

Skeletal Biology Laboratories open at The University of Western Ontario

The Skeletal Biology Laboratories have been opened at The University of Western Ontario for advanced research on the formation and turnover of cartilage and bone.



Principal investigators in the CIHR Group in Skeletal Development and Remodeling at The University of Western Ontario are, left to right, Stephen Sims, Graeme Hunter, Suzanne Bernier, Jeff Dixon, Harvey Goldberg, Frank Beier and Michael Underhill.

THE LABORATORIES WILL BE used by the Canadian Institutes of Health Research (CIHR) Group in Skeletal Development and Remodeling for trans-disciplinary studies of skeletal diseases and the training of future scientists for academia and industry. Dr. Jeff Dixon, the director will be working with Drs. Frank Beier, Suzanne Bernier, Harvey Goldberg, Graeme Hunter, Stephen Sims and Michael Underhill of the Faculty of Medicine and Dentistry, all members of the Canadian Arthritis Network.

"We are grateful for the support of the Canadian Arthritis Network and our other collaborators and partners who have contributed to the development of the Group," said Jeff Dixon. "Our new laboratories will help us advance important research into the causes and prevention of debilitating diseases such as arthritis and osteoporosis."

The Group has received \$700,000 over three years from CIHR and spearheaded a successful \$2.3 million grant for state-of-the-art research equipment and facilities from the Canada Foundation for Innovation, the Ontario Innovation Trust, The University of Western

Ontario, Photon Technology International and other industry partners. The Group's research is funded by operating grants totaling over \$1 million annually from CIHR, The Arthritis Society, the Canadian Arthritis Network and the Stem Cell Network.

The United Nations and World Health Organization have declared 2000-2010 the Decade of the Bone and Joint and with the Skeletal Biology Laboratories, The University of Western Ontario is now a leader in this field of research. Approaches utilized by the Group include protein chemistry, molecular biology, functional genomics, physical chemistry, patch-clamp electrophysiology and advanced cell imaging.

The Group is working with pharmaceutical and biotech companies on novel drugs to prevent and treat osteoarthritis and osteoporosis and is seeking new partnerships with industries in the pharmaceutical, biotechnology, and medical/dental devices sectors.

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JOINT VENTURES

The Canadian Arthritis Network's Industry Newsletter

Researchers brainstorm to conquer arthritis

Conference debates new ideas, inspires young scientists.

Photography by
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AT THE CANADIAN ARTHRITIS Network's (CAN) Annual Conference held in Calgary, September 26-28, Canada's leading arthritis researchers presented highlights of their work and participants engaged in networking that will lead to rapid advancement of treatments for arthritis. Network members, trainees, government officials and representatives of international pharmaceutical and biotechnology companies gathered for an exchange of information and ideas.

The Conference began with a one-day workshop on the Special Research Initiative in Osteoarthritis (OA). This session followed up on the OA Consensus Conference held in April 2002, which brought together Canadian and international researchers, global pharmaceutical and biotechnology companies, people with arthritis, and arthritis organizations.

The workshop presentations dealt with unmet needs in OA research, beginning with the need to create awareness in the general public about recognizing OA, treatment options and patient interaction with physicians. There is also a need to



Bill Taylor, Merck Frosst Canada, Denis Morrice, The Arthritis Society, Dr. Ken Pritzker, Mt. Sinai Hospital, Toronto

create more awareness among trainees, to encourage them to choose careers in OA research. Presentations discussed the future course of OA research and the importance of communication and collaboration by researchers in different disciplines.

Dr. Cy Frank, Scientific Director of the Institute of Musculoskeletal Health and Arthritis, reviewed funding opportunities within the Canadian Institutes of Health Research to support the work

that needs to be done and the role of the Network in facilitating the organization of trans-disciplinary research.

The three keynote speakers at the CAN Conference in Calgary covered different aspects of OA and rheumatoid arthritis (RA), the latest diagnostic tools, the effectiveness of patient involvement in the treatment of chronic disease, and the effects of inflammation on bone remodeling.

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Researchers Brainstorm

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Dr. Stefan Lohmander, of the University Hospital, Lund, Sweden is the principal investigator of a research group focusing on basic and clinical aspects of OA. Dr. Lohmander spoke about the use of biomarkers to measure and predict the course of joint cartilage degradation in OA. The biomarkers can also be used to identify treatment targets and timing of intervention.

Dr. Halsted Holman, of the Stanford University School of Medicine in California, has done research on humoral autoimmunity in patients with rheumatic



Dr. Denis Riendeau, Merck Frosst Canada

diseases and is now engaged in health services research on the design and evaluation of health care services. He spoke about the biological variation of rheumatoid arthritis, the changing illness patterns of the disease and the need for a good partnership between the patient and physician.

Dr. Steven Goldring of the New England Baptist Hospital and Beth Israel Deaconess Medical Center, Massachusetts, is a member of the Network's Scientific and Medical Advisory Council and his research interests focus on the cellular and molecular mechanisms of bone remodeling associated with arthritis. He talked about the adverse effect of inflammation on bone remodeling and the identification of the agents responsible. This work will help develop therapies that can slow or stop bone destruction associated with RA.



Dr. Helen Burt, University of British Columbia, Dr. Sylvain Bourgoin, Centre hospitalier de l'Université Laval, Québec



Dr. John Esdaile, Arthritis Research Centre, Vancouver, Dr. Caroline Kwaitkowska, Abbott Laboratories

An innovative feature of the Conference this year was the active participation of the pharmaceutical and biotechnology industries.

The workshops on the commercialization of intellectual property and knowledge transfer provided insight to scientists on how to turn their laboratory discoveries into products and information that will help treat arthritis. Researchers learned how to protect their intellectual property and how to develop and transfer technology to companies that can effectively evaluate, manufacture and market the products.

An innovative feature of the Conference this year was the active participation of the pharmaceutical and biotechnology industries. Dr. Denis Riendeau of Merck Frosst and Dr. Paul Goldberg of Xenon Genetics spoke at the Industry Forum on opportunities for partnership and success stories. The Forum offered a learning experience for Network members who are unfamiliar with the process of drug development and the complementary roles of academia in meeting the needs of industry and industry translating scientific discoveries into treatment products.

Industry representatives who attended the conference used the networking

opportunities to communicate with scientists at a peer level and were fully integrated into the Conference programs and activities. The benefit was mutual as greater understanding was developed between the parties and potential areas for collaboration were explored.

One of the Network's new initiatives is the proposed collaboration with the German Rheumatology Competence



Dr. Sherif El-Madaawy, Shriners Hospital for Children, Montréal, Jan Brandt, University of Waterloo

Network. This international partnership will expose trainees to research in Germany and attract German researchers and clinicians to Canada. Drs. Henning Zeidler and Joachim Kalden updated the Conference on the German Network's activities.

The Network's Consumer Advisory Council participated actively in the conference, adding the voice of those living with arthritis to consideration of future research priorities. With the assistance of the Network and travel awards, more than 30 trainees attended the Conference, participated in a workshop on career development and networked with their peers and arthritis researchers.

The showcase of projects funded by the Canadian Arthritis Network demonstrated that the Network's trans-disciplinary and integrated, collaborative approach is working well in searching for the causes of arthritis, examining the impact on people and developing treatments and cures. Progress has been made both on



Dr. Tineke Meijers, Executive Director, Research and Development, Canadian Arthritis Network

the biology of the disease and on the human aspect: how successfully people adapt to living with a chronic disease and the effectiveness of patient interaction with health care professionals.

Conference participants rated the Conference a tremendous success and are looking forward to next year's Annual Conference in Montreal. For more information on the Canadian Arthritis Network and the Annual Conference in Montreal, November 13-15, 2003, please see the insert in this issue and visit the Web site at www.arthritisnetwork.ca ■

Canadian Patient Partners® in Arthritis

People with arthritis can help improve health care for arthritis patients by educating health care professionals.



Left to right: Catherine Hofstetter, Anne Lyddiatt, Andrew Chow

THIS PHILOSOPHY FORMS THE basis of the Patient Partners program at Toronto's Sunnybrook and Women's College Health Sciences Centre headed by Dr. Mary Bell. Pharmacia and Pfizer provide an educational grant for the program that currently has 125 Patient Partners in medical schools in St. John's, Sherbrooke, Montreal, Ottawa, Kingston, Toronto, Hamilton, London, Winnipeg, Calgary, Edmonton and Vancouver.

In 1995, Dr. Bell successfully implemented a Canadian version of a program started in the US by a physician and a patient with rheumatoid arthritis. The Patient Partners are people who have been diagnosed with arthritis and many are also involved in advocacy and support groups.

According to Terri Lupton, National Coordinator of the Patient Partners in Arthritis Program, "The partners help increase the awareness of arthritis with all levels of health professionals and within their communities. They are empowered through their work, resulting in them taking an active role in their own healthcare, and more effective communications with their healthcare providers."

The Patient Partners are trained to

demonstrate to health care professionals how to conduct a musculoskeletal examination. They describe their symptoms, discuss their treatment and talk about the impact of the disease on their lives. They provide health care professionals – family physicians, nurse practitioners, undergraduate and postgraduate medical trainees, nurses, physiotherapists, occupational therapists and pharmacists, with practical hands-on experience. Family physicians have been very receptive to the sessions with Patient Partners as it enables them to get a better history and information about the patient's condition.

Evaluation of the work of Patient Partners with student and postgraduate trainees show that one session lasting one and a half hours can result in a 33 per cent improvement in musculoskeletal skills and that these newly-acquired skills can be maintained for at least three months.

The Patient Partners program has potential for use as a model in other areas such as AIDS, cardiology, diabetes, and neurology.

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