E-Milk without borders!

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Word from the director

I am pleased to write to you, as the new director, in order to introduce myself and to share with you my enthusiasm in becoming head of the STELA for the next four years.

But before, I wish to sincerely thank Sylvie Turgeon for having assumed this responsibility for more than eight years and Yves Pouliot, who accepted the interim during the last two years. The two of them invested time and energy for the growth and increased influence of the STELA, here and abroad.

Personally, after having studied as a veterinarian in Tunisia, I crossed the Atlantic Ocean to complete a Master’s degree and a PhD in Food Science and Technology at Université Laval. I am a member of STELA since 1990, member of INAF since its foundation and Head of the Master and PhD Food Microbiology program. My research focuses on the metabolic activity of lactic acid bacteria and des probiotics and their use in food, medical et veterinary sectors.

The STELA is already a well-organized and successful Research Centre. However, many changes occurred to the global picture of the food sector, and the STELA must adjust to this new reality in order to stay competitive and strengthen its position as a national and international leader. One of the objectives for my mandate will be to further strengthen relationships with partners by exchanging in order to better understand their needs and target the research priorities for the coming years.

I would also like our partners to get acquainted with our research scientists’ expertise since STELA members considerably diversified and broadened their range of skills and fields of research these last years.

I count on the support and collaboration of all to succeed in this mission.

Ismail Fliss

New member

We are pleased to welcome a new member of the STELA research centre, Dr. Alain Doyen. Dr. Doyen was recently hired as adjunct professor in the department of Food Science and Nutrition at Université Laval. He will develop an innovative research program in dairy technology as part of a major initiative of STELA to be announced soon.

Alain Doyen achieved most of his training in France where he obtained a Licence in biotechnologies and bioprocesses at the Université Paris XII, and a Master’s degree in Food Science with the ENSBANA at Dijon. Afterwards, Alain obtained a PhD at Université Laval in Food Science and Technology, under the supervision of Dr. Laurent Bazinet. His research aimed mainly to optimize a separation process enabling the selective migration of peptide molecules with a health effect. After a short fellowship with the same research team, Dr. Doyen joined the Centre de Développement Bioalimentaire du Québec (CDBQ) in 2011 to acquire experience with the industry. He was successively project leader and Head of the Research and Development Department.

Welcome to Alain and long life with the STELA!
New Research Projects

Bench-testing system for research in pressure-driven separation processes. Yves Pouliot.

Integrated research program on dairy, dairy fat and cardiovascular health. Benoît Lamarche, Jean-Christophe Vuillermard, Patrick Couture, Émile Lévy, and Peter Jones.

Beneficial effects of milk and fermented dairy products on intestinal and adipose tissue inflammation, and obesity-linked cardio-metabolic diseases. Denis Roy, Yves Pouliot, Sylvie Gauthier, André Marette, Martin Lessard and Claude Asselin.

The effect of milk products and novel milk products on satiety, food intake and metabolic control (glycemia) throughout the lifespan. Harvey Anderson, Sylvie Turgeon and Doug Goff.

Identification of native flora from milk produced by cows fed silage and determination of their impacts on organoleptic qualities of processed dairy products. Denis Roy, Gisèle LaPointe, Yvan Chouinard.

Impact of the processing dynamics and of the composition of fermented dairy products on their stability and rheological properties. Sylvie Turgeon, Daniel St-Gelais and Sébastien Villeneuve.

Graduated Students

Several students have completed their graduate degrees in the past months:

Maxime Saffon, PhD (Y. Pouliot, M. Britten) Development of a new dairy ingredient to use buttermilk constituents.

Valérie Conway, PhD (Y. Pouliot, S. Gauthier) Nutraceutical potential of buttermilk minor constituents.

Rima Hatoum, PhD (I. Fliss, S. Labrie) Dairy yeasts with antimicrobial activity: a new generation of protective cultures and probiotics.

Laure Rinaldi, PhD (S. Turgeon, M. Britten) Impact of the addition of polysaccharides in jelly dairy matrices on gastrointestinal digestion of proteins and associated metabolic responses.

Fatoumata Diarrassouba, PhD (M. Subirade, Gabriel Edgardo Remondetto) Interactions between β-lactoglobulin and nutraceutical ligands, riboflavin, vitamin D3 and lysozyme formation, physico-chemical and biological characterization of functional delivery scaffolds.

Gabriel Ratté, MSc (Y. Pouliot, S. Gauthier) Interaction between a bovine β-lactoglobulin peptide (β-lg f1-8) and whey proteins: The case of α-lactalbumin.

Valérie Goulet-Beaulieu, MSc (S. Labrie, I. Fliss) Growth of Listeria monocytogenes and Staphylococcus aureus in a Camembert model cheese reduced in NaCl or partially substituted with KCl.

Rébecca Labonté, MSc (S. Labrie, G. LaPointe) Estimation of the physiological state of Penicillium camemberti during the ripening of Camembert.

New Students

Young students recently started their graduate studies with STELA researchers:

MSc:
- Stéphanie Méthot-Hains (Yves Pouliot)
- Daniel Tremblay-Marchand (Yves Pouliot)
- Julie Chamberland (Yves Pouliot)
- Adriana Paredes Valencia (Yves Pouliot)
- Marc-André Therrien (G. LaPointe)
- Mélanie Henry (S. Turgeon)
Students at the Bachelor's degree in Food Science and Technology have the opportunity to apply their knowledge in a practical setting by getting engaged in a small scale cheese factory la Fromagerie du Campus. Since already 7 years, they manufacture Cheddar with the help of the Professor Steve Labrie, but they also tested their skills with fresh Mozzarella, Emmental, Camembert, Goat cheese, Ricotta and will soon explore Feta production. La Fromagerie du campus gathers some 20 students and promotes innovation in a sector experiencing a shortage of qualified labour. Recently, the project won the 1st place at "La Ruche Academy", a participatory financing platform. The award provided the opportunity to shoot a video that will be presented on the platform, to launch an advertising campaign and to receive mentoring with the Communications firm LG2 who will propose a logo. 

The project is backed since the beginning by the Faculté des sciences de l’agriculture et de l’alimentation, the Département des sciences des aliments et de nutrition and STELA, but in order to have the project progress further, the students now have access to a financial support from the Université Laval’s Foundation to improve the installations of the school cheese factory. They also took on the challenge of developing a cheese branded with the colours of Université Laval as part of the Foundation’s Campaign for 2014.

Professor Sylvain Moineau and Agropur cooperative are the 2013 winners of the Synergy Award for Innovation, category « Large Companies ». This prestigious prize from the National Sciences and Engineering Research Council of Canada (NSERC) recognizes examples of collaboration that stand as a model of effective partnership between industry and colleges or universities. Fundamental and practical research on cheese manufacturing, lactic acid bacteria and their phages has been taken over by this internationally renowned microbiologist and Agropur’s research team since 17 years. They achieved to upgrade the quality and consistency of the cheeses and to improve productivity in plants. Dr. Moineau, a regular research collaborator at STELA, was granted six NSERC projects in partnership with Agropur that supported the training of some 30 graduate students and the publication of more than 50 scientific papers. This collaboration has also resulted in a state-of-the-art program at Agropur to control the emergence of new phages and to preserve the quality and typicity of cheddar cheeses. Congratulations!

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**Events to come**

**AOIA Luncheon Event**
Allergen Management in Food Industry  
Friday April 4, 2014  
Hotel ALT, Quartier DIX30

**Colloquium New Generation of Scientists Technologies – Ingredients – Nutrition and Health**
Young scientists can help you differentiate your business and improve your competitiveness  
Collaboration COVB - INAF  
Thursday, April 10, 2014  
Pavillon Alphonse-Desjardins, Université Laval  
Program to come

**First International Meetings on Milk, Vector of Development**
May 21 – 23, 2014  
Rennes, France  

Continued...
Novalait Technological Forum
May 28, 2014
Hotel Le Dauphin
Drummondville

BENEFIQ 2014
September 23 – 25, 2014
Quebec City Convention Centre
Quebec

IDF World Dairy Summit
October 27 – 31, 2014
Tel-Aviv, Israel