A word from
the Director

Institute Director
Terry Spithill

Welcome to the fall / winter 2004 edition of our Newsletter. As an Australian newcomer to Canada, I really do notice the change in seasons and this fall has been lovely and mellow; a fine start to the teaching year. One of the highlights was our Homecoming dinner and visit to the Institute by many old friends and alumni. We were delighted to welcome Doreen Croll and her family, and to hear stories from Alistair about the times he spent at the Institute with his father, Professor Neil Croll the third Director of the Institute. I very much enjoyed meeting those who attended the dinner and enjoyed listening to their stories of student life in the Institute two or three decades ago. I would like to thank all alumni and friends for making our first Homecoming such a wonderful event, and for laughing at some of my jokes! We plan to hold this dinner every two years, so mark your calendars.

The fall also sees an influx of new students, and we welcomed 10 students into our thesis program in 2004. A major milestone for the Institute was the first intake of nine students into our MSc (Applied) Biotechnology program. We are very keen to see this course grow in stature over the next few years and the graduating students from it, and our Certificate course, will constitute a significant body of highly trained and motivated young scientists, equipped for careers in the biotech industry, academia or the government sector. It is curious that such a major program has been created in an Institute focused on basic studies in parasitology: this reflects the current molecular research strengths at the Institute and the visions of Roger Prichard and Marilyn Scott who helped to establish this program in the late 1990s. I suspect that Tom Cameron would not have predicted such a development at his Institute in 1932.

The Institute continues to grow and prosper. We are in the process of finalizing a new tenure track appointee in helminth functional genomics and will shortly initiate a new search for a Bioinformatician interested in protein modeling and genome mining. These appointments will add greatly to our critical mass and also bring a breadth to our research base. With the rapid sequencing of parasite and host genomes now occurring, genome mining and protein modeling studies are becoming a core activity of many research programs at the Institute. We anticipate expanding our teaching in these areas in order to capture the benefits of this genome revolution. My wish is that, through excellence in our teaching and graduate training, we will inspire the young people crowding our laboratories to find solutions to the many parasitic diseases that do so much harm to our global community.

After the growing pains of getting the first Newsletter out in the spring/summer the second issue has been much easier and certainly buoyed by the knowledge that our first effort was so well received. With a new crop of enthusiastic students, the launch of the new Master’s (Applied) in Biotechnology, a very successful Quebec Parasitology Symposium and the first ever Parasitology Homecoming, the issue is bursting at the seams. I hope you find it both informative and entertaining.

On a personal note, it was a great thrill to make contact with old friends and alumni as a result of this publication and to reestablish connections.

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In the News

In June of this year Roger Prichard was featured in an article written by Andrew Fazekas for Science magazine. The article, entitled “A Measured Dose of Corporate Support,” gives an overview of the important role corporate support can play in funding basic research. Roger made a good case for seeking corporate support as part of a balanced research-funding budget and to offset the short fall in traditional competitive funding sources. Roger has a long history of ties to the pharmaceutical industry, and sees the virtue of this type of association. He is quick to point out in the article that “it’s important to have a solid research program; work that will pique a company’s interest. And then you need credibility and you get all that from doing good, basic science.” Well done Roger for hoisting the flag!

New Master’s (Applied) in Biotechnology

A new Master’s (Applied) in Biotechnology, administered by the Institute, was initiated in September of this year. The introduction of the new program was largely spearheaded by Roger Prichard, Biotechnology Program Director, and Christiane Trudeau, the course administrator. The new program required the formation of several new courses: Biotechnology Lab 2, Biotechnology Ethics and Society, and a Biotech Research Project. The new program provides an increased level of training in a rapidly evolving field, and offers a unique opportunity for students to have exposure to the biotech industry, both through lectures from leaders in the field and through industry-based research projects. Nine students enrolled in the program in 2004. Five of the students completed Bachelor’s degrees at McGill, one graduated from the Université de Montréal and the remainder from Schan-dong University and Beijing University, China, and Bangalore University, India.

Institute Kudos

Roger Prichard was elected an Honorary Member of the European Veterinary Parasitology College (EVPC) in recognition of his “outstanding services to, and achievements in, Veterinary Parasitology.” This highly prestigious honour is awarded to those who have contributed in an extraordinary manner to the advancement of Veterinary Parasitology.

Lisa Purcell, a new doctoral student with Dr. Terry Spithill, was awarded the prestigious Canadian Graduate Scholarship, one of only 148 offered across Canada. Scholarship winners receive $35,000 over three years. Lisa will study DNA vaccines for malaria.

Dr Stephanie Yanow a Post-Doctoral fellow who recently joined Dr Terry Spithill’s lab, was awarded two prestigious fellowships; a McGill Tomlinson Fellowship, and a CIHR Postdoctoral Fellowship. The Tomlinson Fellowships are aimed at recruiting bright young researchers to McGill and only four are awarded each year. Stephanie will study the application of RNAi to study gene function in malaria.

Best Wishes to Dr Ken Davey

We had expected to see Ken at our Homecoming event but we have just learned that he was seriously ill during that period and was unable to attend. Ken is recovering well and no doubt enjoying a restful period. We wish him well in the coming year.

Visiting the Institute.

Dr Philip Skuce is a visiting parasitologist from the Moredun Research Institute, Penicuik, near Edinburgh, Scotland. Philip came to the Institute in May to spend six months in the laboratory of Roger Prichard.

Philip hopes that his visit will be the start of an ongoing collaboration between the two Institutes. In Scotland, farmers are experiencing a serious problem with the parasitic nematode Teladorsagia (Ostertagia) circumcincta in sheep. Nematodes of farm animals, are developing resistance to anthelmintic treatment and cause annual losses to farmers in the UK in excess of $60 million. Philip came to the Institute because of its reputation as one of the foremost laboratories in the world working on drug resistance in nematodes, with the expertise for developing molecular markers to detect emerging drug resistance in nematode populations. His objective has been to learn the skills and techniques developed in Roger Prichard’s lab, to enable him to look for similar molecular markers for Teladorsagia.

This is a new departure both for Philip and the Moredun Research Institute. Prior to his visit, he was engaged in research on vaccine development against nematode parasites of veterinary importance.

Philip is not a Scotsman but has a lilting Irish brogue and good sense of humor. He has enjoyed his visit a great deal, and is very impressed with every aspect of the Institute, including its equipment. He also noted “its graduate students, who are hardworking and highly motivated.” He has been a good ambassador; everyone has enjoyed his visit and look forward to future collaborations and visits.

If you would prefer to receive future issues of this newsletter electronically, please notify Jim Smith at james.smith@mcgill.ca.

Friends of Parasitology Help us reach our Alumni

If you know of any alumni or friends who have not received this newsletter please let us know.

Contact Jim Smith at james.smith@mcgill.ca.
Fourth Annual Quebec Parasitology Symposium

The Fourth Annual Quebec Parasitology Symposium, sponsored by the Institute-based Centre for Host-Parasite Interactions, was held this year on June 21 and 22 at INRS-Institut Armand Frappier in Laval. The two-day event, with over 100 participants, was organized by alumnus Dr. Albert Descoteaux.

There were 30 oral presentations, many from graduate students and postdocs, but also from invited speakers Dr. Bill Petri (University of Virginia, USA), Dr. Sam Turco (University of Kentucky, USA) and Dr. John Gillear (University of Glasgow, UK) and two guest speakers: Dr. Tom Seebeck (University of Bern, Switzerland) and Dr Michael Grigg (University of British Columbia, BC). In addition, there were also 30 excellent poster presentations.

Kudos to students  Darcy Moncada (Institute of Parasitology) and Annie Rochette (Université Laval), who received a best poster presentation award, and François McNicoll (Université Laval) and Kleber P. Madrid (Institute of Parasitology), who received a best oral presentation award.

The Symposium highlights the breadth of excellent research in parasitology across Quebec, and is a positive forum in which to foster potential collaborations between participating Institutions.

The next Symposium will be hosted by the Centre for the Study of Host Resistance, McGill, and will be organized by Dr. Mary Stevenson.

New services at the Institute

With the formation of the Flow Cytometry Core Facility and the Molecular Biology Service Facility, the Institute now offers new services to both members of the Institute and the wider research community. Many of you who attended Homecoming saw these new facilities during your tour of the Institute. The Flow Cytometry Facility is equipped with a new BD FACSAria sorter and offers high speed fully sterile cell sorting and complex analytical services. Jaime Sanchez-Dardon recently joined the Institute as director of the new facility.

The Molecular Biology Facility is managed by research technician Line Dufresne, and offers a number of high-end molecular techniques including Microarray scanning, DNA Sequencing, Fragment Analysis, Real Time PCR and Quantitative PCR analysis.

Student Conversations

Joe Nabhan has been working in Dr. Paula Ribeiro’s lab for a number of years; he started as an MSc student and transferred to the PhD program after his first year. Joe is nearing completion of his thesis and reflects on his stay at the Institute.

Can you remember why you chose to come to the Institute?

I did my BSc at the American University of Beruit. I heard from a friend of mine, Roni Daoud, who was already at the Institute, what a great place it was to do research, that there were good interactions between staff and students, excellent access to equipment and the research that was being done was cutting-edge. After corresponding with Paula (Ribeiro) and discussing possible projects I applied, and was accepted.

Why did you want to work on parasites?

I took a parasitology course as one of my electives for my BSc. Of all the courses that I took, I found this to be the most interesting.

What do you think is the most significant out come of your research?

From a personal point of view, I think that graduate studies have had a big impact on my life, helped me mature in my thinking and made me more critical of both my own and other people’s work. But also, they have given me an understanding for the need for basic research to answer fundamental questions. My work on protein degradation through the proteasome fits into this area. It adds a piece of the puzzle in the understanding of this important area of protein trafficking.

When you finally leave the Institute what are the most significant memories that you will take with you?

I have been here a good number of years, and there are many ways that I will remember the Institute. I have built a lot of friendships which I will cherish the rest of my life, and I have also gotten to know a lot of senior researchers from whom I have learned a lot, and who have always been there to help me. It is also a place where I learned a lot technically, particularly in the beginning, and I appreciated the help I received from my peers and then later the useful discussions we had. In addition to this, I will also remember the Institute as a place where I had a lot of fun socially. The Institute is a very good place for young people to do graduate studies. There is a combination of socializing as well as doing research, which creates an excellent environment to interact with your peers and do excellent science.

So what’s next?

Well I would like to do a post-doc and there have been some suggestions that I should try to do one in industry. After much consideration, however, I think I would prefer to stay within academia because I think there is a greater opportunity to develop a project independently here than perhaps is possible within industry. I would like to stay in Montreal because I really like the city. After a post-doc I have not yet decided the path I would like to take and to some extent this will depend on my post-doc experience.
Our first Institute of Parasitology Homecoming was held on Saturday September 18, 2004, and was attended by 68 alumni, friends and staff of the Institute. During the afternoon, alumni gathered in the new Bioinformatics lab, prior to touring the Institute. Over coffee many acquaintances were renewed and stories told while people tried to remember names of fellow graduates whose images were displayed on a PowerPoint presentation.

Graduate students, Celia Caballero, Mara Leimanis, Darcy Moncada, Catherine Ivory and Joel Karwatsky enjoyed interacting with alumni as they led them on a tour of the Institute and, judging by the apparent extended length of some of the tours, all parties had an interesting time.

There was buzz of activity as people arrived for pre-dinner drinks and hors d'oeuvres in the Ceilidh. Dean Buszard welcomed alumni and extolled the Institute’s achievements over the years. During dinner, Director Terry Spithill gave a brief and entertaining history of the Institute, recalling major achievements, directors and personalities! After dinner, graduate students Anne Schwab and Fouad El-Shehabi each gave a short presentation on their graduate projects. The evening was a great success, with attendees reluctant to leave as midnight struck.

PhD student Lisa Purcell completed her Masters in Prince Edward Island (PEI) and joined Terry Spithill’s Lab in September. She is a recipient of a Canada Graduate Fellowship.

Why did you want to study parasites?

I have always been interested in parasites but probably got interested when I was teaching an invertebrate zoology lab. Then when I was doing some survey work on West Nile Virus I became more fascinated and started doing some reading on malaria and decided this was the subject I was interested in.

What attracted you to the Institute?

I looked at a number of places, I think the availability of new equipment, but also the smallness of the place, where everyone is together allowing me to draw on people’s expertise is what attracted me. In addition, I liked its physical location in Montreal.

What is your project on?

Well it’s still a bit sketchy, but broadly, it’s vaccine development in malaria using the mouse malaria model.

What are your long term objectives?

I am not totally sure at this stage, but there are a couple of alternatives. I know research will be a part of it, but I do not know if it will be within a university setting. I might like to work in a more humanitarian context and certainly I would like my project to have a field component.

What do you like to do to relax?

I like sports, particularly Volley Ball which in PEI I played at varsity level, and I also enjoy soccer. For winter sports, I enjoy downhill skiing—in PEI I was a member of the Ski patrol. I hope to be able to do that here also. Actually the skiing was another reason I wanted to come to Montreal!