital for Special Surgery, Cornell University, "Inflammation induces Pregnancy Failure and Growth Restriction: Complement Inhibition as a possible Target for Therapy"

**Dr. Chun Peng**, Department of Biology, York University, "Nodal and ALK7 Signaling in Human Placenta"

### Recent Graduates and their Theses

Two students graduated in 2007:

#### M.Sc.

**Andrew Donald** "The ontogeny of acrosomeless mouse spermatozoa after oral ingestion of an alkylated imino sugar, MB-DNJ"

Supervisor: Dr. R.J. Oko

#### Ph.D.

**Lya Hernandez** "Protective effects of diallyl sulfone against vinyl carbamate-induced mutogenesis, clastogenesis and carcinogenesis"

Supervisor: Dr. P.G. Forkert

### New Graduate Students

There are currently 43 students registered in the graduate program, 35 at the M.Sc. level and 8 in the Ph.D. program. Fifteen students have been accepted into the M.Sc. program: **Anna Ammerata** (Dr. L.W. MacKenzie), **David Armstrong** (Dr. S.C. Pang), **Devin Brisson** (Dr. C.W. Reifel), **Marissa Cunningham** (Dr. R.A. Easteal), **Joel Davies** (Dr. L.W. MacKenzie), **Kimberly Hennessy** (Dr. R.A. Easteal), **Cassandra Howse** (Dr. C.W. Reifel), **Veronika Kurtz** (Dr. L.W. MacKenzie), **Janette Leroux** (Dr. S.C. Pang), **Xin Li** (Dr. C.H. Graham), **Daniel Mulder** (Dr. R.A. Easteal), **Sarah Svoboda** (Dr. M.D. Kawaja), **Jennifer Tomasone** (Dr. S.C. Pang), **Carolina Venditti** (Dr. G.N. Smith) and **Evan Watts** (Dr. S.C. Pang) and three students have been accepted into the Ph.D. program: **Ahmad Hassan Albaghdadi** (Dr. R.J. Oko), **Michael Bilinski** (Dr. B.A. Croy) and **Suzanne Burke** (Dr. B.A. Croy)

## The Science Skinny

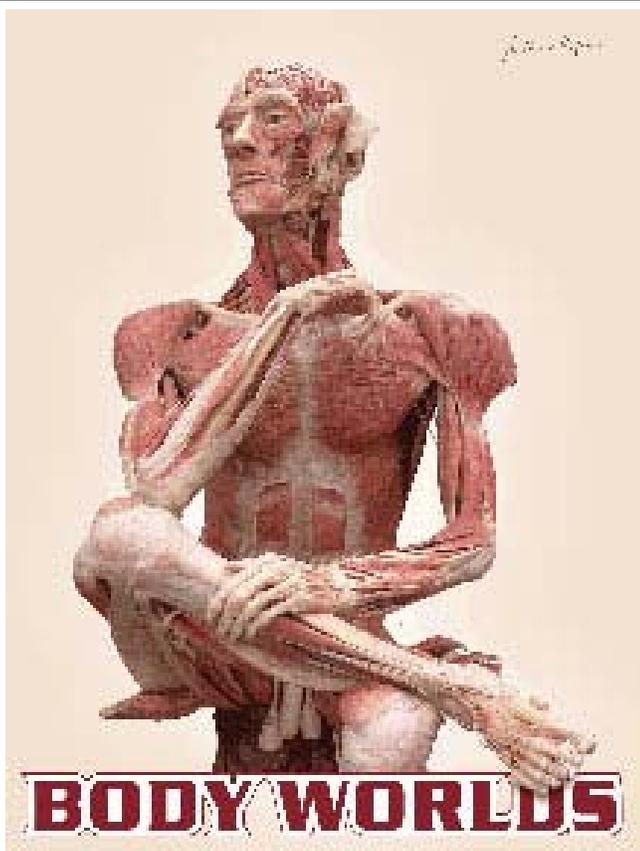
by Heather Angka, Dalhousie University

### The World of Human Bodies

A decade has passed since "Gunther von Hagens' Body Worlds: The Original Exhibition of Real Human Bodies" first emerged on the scene. Since then there have been a number of imitators, including "Bodies: The Exhibition" and "Our Body: The Universe Within", that have also become successful.

If you have heard of Body Worlds, it's likely

you've heard the utterances of controversy that go along with it. It is this very controversy that likely serves to feed Body Worlds' popularity and success, which in turn helps to increase profits - one of the components of the exhibit that is objectionable for so many of its opponents. Some call it anatomy, others say it is edutainment, and still others believe it is simply a display of art (that just happens to use human bodies as a medium). While there are some who feel the anonymous bodies have been stripped of their human dignity while the inventor of the plastination technique, von Hagens, signs his name on



every completed cadaver/exhibition piece, others feel it is the very anonymization that speaks to the fact that under the surface we are all the same and driven by the same biological mechanisms. Of course, this requires a definition of the word dignity which, in this phase of human existence, appears to be defined by the choice of the individual; if a person's choice is being honored it might be safe to say they have their dignity intact (skin or no skin).

By the way: the reason for the signatures on every plastinate apparently stems from the fact that the bodies exhibited in Body Worlds have been bequeathed while some of the imitator exhibits, that have directly mimicked some of the plastinates first seen at Body Worlds, have been accused of using bodies that are unclaimed. The narrator on a video purchased from the Body Worlds 2 exhibit in Montreal explains the following "the bodies shown here are all authentic, they come from persons who decreed, during their lifetimes, that their bodies should be made available for plastination after their deaths in order to serve in training and educating physicians as

well as medical laypersons".

Gunther von Hagens was the first person to perform a public autopsy in over 150 years - something that was a common occurrence during the 13<sup>th</sup> and 14<sup>th</sup> centuries. This is just one of the reasons von Hagens' work can be seen as a means to "democratize anatomy"; no longer keeping the learning of the interior of a human body for the medically-educated few. Body Worlds exhibits contain not only whole and sectioned human bodies (e.g. an entire body sectioned along the saggital plane or a whole corpse carrying out an athletic move thereby revealing the extensor and flexor muscles that would be used if the individual were carrying out the motion in real life) but also contains individual organs. Some of the organ exhibits contain only a specific tissue type that has been isolated to stand on its own (e.g. the blood vessels of the lung) while others are entire organs that contain some sort of disease (e.g. smoker's lung, gallbladder with stones). During an interview with von Hagens, on the video, he explains, "Lay persons have a right to view the human body so that they can form an impression of its anatomy, so that they can genuinely comprehend the body in the true sense of the word - this exhibition has been consciously made for the lay persons, the reason is that lay persons are the partners of today's physicians - consequently they have to be educated about the human body and



they can only receive this education when they look inside genuine human bodies, just as physicians were able to do during their

studies.”

All things considered, I can't help but wonder: where are these physicians that are being trained from the plastinates appearing in these exhibits? Furthermore, with Body Worlds exhibits becoming more and more artistic (including the recent appearance of plastinates in the latest James Bond movie) and less focused on structure and function, and considering the fact that medical schools around the world are having difficulties in getting people to donate bodies, it behooves us to ponder the “need” for these exhibits. Richard Wassersug, in his article entitled: “Awesome and Captivating, But is it Really Educational?”, sums it up perfectly: “The fact is that we do not know if a positive view of von Hagens’ projects correlates with improved health in any way”, “If the Institute for Plastination is to continue to be allowed to acquire cadavers, it should prove that its exhibitions are helping humans live longer and more comfortably”, and “Without evidence of educational effectiveness, citizens who have an altruistic desire to serve society after their death would be wiser to donate their bodies for the training of future surgeons.”.

I not only agree with these statements but would add that it is certainly an overstatement to imply that the only way for the general public to learn about the body, and how to care for it, is by seeing authentic human bodies. Having successfully completed several years of university while learning about the functions of the body through physiology, biochemistry, and nutrition courses and textbooks I would urge von Hagens’, who no doubt has an eye for beauty, to carefully consider the legitimacy of the “educational value” of these exhibits.



**For more information:**

See the recent addition to the Body Worlds experience:  
Plastinarium [www.plastinarium.de/en.html](http://www.plastinarium.de/en.html)

Public autopsy:  
<http://news.bbc.co.uk/2/hi/health/2493291.stm>

cbc: religious outrage:  
<http://www.cbc.ca/arts/story/2004/01/16/briefs160104.html>

the better part of The American Journal of Bioethics Volume 7 issue 4 p.12 to 47 in  
<http://www.bioethics.net/journal/issues.php>  
[http://www.bioethics.net/journal/j\\_articles.php?aid=1205](http://www.bioethics.net/journal/j_articles.php?aid=1205)

Mock worlds:  
[www.bodiestheexhibition.com/bodies.html](http://www.bodiestheexhibition.com/bodies.html)  
[www.ourbodytheuniversewithin.com](http://www.ourbodytheuniversewithin.com)

The CAANCB Graduate Student's Society is looking for new members, particularly to fill executive positions! We're looking for a Secretary, a Treasurer, and Program Coordinators. Please email [CAANCBGS@gmail.com](mailto:CAANCBGS@gmail.com) if you are interested!