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**THE STELA RESEARCH CENTRE’S BIENNIAL SYMPOSIUM**

The STELA Research Centre’s Biennial Symposium, held on April 28 and 29, 2003, at Hotel Québec, was a genuine success. It brought together more than 120 participants and provided a forum for communications among dairy processors, government stakeholders and research scientists.

A total of 14 speakers shared their findings and research interests in the area of dairy science. The distinguished guest speakers, Helen Bishop MacDonald of the Dairy Farmers of Canada and Dr. Morsi El Soda of the University of Alexandria (Egypt), highlighted how important dairy product quality is to our society. The visit of the pilot plant and INAF’s new pavilion at the end of the first day of the Symposium was really appreciated. The wrap-up of the event by Dr. Jacques Goulet was also a high point of the Symposium.

We would also like to congratulate all our students for their creativity and the exceptional quality of their presentation. Congratulations to the following winners of the poster presentation contest:

- **Cécile Cinquin**, Ph.D., 1st prize from the Dairy Farmers of Canada for her poster presentation entitled: “Développement d’un nouveau modèle in vitro avec cellules immobilisées pour simuler la fermentation colique chez l’enfant” [Development of a new *in vitro* model with immobilized cells for simulating infant colonic fermentation];
- **Rachel Gervais**, M.Sc., 2nd prize from the Nutraceuticals and Functional Foods Institute (INAF) for her poster presentation entitled: “Production et composition du lait chez des vaches recevant un supplément d’acides linoléiques conjugués, en conditions commerciales” [Production and composition of milk in cows receiving a supplement of conjugated linoleic acids, under commercial conditions];
- **Samira Roufik**, Ph.D., 3rd prize from the Fondation de technologie laitière du Québec for her poster presentation entitled: “Digestibilité gastrique *in vitro* de peptides bioactifs issus de la β-lactoglobuline bovine” [In vitro gastric digestibility of bioactive peptides derived from bovine β-lactoglobulin].

We would like to thank all our speakers, participants, and students, as well as all those who contributed directly or indirectly to the success of this event. We would also like to thank the ministère des Finances, de l’Économie et de la Recherche (MFER), the Dairy Farmers of Canada (DFC), the Nutraceuticals and Functional Foods Institute (INAF), the Fondation de technologie laitière du Québec (FTLQ), and the Département de sciences des aliments et de nutrition for their financial support.

We are looking forward to seeing you again in two years!

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**Nomination**

Université Laval’s Faculté des sciences de l’agriculture et de l’alimentation is pleased to announce the nomination of Dr. Paul Paquin as the new Assistant Dean, Research. Dr. Paquin is renowned not only for his direct involvement in research, but also for his great research development...
and organizational skills. His understanding of all aspects of the research work conducted at the FSAA, whether it be “fundamental” or directly linked to the industry, and his ability to meet challenges will undoubtedly be an invaluable asset to consolidating and expanding FSAA’s role in research and development in all areas of the agro-industry. He will assume the position effective June 1, 2003. Dr. Paquin has worked for a number of years as Director and researcher for STELA Research Centre and then as Director for INAF.

We extend our best wishes to Dr. Paquin in his new position!

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**RESEARCH GRANTS**

“ACTION CONCERTÉE FQRNT-NOVALAIT-MAPAQ”

- Jean-Christophe Vuillemard, Claude Champagne, and Daniel St-Gelais “Caractérisation des activités biologiques et du potentiel technologique de souches bactériennes isolées de ferments lactiques naturels” [Characterization of the biological activities and technological potential of bacterial strains isolated from natural lactic starters], 283,800$ - 3 years.

- Michel Britten, Yves Pouliot, Paul Angers, Jean-Christophe Vuillemard, Claude Champagne, Laurent Bazinet, and Patrick Fustier “Potentiel REDOX du lait et de ses effets technolaitiers” [Potential REDOX of milk and its technodairy effects], 250,000$ - 3 years.

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**CONFERENCE PROGRAM**

STELA’s Conference Program ended on Friday, May 16, 2003 with Dr. Denis Roy’s conference entitled: “Les cultures lactiques et probiotiques d’intérêt laitier: traçabilité, activités métaboliques et propriétés technologiques” [Lactic cultures and dairy probiotics: traceability, metabolic activities and technological properties].

A special thank you to all our speakers who provided highly enriching and interesting presentations. Their contribution was instrumental to the success of our program.

Watch for the September issue of E-MILK to find out about our Fall 2003 Conference Program!

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**EYE ON TECHNOLOGY TRANSFER: BACTERIOCINS TO FIGHT BOVINE MASTITIS**

What has been done: Dr. Ismaïl Fliss spearheaded the work of a research team on developing new bacteriocin-based antimicrobial products in the fight against bovine mastitis, which is funded as part of the “action concertée FQRNT-NOVALAIT-MAPAQ” program. This project, which arises, in part, from the research work performed by the NLAB, is responsible for the development of a new integrated process of production by repeated cycles of batch fermentation with immobilized cells and purification by immunoaffinity of two bacteriocins produced by lactic acid bacteria: pediocin and nisin Z. This new process not only provides a 10-fold performance gain over standard processes, but also a high level of purity (> 95%). Through the use of these bacteriocins alone or in combination with antibiotics, two combinations were found to be highly effective against antibiotic-resistant strains belonging to the Staphylococcus and Streptococcus genera, which are known mastitis-causing agents.

What happens next: Work is underway to develop an intramammary ointment containing, as the main active ingredient. We will initially carry out in vitro tests to evaluate the stability of the ointments and the value of their antimicrobial activity. We also plan to conduct in vivo trials (i.e., in cows) as part of the Bovine Mastitis Research Network to determine the effectiveness of the intramammary ointments under study. After validating the in vivo effects and obtaining the appropriate copyright protection, licenses for their manufacture and commercialization will be developed with industrial partners or as part of business start-up initiatives.

This research work was the subject of a presentation at the Forum technologique Novalait 2003 and can be found in the “cahier du Forum technologique...”
Novalait 2003” (record P2003-04 and presentation 4).

For more information on this research work, contact Dr. Ismaïl Fliss at: ismail.fliss@aln.ulaval.ca

Research team and contributing partners
- Ismaïl Fliss, STELA Research Centre, Université Laval;
- Christophe Lacroix, Institute of Food Science and Nutrition, Swiss Federal Institute of Technology, Switzerland;
- Serge Messier, Université de Montréal, Faculté de médecine vétérinaire;
- Ehab Kheard, Postdoctoral Researcher, STELA Research Centre;
- Graduate students: Karim Naghmouchi, Louis Grignon, and Safaa Lamhoujed;
- Undergraduate students: Christophe Le Lay.

Financial Partners
- Fonds Québécois sur la Nature et les technologies;
- Ministère de l’Agriculture, des Pêcheries et de l’Alimentation du Québec;
- Novalait Inc.

E-MILK will be on hiatus during the summer. So, on behalf of all the staff at the STELA Research Centre, we would like to wish everyone a safe and well-deserved summer vacation.

Bonnes vacances et soyez prudents !

For more information on E-MILK or to get a copy by e-mail, please contact:

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Congratulations to Safaa Lamhoujed, M.Sc. student at the STELA Research Centre under the direction of Serge Messier (Université de Montréal) and co-direction of Ismaïl Fliss, who was awarded the “Prix d’excellence de la relève technologique du Fonds québécois de la recherche, sur la nature et des technologies – Novalait inc.” for her poster presentation entitled: « Évaluation de l’activité inhibitrice de la nisine Z, de la pédiocine PA-1 et de certains antibiotiques contre des agents responsables de la mammite bovine » [Evaluation of the inhibitory activity of nisin Z, pediocin PA-1, and selected antibiotics on causative agents of bovine mastitis]. This award was given by Sylvie Dillard, CEO of FQRNT, during the Forum technologique Novalait 2003, held at Bécancour on May 24, 2003.