

The HQPA Insider

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

Highlights:

Training and
Communication
Officers 2

The Policosanol
Controversy 2

Jessica Miller 4

Reminders 4

Student Highlights Bénédicte Fontaine Bisson

Written by: Karen Eny & Leah Cahill

In today's rather busy, individualistic Canadian society, there remains an individual, in the heart of the metropolis of Toronto, who will go out of her way to secure gluten-free brownie mix for her homesick, chocolate-deprived and celiac lab colleague. Her name is Bénédicte Fontaine-Bisson and she is an exemplary student, an accomplished researcher, a supportive mentor and an outstanding person. We are two new master's students in the University of Toronto's Nutritional Sciences department who have recently joined the El-Sohemy Lab where Bénédicte is finishing up her PhD. Right from the start, Bénédicte took us under her wing, graciously offering us advice, support and guidance as we embarked upon our graduate studies. Bénédicte's success and character are unique and we hope to share a glimpse of her story, leaving you feeling impressed and inspired.



Envision this: You arrive in an enormous city on your own to join a budding lab and begin graduate school - a rather independent way of life which can be an overwhelming experience in itself. Now imagine this: English is a new language to you. In addition, your project involves statistics and genetics, two more foreign languages you must acquire. Bénédicte met each of these challenges and today she speaks with ease and poise as she discusses her thesis work as one of Canada's main nutrigenomics-researching dietitians. She has learned a lot from Dr. El-Sohemy, including his clear, concise and effective communication skills and his super-human ability to remain relaxed and pleasant during extremely busy times. Bénédicte now teaches all she has learned, going above and beyond to minimize hurdles for incoming students.

Bénédicte joined Dr. El-Sohemy's lab in July 2003 upon completing the undergraduate Dietetic program at Laval University, Québec. After only one year, Bénédicte successfully reclassified from her Master's of Science degree and began her PhD.

Continued on Page 3

afmnef

Réseau des aliments et des matériaux d'avant-garde
ADVANCED FOODS & MATERIALS NETWORK

Inspiration from the ground up | Aux racines de l'inspiration

Message from your HQPA

HQPA Theme Training and Communications Officers

The mandate of the AFMNet HQPA is to enhance the visibility, opportunity and research excellence of HQP within the network. We attempt to accomplish this mandate by promoting networking, offering skills and development training and facilitating the formation of HQP-industry partnerships. It is a fantastic goal and we as the HQPA certainly strive to excel at this task but it is not without its challenges.

One of the more challenging aspects of our organization (and one of the most exciting) is that we are trying to represent and serve more than 100 HQP, spread across three themes and a whole lot of land. As such, it is very important for the HQPA to receive constant

performance updates so that we know how we are doing in our effort to serve you - the HQP.

Three key members of the HQPA governing council, the Training and Communication Officers, are charged with listening to your thoughts and concerns regarding the HQPA's initiatives. Each of the three themes is represented by an officer who can be contacted directly via email (see below).

If you have thoughts, ideas or concerns about HQPA initiatives, please contact your Training and Communication Officer. Your feedback will be brought before the HQPA council and undoubtedly it will help us to enhance your experience within the network.

Your Training and Communication Officers are:

Theme I: Structure-Dynamics-Function of Foods & Materials
 Dave MacKenzie
 dave.mackenzie@gmail.com

Theme II: Functional Foods and Nutraceuticals
 Bénédicte Fontaine-Bisson
 benedicte.fontaine.bisson@utoronto.ca

Theme III: Genetics, Ethics, Economics, Environment, Law and Society
 Jacob Shelley
 jshelley@ualberta.ca

The Policosanol Controversy

Written by Amira Kassis

Policosanols have been purported to decrease the risk of coronary heart disease in a series of animal and clinical studies conducted by one laboratory in Cuba, using local sugar cane policosanols to show that these long chain fatty alcohols ranging from 24 to 34 carbons in length, suppress cholesterol biosynthesis, LDL-oxidation and platelet aggregation. The policosanol controversy has its origins in the negative results reported by research groups outside Cuba using policosanol preparations different from the ones used in Cuban studies. I started my PhD project under the supervision of Dr. Peter Jones with the aim of testing the Cuban sugar cane policosanol for the first time outside Cuba on animals and humans. The lack of cooperation on behalf of the Cuban laboratory increased our skepticism about policosanol efficacy but it was not until our animal and human trials confirmed the lack of effect of policosanols on cholesterol levels seen in other independent studies, that we were able to conclude that these alcohols may not be the next statin as was claimed by over 60 original studies. With the overwhelming evidence backing up these natural health products, it is no surprise that policosanols can be found on the market, with claims that they reduce cholesterol levels or promote cardiovascular health. Policosanols from sugar cane, wheat, rice and beeswax are available in drugstores in Canada and the US, sometimes included

in other supplements, adding cholesterol-lowering value to the product. Some physicians now prescribe policosanols to their patients, claiming that they are responding to the therapy. Is it placebo effect? Is it simultaneous lifestyle changes? Do policosanols work in certain individuals and not in others? Interestingly enough, and while Cubans are still publishing astonishing results, a growing body of evidence, originating from laboratories in Europe, South Africa and Canada is shedding doubt on the claims Cubans are making regarding benefits of the sugar cane



extract. Lately the policosanol controversy has stirred up media. Although communicating this message to the general public might reduce the level of trust towards natural health products, the hope is that it will increase awareness and vigilance against potentially fraudulent claims and provide a certain education on reliable sources in the literature on natural health product research. As for researchers, the policosanol controversy can serve as an incentive to increase scrutiny in the manuscript review process, working towards consumer protection.

The cholesterol-lowering effect of policosanols has yet to be dismissed as there are only a few independent studies to date. The next step in my PhD project will be to verify the antioxidant aspect of policosanol activity

as well as to determine their effect on cholesterol synthesis and absorption. These analyses will help examine the mechanisms of action, if any, behind their suggested protection against heart disease.

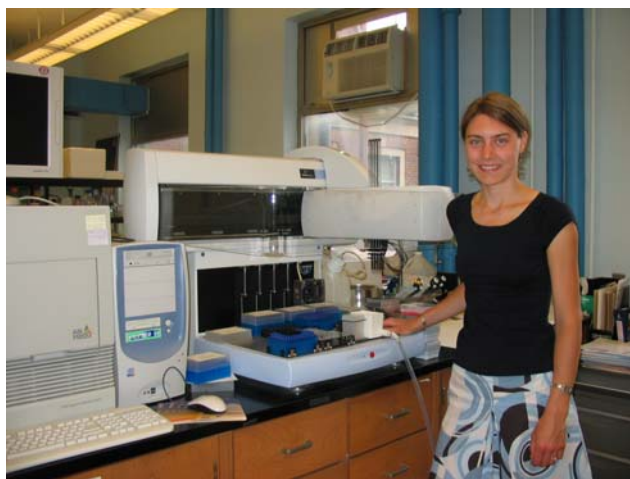
Research on Cuban sugar cane policosanols has expanded to areas beyond cardiovascular disease as it has been shown to enhance cellular energy production, decrease the risk of osteoporosis and, more recently, act as a natural male enhancer. So is this natural fatty alcohol extract truly a remedy to all ailments, or is it more likely that our scientific review machinery needs serious maintenance?

Written by: Amira Kassir

One of a Kind Bénédicte-Fontaine Bisson

Continued From Cover

Bénédicte played an active role in the design and development of the AFMNet study titled Nutrigenomics and Biomarkers of Chronic Disease. She even volunteered to be the first subject in the study! Her research interest involves unraveling the relationship between genetic and dietary factors that affect inflammation and their role in cardiovascular disease. In 2006, Bénédicte won the



American Society of Nutrition's Proctor & Gamble Graduate Student Research Awards Competition when she presented her work at the Experimental Biology Annual Meeting in San Francisco. She recently was among the top 1% of Canadian graduate students in the health sciences to be honoured with a CIHR National Health Research Poster Competition Travel Award. Bénédicte has several impressive publications in journals such as The American Journal of Clinical Nutrition. She has received scholarships from NSERC, AFMNet and the Toronto chapter of the CIFST.

Bénédicte is able to pack an amazing amount of activity into each day. She is currently Co-Chair of the Canadian Obesity Network Students and New Professionals Toronto Chapter. She has held various positions on the U of T Nutritional Sciences Student association, including President. She has also been involved in numerous university committees, including

the School of Graduate Studies Council and the Graduate Academic Appeal Board. Bénédicte is also the new Theme II Training and Communication Officer for AFMNet. As a Teaching Assistant in the U of T undergraduate course Basic Human Nutrition, Bénédicte instructs groups of anxious first year students, taking great care to make learning nutrition very interesting, un-intimidating and fun. We think that she is the

ideal person for students to meet in their nutrition course; her enthusiasm could spark the career of many future nutritional scientists!

In addition to her inspiring journey as a successful graduate student, Bénédicte's dedicated spirit is what makes her a rare find. From the start, she greeted us with a warm welcome and encouraged us when we felt lost. As a natural-born mentor, she initiated setting up regular weekly meetings for any questions we may want to discuss and beyond that has an "open-door" policy replying to any anxious emails or phone calls any day of the week. Reflecting on Bénédicte's triumphs it is clear that she has come way beyond making the full circle and is now an accomplished young researcher and amazing mentor!

Written by: Karen Eny & Leah Cahill

Jessica Will Be Missed

Long standing HQP's future plans

The HQP are losing one of their finest members this year as Jessica Miller will be defending her thesis in mid December. Jessica, a Saskatoon-born but Halifax raised student of biochemistry, has been with AFMNet almost since its inception in early 2004. After graduating from Dalhousie with a degree in biochemistry, Jessica decided to take a few years off to work on herself and got a job teaching English in Japan. Once her teaching contract was up, she traveled around South East Asia and Europe for a few months before coming back to Halifax and Dalhousie to work on her Masters with her supervisor, Roger McLeod. Jessica and Roger have been working on the effects of conjugated linoleic acid (CLA)



supplementation and its effects on obesity. CLA is being sold as a weight loss supplement currently, as it has been shown to cause huge weight loss in mice, but human trials have not been very convincing. Their research involves clinical trials which unfortunately suffered very long delays as they awaited ethics approval from Health Canada. They have indeed been given the go ahead to begin trials this year and another up and coming HQP working for Roger McLean will be taking over when Jessica leaves.

After completing her Masters program, Jessica will be moving to Canberra, Australia for a few years to join her fiancé. While there she is hoping to take a scientific journalism program at the university. Jessica really enjoyed writing as a

part of AFMNet, compiling pieces for the HQP Insider and the AFMNet website.

Jessica was also an integral part of the team that helped organize and execute the Atlantic HQP Summit in August of 2005 and held a seat on the HQPA board as a training officer in its first year.

Jessica believes in the spirit of the network, that collaboration should be a common goal, and says the most interesting part of the network to her is the inclusion of the GE³LS theme. With food and food science being a sometimes controversial topic, including the law, ethics and media relations aspects is a forward thinking move that should really help the network in the coming years.

Reminders

- 1) HQP January Meeting
 - The meeting will take place January 25th - 27th 2007
 - The location of the meeting will be the Clarion Hotel Gatineau (111 Rue Bellehumeur Gatineau QC)
- 2) HQPA Elections
 - The positions for the HQPA elections will be announced at the January Meeting
 - Please visit the website for further details about each of the positions available
- 3) HQPA Job Openings
 - The position of Communication Officer for the HQPA is still available
 - Please contact Fouad Elgindy for further details regarding the position
- 4) Upcoming Awards
 - IDRC Evaluation Research Awards (January 15th 2007 Deadline)
 - Marilyn Griffith Memorial Scholarship (February 1st 2007 Deadline)
 - HQPA Excellence Award (February 1st 2007 Deadline)
 - AFMNet Undergraduate Research Supplement (March 16th 2007 Deadline)
 - For all award information check out:
<http://www.afmnet.ca/index.php?fa=HQP.showAwardsList>

The Advanced Foods and Materials Network



**150 Research Lane
 Suite 215
 Guelph, Ontario
 N1G 4T2**

**PHONE:
 519-822-6253**

**FAX:
 519-824-8453**

**E-MAIL:
fouad.elgindy@afmnet.ca**