

The HQPA Insider

The official newsletter of the Highly Qualified Personnel Association
as part of the Advanced Foods and Materials Network

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Student Highlights

Kate Roberts

When the network was first established, it was a given that the science of AFMNet, as of any NCE, would be top-notch. AFMNet also understood, however, that this kind of multi-million-dollar investment in research had to be understood by the public. Rickey Yada, AFMNet Scientific Director, loved that Guelph's Research Communications unit partnered with Students Promoting Awareness of Research Knowledge (SPARK) writers to interview, write and publish research-based stories and hence, as all good networkers do, he developed a partnership with SPARK to help tell the world about how AFMNet is helping to build healthier Canadians.



Kate Roberts

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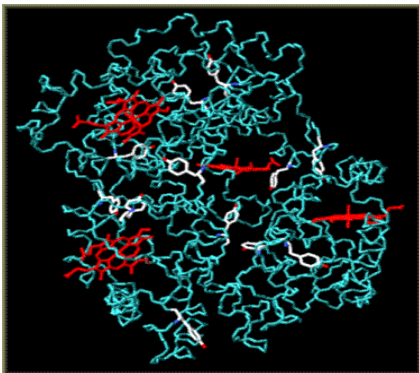
New HQP Website

A major focus of AFMNet's HQPA is to enrich the Highly Qualified Personnel (HQP) we represent through training and networking opportunities. As a further step toward achieving this goal, the HQPA has remodelled the HQP link on the AFMNet website. The new HQP website allows students to communicate on the forum,

get the latest information through newsletters, apply for grants and or even look up other HQP members using the new Search Tool. The HQP website should be of great importance to all members of the network since it is the means by which network investigators, project leaders, other HQP and the general public can identify your area of research. Please take the time to ensure that your profile is up to date. To visit the new HQP site go to www.afmnet.ca and click on the Students/HQPA link.

AFMNet Micro-symposium Montreal

The AFMNet first annual micro-symposium related to the project entitled "Protein and Polypeptide Interactions with Biological and Nanostructured Surfaces" was held on August 4th, 2006 in the new J.-Armand Bombardier Pavilion at the Université de Montréal. The project involves six different AFMNet investigators with the focus of the symposium revolving around the current progress of each project member.



Dr. Carole Fraschini was responsible for the coordination of the meeting. The whole day was packed with talks, networking and poster sessions, allowing everyone

to leave the symposium with a clear view of the project's direction.

The necessity for such an event was evident through the overwhelming attendance - over fifty participants came from various universities in Quebec and Ontario. The meeting provided everyone the opportunity to exchange ideas freely and discuss possible future collaborations.

Opening remarks were made by Prof. Prud'homme, followed by the heart of the meeting which consisted of ten formal oral presentations summarizing the current progress of the project. The presentations were followed by a brief question period. Over lunch Prof. Prud'homme organized a tour of the new facilities of the J.-Armand Bombardier Pavilion.

The poster session followed with seventeen posters displayed to complement the scientific results highlighted in the earlier presentations. As the meeting progressed, the atmosphere became more interactive, allowing all project members to evaluate successful techniques and new methodologies.

At the conclusion of the meeting the AFMNet members joined together for an exquisite dinner in the most popular restaurant in the heart of Old Montreal "Le Restaurant du Vieux Port." The remainder of the evening was at the discretion of the participants many of whom took advantage of the Montreal nightlife.

Based on the success of the meeting, plans were made for the next meeting to take place in Guelph in Summer 2007. See you there.

David Gaspard
M. Sc. Candidate
Université de Montréal



Message From Your HQPA

As HQP of AFMNet, we are at the cutting edge of research and development in the area of advanced foods and bio-materials. To maintain our edge, it is vital that we keep the networking aspect of AFMNet at the forefront of our minds. Taking advantage of the tremendous opportunity to meet, discuss and collaborate with researchers across all three themes of our network will ultimately lead to the fulfillment of AFMNet's vision. We strongly implore all HQP to take an active approach to their involvement with the HQPA and AFMNet. Read the HQPA website and newsletters, talk to your advisors and fellow HQP, attend workshops (travel money exists for each of you!!) and become knowledgeable about the many opportunities that exist. We also ask that if you have ideas about

events/workshops or how the HQPA could better serve all of us as HQP, then please contact a member of the

HQPA Governing Body. We are confident that with your active involvement in the HQPA and AFMNet, our research will remain on the cutting edge and truly will lead to a healthier and more prosperous Canada.

Scott Allen
PhD Candidate
HQPA Vice Chair



Recognition Of Excellence

HQP Poster Competition Winners from AFMNet's 2nd Annual Scientific Conference

The objective of the competition was to award top HQP within AFMNet who demonstrate excellence in research, networking and communications through their poster presentations. With 49 submissions, deciding on top honours was not an easy task but in the end, our judges came up with the following 8 worthy winners.



Simon Vieth

- **Simon Vieth**, Ryerson University
Tailoring Hydrogel Microstructure Via Phase Separation and Kinetic Trapping (Theme I)
- **David Mackenzie**, St. Francis Xavier University
Controlled Release in Two Component Hydrogel Delivery Systems (Theme I)
*Dave also received the Marilyn Griffith Memorial Scholarship
- **Natasha Kachan**, University of Toronto
Canadian Consumers' Perceptions of the Risks Associated with Using Natural Health Products (NHPs) (Theme III)
- **Shama Joseph**, Universite Laval
Effect of CLA isomer trans 8, cis 10 on lipid metabolism in 3T3-L1 mouse preadipocytes (Theme II)
- **Sarah Schooling**, University of Guelph
Probing the ultrastructural properties of biofilms: Membrane vesicles within the matrix of mixed and Gram-negative biofilms of lab. and environmental origins (Theme I)
- **Ravinder Kumar Goyal**, University of Victoria
Expression of antimicrobial peptide in transgenic plants enhances innate immunity and modulates inducible hypersensitive response (Theme I)
- **Jessica Miller**, Dalhousie University
Mechanisms of action of conjugated linoleic acid in differentiated 3T3-L1 preadipocytes (Theme II)
- **Bryce MacMillan**, University of New Brunswick
Magnetic Resonance in Doughs and Gels (Theme I)



Sarah Schooling



Dave Mackenzie



Jessica Miller

Award Opportunities

Have you ever wanted to explore opportunities for research abroad but don't have the funding? Then a Travel Grant might be what you're looking for. The AFMNet Travel Grants target students looking to involve themselves in national or international research. Each year, AFMNet offers 10 travel grants valued at \$3000 each. This program is exclusive to HQP and is designed to facilitate knowledge exchange. For further information visit www.afmnet.ca or talk to your AFMNet project leader.

Touching Base With Bruno

Do you remember “Busy Bruno” first profiled on the HQP homepage in December 2005?

If so and heck, even if not, read on for an exciting update ...

I have been hired by the Department of Physics and Astronomy at Brandon University for a 3 year term with renewal possibilities to five years to continue my work in theoretical biophysics and to set up a biophysics course specialization. Brandon University is a primarily undergraduate university with about 4000 students situated in the western Manitoba town of Brandon (pop. ~ 45,000). Even more so than existed at the other small Canadian universities where I've had the privilege of working/studying, I am delighted with the collegiality and academic spirit at BU (“Be You at BU”). People there have welcomed me with open arms. As the first AFMNetter at BU, I hope to serve as a “bridgehead” for others at BU to join AFMNet. I will continue collaborating closely with AFMNet researchers studying the interactions of Lactoferricin and other antimicrobial polypeptides with biofilms in the hope that my computer simulations of peptide-membrane interactions will have applications in food and agriculture. I also plan to continue working with colleagues I have met through AFMNet on the statistical mechanical theory of supercritical fluid



and physical properties of nutraceuticals and antimicrobial agents. My planned adjunct status at both University of Manitoba and Guelph will allow me to supervise students with interests in both of these fields. Having been born and raised in Manitoba, I am very much looking forward to the return to my favoured locales in Canada's heartland and to re-establishing relationships with old friends and family. Recent experiences and advice for HQP:

The Good – Despite having yet to resign the fight against the typical Canadian view that Manitoba is flat and boring (flat country in south = cheap trans-provincial highways = avoiding the scenery, OK?), I am surprised at how much I like Brandon. It has all the amenities of a small stress-free city with Manitoba Escarpment nearby offering ready access to the quality outdoor experiences that are integral to the Canadian psyche.

The Bad - An inter-provincial move with a young family is a surprisingly daunting task. If a job offer involves a move to another province, keep in mind that shipping is expensive. Don't get too attached to your stuff, or make sure you have a generous moving allowance!

The Ugly - The Mosquito being Manitoba's Provincial Bird and the huge amount of forms (driving licenses, health cards etc.) required to change provinces. The Mafia lets you out easier than the province does (so I hear...)

Bruno Tomberli
Assistant Professor
Brandon University

Did Someone Say **SOFT MATTERS** ?

The 2005-06 offering of the Soft Matters interdisciplinary seminar series was a resounding success. Organized by University of Guelph graduate students Chris Schultz-Nielsen (Biophysics) and Scott Allen (Physics), Soft Matters featured an impressive and diverse cast of speakers representing the fields of Biology, Chemistry, Engineering, Food Science and Physics. Drawing mainly from academic institutions in Southwestern Ontario, Soft Matters also featured speakers from Germany, Holland, Saskatchewan, Quebec and the United States. The seminars were well attended (average attendance of 30 people) and the diverse interdisciplinary audience, comprising undergraduate students to graduate students and post-doctoral fellows to professors, was introduced to exciting cutting-edge research currently being performed in the area of science and technology as it related to soft materials.

Soft Matters was successful in presenting highly qualified personnel with an unprecedented opportunity to interact with visiting speakers in an informal manner. Not only did this enable HQP to gain further insight into the speakers' area of expertise, but also provided a great forum in which the foundation for future employment/networking possibilities could be laid. The highlight of the series was the AFMNet HOPA Distinguished Lecture, which was given by Dr. David Weitz of Harvard University. During his two day visit to the University of Guelph, Dr. Weitz presented two very well received seminars on aspects of his research program. In addition to the seminars, Dr. Weitz made an impressive effort to meet with and network with faculty and HQP and provided a number of HQP with insightful advice and ideas concerning their own research projects.

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International News

What I Learned In Brazil That Wasn't Part Of My Research Project by Karen Durell, AFMNet HQPA

The planning of my three-month research exchange in Brazil started about a year prior to my departure. It was decided that I would work with members of the Instituto de Direito do Comércio Internacional e Desenvolvimento and the University of Sao Paulo. Having settled my focus, location and partners early, I had several months to develop a detailed research agenda and prepare for my trip.

I sought out a travel visa, Portuguese language instruction, the required vaccinations and general information about traveling around Brazil. My colleagues in Sao Paulo found me a place to live and arranged everything I would need to work (desk, library access, etc.). When I arrived in mid-May I was confident that I was ready to hit the ground running. I immediately met my fellow researchers, visited the research facilities and got settled in my

apartment. The careful planning had paid off, or so it seemed.

What I was to realize only hours after arriving is that I had not planned for a critical possibility – civil unrest. The day I arrived in Sao Paulo warring broke out between the drug lords and the police. Starting with executions of police officers and riots in the prisons, the conflict escalated over the following days into violent attacks upon the public, including the burning of transit buses, bombings and shootings throughout the city.

The trouble came as a complete surprise to me, since I had previously thought of Brazil as a stable country. Having just arrived I was completely unfamiliar with the culture of Sao Paulo and consequently it was particularly difficult to sort out what I should be concerned about and what was “normal.” On the advice of the Canadian Embassy, my Brazilian friends, and due to flight availability issues, five days after arriving



I decided to fly back to Canada. My intention is to return, but a key element of my research agenda is presently postponed indefinitely as uprisings have continued to plague Sao Paulo periodically throughout the summer.

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When Hell Broke Loose: A First Hand Account of the Crisis In Lebanon by Amira Kassis, AFMNet HQPA

Beirut, July 12, 2006. I'm lying on a sand beach on the North coast, enjoying the soothing heat of a Wednesday afternoon. Rumor has it that Beirut is being threatened by war. "War"... Familiar but so far away... Since the end of the last conflict in 1990, Lebanon had enjoyed 16 years of relative stability during the reconstruction period. Although Israel and Hezbollah often

violated UN resolutions through incursions on both sides, it was contained in the South border area, and had no repercussions on the safety of the rest of the country. Incursions sometimes involved kidnappings such as the one Hezbollah had just executed, and which was purported to have sparked this new crisis. But why would it be different this time? What was so special about the

events that would cause anyone to even think of fleeing their homeland? Following this line of thought, denial automatically sets in even when you hear the news confirming that Israeli raids were fiercely attacking the southern suburbs and soon enough the capital itself. It's called Lebanese optimism. But really, it is merely refusal to undergo the fifteen-year-long

nightmare once again. For me, this summer was to be my best in a long time. I had passed my PhD comprehensive exams, had the chance to present my research data at ISA (International Symposium on Atherosclerosis) 2006 in Rome and was looking forward to going home to attend my brother's wedding. Lebanon was experiencing an economic boom with the highest rate of tourism in a long while, so this summer had all the stars aligned for it, and the first three weeks I spent there met the expectations. But soon after the first attack, embassies invited foreign citizens and residents to be evacuated by boat through Cyprus or bus through Syria, one of the many signs that this was going to take longer and be harder than we thought.

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Communications With Kate

Continued From Cover Story

The SPARK connection has been embodied for the past three years by Kate Roberts. Entering fourth year of Marketing Management at the University of Guelph, Kate has a clear goal after graduation – to communicate science. First introduced to the whole concept in May, 2004, Kate has since produced the AFMNet general information brochure, taken on the role of HQPA Student Communications Officer for two years (producing four newsletters) and coordinating and contributing to the first two issues of *Advance*, AFMNet's highly successful magazine. The timing seemed to be perfect. "The same summer I was starting at SPARK, AFMNet was looking to hire a student to help communicate the new network and coordinate a national magazine," she says. Kate's passion for science communications and willingness to coordinate a new project made her perfect for the job and in early-May, she began interviewing and writing for *Advance*. This was the first time a SPARK publication was written that focused on research on a national scale, and Kate found it quite challenging to have phone interviews and obtain photographs from researchers across the country. With perseverance, however, the magazine came together in time for the NCE annual meeting and was well received by the NCE secretariat.

Since 2004, Kate has been a member of the Canadian Agricultural Communicators of Tomorrow (CanACT) club at the university. There are 16 chapters of ACT in the US, including chapters at the biggest land-grant universities - Texas A&M, Kansas State University and the University of Florida. CanACT is the only Canadian chapter. Each year, all of the schools compete in a contest and critique of items they published, ranging from news stories and video production to brochures and web design. For the 2004-2005 competition, Kate submitted the AFMNet brochure and *Advance*, and won top prize for the brochure and magazine division. These accolades garnered her the overall publications award among all publications entries, which was quite the award considering the competition she was facing had well-established Agricultural Communications degrees.

The following summer, Kate was hired by the NCE secretariat in Ottawa to write research-based stories for their annual report. Here she got to speak to all of the NCEs including ones focusing on stem cell research, heart and



stroke disease, allergies and language and literacy. The HQPA really began to come on full-force at this time, and Kate was asked to act as the Communications Officer to help write stories about HQP in the network and establish a quarterly newsletter. Adding all of this to her skill set made writing and coordinating the next issue of *Advance* easier and throughout the school year, Kate finished another edition in time for the NCE annual meeting.

She submitted the second edition of *Advance*, as well as a research-based story on AFMNet research Ahmed El-Sohemy, to the 2005-2006 ACT contest and critique. She won first place in the magazine division again and second place for her story. She was definitely surprised when she won the top publications award for the second year in a row.

"I am so grateful for the opportunities that AFMNet has offered me throughout the past three years." She says. "Not only does my portfolio overflow with so many AFMNet stories and publications, but AFMNet has assisted me in working with the NCE secretariat, given me the chance to travel to Toronto and Calgary to attend the AFMNet annual meetings, opened my eyes to so much of the great research happening across Canada and been excellent supporters and encouragers for every step I've taken."

This fall, Kate will be tackling the third issue of *Advance*, with some stories already in the works by other SPARK writers. Be on your toes – Kate may be calling you soon for an interview!

Reminders

Do you have something to say to AFMNet's HQP? Want to write a story about your friends in the network? This newsletter is built by your stories. Recommend or submit a story to be published and shared throughout the network. Send your stories to Kate Roberts, HQPA Communications Officer at kate.roberts@afmnet.ca

No Way Home. Trapped In The Middle East Crisis



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Beirut, July 16, 2006. Israeli forces had been bombing the Southern suburbs of Beirut for a few days already and our daily activities were now restricted to watching the news and calling friends and family to make sure they were safe. Wherever one lived, their safety was now threatened by the systematic raids on the country's infrastructure i.e. airport, main bridges, telecommunication and broadcasting antennas and power plants. It is breathtaking how quickly a familiar routine is revived with the sound of bombshells. You wake up at the sound of the blast, sleepwalk into the different rooms to check in on everyone, turn on the TV to inquire on the location of the explosion, roll your eyes and then go back to sleep. Discussion usually waits till breakfast. That is, of course, if you don't live in a targeted area. For hundreds of people in the South, the routine was slightly different: you wake up to the sound of closing blasts, seek shelter in the basement of your building and get buried right there under the rubble. Others tried to flee their homes as a response to Israeli flyers dropped on residential areas and villages allegedly harboring Hezbollah fighters, advising people to leave. Later, refugees were found lifeless at the wheel of their burnt cars as a result of another air raid

'mistake' or what was labeled as a successful hit of Hezbollah rocket-launching trucks.

More deafening than the sound of explosions was the silence of the international community in the face of death and destruction, the rescheduling of meetings to deal with the "Lebanese crisis" as if a few days wouldn't make a difference, but mostly the helplessness of an entire nation in the face of injustice. There is nothing fair about the war, there never was, but there was something utterly cruel and inhumane about this one. Since moving trucks carrying food and supplies as well as Red Cross ambulances were added to the list of targets, those who survived under crumbling buildings died trying to get to the closest hospital or were stranded in their neighborhoods waiting for humanitarian and medical aid that never came.

Some of the massacres were a poignant replay of the Israeli invasion in 1982. The phosphorous shells and cluster bombs had been used before and frowned upon. They say we learn from our 'mistakes.' Not in this part of the world. Here, history repeats itself in the most revolting way. While I tried to understand the rationale



and possible outcomes of this conflict as a good graduate student would, the Canadian embassy called citizens and residents to the port of Beirut for evacuation. As scared as I was of the bombing, I did not want to leave Beirut, not knowing what was about to happen to it and whether my family would be spared. But then I selfishly did, because it was the right thing to do. Standing on the deck of the evacuation boat, I watched the Beirut port from a distance trying not to think of what I'd just done, giving a last shot at understanding the chaos around me. What was the basis of the conflict? Power? Land? Ideology? Or inevitably God? Well if you ask me, God is probably sitting at the edge of the world looking down trying to figure out where he went wrong.



Amira Kassis
HQPA Chair
Montreal

Return Of The Seminar Series

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Chris and Scott have passed the torch to University of Guelph graduate students David Libich (Molecular and Cellular Biology) and Derek Dee (Food Science), who will organize the 2006-07 Soft Matters seminar series.

Building upon the experiences of last year, there is no doubt that David and Derek will make Soft Matters even more successful! Soft Matters will recommence in the fall so keep your ear to the ground for a list of upcoming speakers. A list of scheduled speakers will also be posted online.



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Future Planning For A Research Exchange

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As a result of my experience in Sao Paulo there are a few things I would change about my research project preparation. Now before leaving I would check the Canadian Embassy Travel Report web page. It offers travelers information on safety and security abroad (<http://www.voyage.gc.ca/dest/ctry/reportpage-en.asp>). I also would ask my airline how to contact them quickly from Sao Paulo. When I needed to change my flight I could not get a reliable Internet connection, so I had to speak with an agent in Canada. Knowing that in advance would have saved crucial time as the available seats went quickly when people started fleeing the city. I also would have bookmarked the Embassy's Current Issues page, which gives information about uprisings, natural disasters, etc. (<http://www.voyage.gc.ca/main/sos/ci/all-en.asp>).







Karen L. Durell,
Doctoral Candidate,
Faculty of Law, McGill University

Comments and Questions

If you have any questions or would like to submit a comment about The HQP Insider, please send them to:

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Food For Thought

-  Lemons contain more sugar than strawberries.
-  The onion is named after a Latin word meaning large pearl.
-  In a sealed container honey can be stable for centuries. Honey found in the tombs of Egyptian pharaohs has been tasted by archaeologists and found edible.
-  The avocado has the most calories of any fruit.
-  The oldest known vegetable is the pea.
-  You can make edible cheese from the milk of 24 different mammals.

