



THE ARTHRITIS RESEARCH CENTRE OF CANADA
ANNUAL GENERAL MEETING – THURSDAY, SEPTEMBER 10, 2012

ANNUAL REPORT OF THE SCIENTIFIC DIRECTOR
JULY 2011 – JUNE 2012

The past year has been challenging and highly successful. **Paul Fortin** was appointed an ARC Research Scientist and ARC expanded to the Université de Laval in Quebec. ARC's name was changed to The Arthritis Research Centre Society of Canada/Arthrite-recherche Canada. With the appointment of **Cheryl Barnabe**, ARC Calgary now has a second Research Scientist. Four ARC Trainees received their degrees. ARC Scientists and Trainees received a significant amount of funding from multiple agencies. Appended are tables outlining operating grants awarded to ARC scientists for peer-review research projects (Appendix I); a list of publications (Appendix II); and, the Consumer Advisory Board annual report (Appendix III), all for the period of July 2011-June 2012.

TRAINEES

Trainee Grants and Awards

Allison Ezzat (supervisors: **Linda Li** and **Jolanda Cibere**) was awarded the Physiotherapy Foundation of Canada-Dominion of Canada Scholarship. This award is given to one physiotherapist in Canada who is in graduate research training. Ms. Ezzat's Masters thesis studied the role of occupational activities in knee osteoarthritis in men and women. Previous research has shown that certain activities such as kneeling and squatting are associated with knee osteoarthritis in men; but the evidence was not clear in women due to the definition of occupation in older studies. Using Dr. Cibere's Knee Osteoarthritis Cohort, Ms. Ezzat will be able to add new insight to this area.

Claire Barber (supervisors: **Deborah Marshall**, **John Esdaile**) was awarded a UCB-Canadian Rheumatology Association-The Arthritis Society Research Fellowship. The title of her proposal was "Analysis of preventable infections in patients with systemic autoimmune rheumatic disease (SARD)". She had valuable input from her mentor, **Paul Fortin** (Université de Laval), as well as from **Diane Lacaille**, **Antonio Aviña** and Louise Bergeron of the Canadian Arthritis Network's Consumer Advisory Council.

Charles Ratzlaff received a Michael Smith Foundation for Health Research post-doctoral award to study at the Brigham Women's Hospital (supervisors: Jeff Duryea, a radiologist and **Matthew Liang**). He is investigating the impact of femoroacetabular impingement and physical activity on hip pain and osteoarthritis. Femoroacetabular impingement, caused by subtle deformities and/or muscle imbalance that cause early bony contact during hip flexion (e.g., sitting, hockey, soccer, cycling) in young adults can cause hip joint damage. It has been postulated as the leading cause of hip osteoarthritis.

Marko Yurkovich, a Master's student at ARC (supervisor: **Antonio Aviña**, **Diane Lacaille**), was awarded the **Philip S. Rosen Award** for the best clinical presentation at the Canadian Rheumatology Association's Annual Scientific Meeting in Victoria, British Columbia. His abstract evaluated the validity of instruments used to compare illnesses that typically coexist with rheumatic diseases and predict the risk of outcomes.

Robin Roots, a former Master's trainee at ARC (Thesis committee: **Linda Li** (supervisor), Leslie Bainbridge (Physical Therapy), Helen Brown (Nursing)), was awarded the Allied Health Professional Association **Carolyn Thomas Award** for the best scientific abstract, which was based on her Masters thesis. The award was

presented at the 2012 Canadian Rheumatology Association/Allied Health Professional Association meeting in Victoria. Ms. Roots' abstract entitled, "Understanding rural rehabilitation practice: Perspectives from occupational therapists and physical therapists in rural and remote British Columbia" highlighted the uniqueness of 'rural general practice' for physiotherapists and occupational therapists. Her results showed that access to continuing education and mentoring, rather than financial incentives, were critical to recruitment and retention in rural and remote areas.

Cheryl Barnabe received a grant from the MSI Foundation, an Alberta-based health research funding organization. Dr. Barnabe will use the Alberta Biologics Pharmacosurveillance Program Registry to determine the clinical outcomes of biologic therapies for rheumatoid arthritis in the Aboriginal population of Alberta. The outcomes assessed will include whether the specific concerns for biologics are similar in aboriginal and non-aboriginal populations. The economic benefits of treatment, including the healthcare system costs associated with biologic therapies, will be determined. Dr. Barnabe's co-investigators include Brenda Hemmelgarn and Liam Martin (University of Calgary), and Walter Masksymowych (University of Alberta).

Cheryl Barnabe's application titled "Arthritis in First Nations People in Alberta: Prevalence and health care utilization" was funded by the Canadian Institutes of Health Research. Co-investigators included Brenda Hemmelgarn (University of Calgary), Sasha Bernatsky (McGill), **John Esdaile**, **Charlie Goldsmith**, Lawrence Joseph (McGill), and Christine Peschken (University of Manitoba). This study is using provincial administrative data to calculate for the first time the frequency and health resource use related to both inflammatory arthritis and osteoarthritis in the First Nations population of Alberta and compare it to the same data in the non-First Nations population. Arthritis is thought to be more severe in First Nations people, and there are suspected inequities in accessing appropriate arthritis care. The study will compare the rates of primary care physician visits, specialist visits, hospitalizations and joint replacement surgeries for arthritis conditions between the First Nations and non-First Nations populations.

Cheryl Barnabe's application titled "'The window of opportunity': Seizing the opportunity for positive lifestyle modifications in early inflammatory arthritis" was funded by the Canadian Rheumatology Association's Canadian Initiative for Outcomes in Rheumatology Care. Patients with early rheumatoid arthritis may be highly motivated to achieve healthy lifestyle behaviors at the beginning of their disease process. Dr. Barnabe will randomize patients to an intervention group, who will receive personal instruction on physical activity and dietary recommendations, and a standard care group. She will identify benefits in body composition, physical activity participation, physical fitness and adherence to diet recommendations over six months.

Nick Bansback, an ARC Trainee, received funding from the Arthritis Society for his study titled "Promoting preference-based informed decision-making: A proof-of-concept study evaluating the effect of an enhanced decision aid in adults choosing between medications for knee osteoarthritis". **Jolanda Cibere**, **Linda Li** and **Carlo Marra** are co-investigators. Dr. Bansback will put iPads into a number of pharmacies in Vancouver where people with suspected or diagnosed knee osteoarthritis will be recruited. He will test an App developed to improve decision making for over-the-counter medications. Specifically, he will try to help people make decisions that are aligned with their own preferences. He will compare this to usual care without the App.

Helia Sillem, a former Master's student at ARC, (supervisor: **Catherine Backman**), received the 2011 "First Time Writer's Award" from the Journal of Hand Therapy for her paper based on her Master of Science thesis. This follows on the heels of her receiving "Best Scientific Paper" when she presented the work at the 2010 conference of the American Society of Hand Therapists. The clinical trial showed that both custom-work and off-the-shelf types of splints provide pain relief and improve hand function for people with thumb osteoarthritis, with the custom-made splint offering better pain relief than the off-the-shelf version. Thumb osteoarthritis most commonly affects middle-aged women; the majority of study participants were women, with an average age 62 years. The thumb splints were typically used by participants to relieve pain enable specific activities like driving, gardening, golfing and housework – activities that require the hand to grasp tools or objects.

Trainee Degrees

In July 2011, **Chuck Ratzlaff** (supervisor: **Jacek Kopec**) defended his doctoral thesis titled “Lifetime physical activity and osteoarthritis”. In his doctoral thesis, Dr. Ratzlaff showed that lifelong physical activity is generally safe for the hip and knee, and the promotion of exercise as a major public health initiative should continue without concern for increased rates of osteoarthritis. However, those individuals with very high physical loads on the hip and knee at work, including housework, and those with sports-related injuries are at risk for osteoarthritis and should be targeted for prevention programs. He also reported several novel findings, including that lifetime physical activity in women was higher than men, driven largely by household activity. This may explain why women have more knee osteoarthritis than men. His thesis was also the first to report that better coordination may play a role in protecting against knee osteoarthritis.

In July 2011, **Dr. Cheryl Barnabe**, then an ARC trainee in Calgary, successfully defended her Master’s thesis titled “Assessment of bony damage using high resolution peripheral quantitative computed tomography in rheumatoid arthritis” (supervisors: Susan Barr, Martin Verhoef, Liam Martin and Steven Boyd). Researchers are working to identify imaging techniques that give more information about bony damage in rheumatoid arthritis than the standard x-ray. Dr. Barnabe determined that high-resolution peripheral quantitative computed tomography could provide precise measures of joint space narrowing, bone density, and bone microarchitecture around the small joints of the hand, and found more erosions using high-resolution peripheral quantitative computed tomography than using standard x-rays.

Harpreet Chiina successfully defended her Master’s thesis in April 2012 (supervisor: **Diane Lacaille**). She studied the effectiveness of academic detailing at influencing the drug prescription behaviour of family physicians. The thesis committee and external examiner praised Ms. Chiina for her excellent presentation at the defense, noting how she had managed to succinctly and elegantly present the essential elements of a complex thesis. They also noted the broad breadth of her thesis, which they described as beyond a Master’s level, with elements of qualitative and quantitative methodology as well as a systematic review.

Natalie McCormick has successfully defended her Master’s thesis (supervisors: **Carlo Marra, Antonio Aviña**) entitled “The health resource utilization and economic burden of systemic autoimmune rheumatic diseases”. Her study used BC administrative data and demonstrated current medical costs of \$6090/year for people with these conditions. The examiners commended Ms. McCormick on her thorough data analysis. She also received a scholarship from the Faculty of Pharmaceutical Sciences to commence her doctorate this summer (supervisors: **Carlo Marra, Antonio Aviña**).

Summer Studentships

Marko Yurkovich (supervisors: **Diane Lacaille, Antonio Aviña**) was awarded a Canadian Rheumatology Association-Roche Research Studentship. Marko is a second year medical student who did a systematic review of instruments used to measure complications of arthritis in administrative data (government databases).

Leslie Chin, a first year medical student, was awarded a Canadian Rheumatology Association-Roche Research Studentship and worked with **Jolanda Cibere**. He evaluated physical activity in the early knee osteoarthritis cohort study. He determined how frequently people with knee pain reduce physical activities as a result of knee pain and what the predictors of physical activity reduction are.

Erin Bambury, a second year Physical Medicine student, did a five week summer placement at ARC. Supervised by **Linda Li**, Ms. Bambury was involved in the following projects: ANSWER (assisting with patient recruitment to test a methotrexate decision aid), ERAHSE-2 (interviewing patients who are recently diagnosed with rheumatoid arthritis), and the OPEN (assisting with the online tool development).

Dr. Megan Hiltz, a Rheumatology Fellow, did her fellowship research project under the supervision of **Diane Lacaille**. She evaluated the impact of treatment with rituximab (a new biological agent) in rheumatoid arthritis by performing a chart review of the infusion clinic at the Mary Pack Arthritis Program.

Dorothy Kuk did a Canadian Rheumatology Association funded summer studentship under the supervision of **Diane Lacaille**. She performed a systematic review of self-management programs for Aboriginal people.

April Leung, 2nd year MPT student, did a research placement at ARC that was funded by a Canadian Institutes of Health Research Professional Student Award. April worked with **Linda Li** and **Lynne Feehan** to analysis the accelerometer data to study the relationship between sedentary behaviours and health outcomes in rheumatoid arthritis patients.

Alvin King was awarded a Canadian Rheumatology Association Summer Research Program award worked with **Jolanda Cibere**.

RESEARCH

Grants Funded

Linda Li received funding from the Canadian Institutes of Health Research for her study titled "Capitalizing on the teachable moment: the OPEN (Osteoarthritis Physical Activity & Exercise Net) for improving physical activity in early knee osteoarthritis". Co-investigators on the study include **Jacek Kopec**, **Jolanda Cibere**, **John Esdaile**, Sydney Lineker (The Arthritis Society), Allyson Jones (University of Alberta), Scott Lear (Simon Fraser University), Valorie Crooks (Simon Fraser University), Ryan Rhodes (University of Victoria), and James Pencharz (Credit Valley Hospital, ON). Linda and her team are developing and testing an interactive website to see if it can increase physical activity in people with early knee osteoarthritis. This project directly targets physical inactivity at a time when the joint damage tends to be mild, and when people are more motivated to adopt a healthy behaviour. If the website is found to be effective in improving physical activity, it opens further opportunities to promote early diagnosis and to implement lifestyle interventions.

Michael Hunt, an ARC Affiliate Scientist, received a grant from the BC Sports Medicine Research Foundation for his study titled "Biomechanical differences in patients with femoroacetabular impingement". Dr. Mike Gilbert (UBC) is co-investigator on the study. Femoroacetabular impingement is a common structural anomaly of the hip joint that prevents full range of motion and causes physical dysfunction and pain. Individuals with femoroacetabular impingement report difficulty in performing many functional tasks associated with activities of daily living, resulting in significant reductions in quality of life. Though the common functional limitations are well known (for example, difficulty with stair climbing, squatting, and lunging), very little is known about the magnitude of these limitations. A lack of research in quantifying functional differences between those with and without femoroacetabular impingement has limited treatment for the condition. The study proposes to conduct the most thorough biomechanical examination of functional impairments in this patient population to-date.

Aslam Anis received funding from the Canadian Rheumatology Association's Canadian Initiative for Outcomes in Rheumatology Care for his grant titled "From prediction to proof: Using linked data to observe reductions in rheumatoid arthritis costs following expansion of biologic therapies". **Diane Lacaille** and **Nick Bansback** are co-investigators. Until now, no study has aimed to directly observe reductions in health resource use and costs associated with the use of biologics in rheumatoid arthritis. They will analyze the health resource use of a cohort of 36,000 rheumatoid arthritis patients. This is a powerful and expedient means to determine the association between biologics, health resource use, and costs. This study will evaluate the evidence of the possible cost savings achieved by reduced health care use due to the clinical benefit from biologics. This is crucial to advocating for the long-term funding of biologics.

Aslam Anis was also funded by the Canadian Institutes of Health Research for his application titled “The impact of poor health and absenteeism on work productivity in Canada: Evidence from linked employee-employer data”. Co-investigators include Simon Woodcock and **Wei Zhang**. The objectives of this research are to evaluate the impact of poor health on work productivity in Canada and to test whether wage correlates with productivity loss.

Diane Lacaille was awarded a 5-year grant by the Canadian Institutes of Health Research for her grant titled “A randomized controlled trial evaluating the effectiveness of the Making It Work program at preventing work loss and improving at work productivity in employed people with inflammatory arthritis”. Arthritis is the most common health reason why Canadians have to stop working. With a multidisciplinary team of experts, health care professionals, and people with arthritis, Dr. Lacaille developed the program entitled “Employment and Arthritis: Making it Work” to help people with arthritis deal with employment issues. The program consists of five self-directed eLearning modules aimed at enhancing self-management of work-related problems, on-line group meetings with other participants to discuss work-related issues and practice the skills and techniques learned in the on-line modules, and individualized assessments by employment-related health professionals: 1) an ergonomic assessment by an occupational therapist; and 2) job retention vocational counseling. She has begun a national randomized controlled trial that will prove whether or not the Making It Work program is effective at improving people’s ability to perform their job and remain employed.

Co-investigators include **Linda Li, Catherine Backman, Charlie Goldsmith, John Esdaile, Carlo Marra,** Monique Gignac (U of T), **Cheryl Koehn,** Dianne Mosher (UC), J. Carter Thorne (U of T), Judy Village, and various student teams from the Centre for Digital Media. Collaborators include ARC CAB members **Otto Kamensek** and **Pam Montie,** Janet Finlayson (Vocational Rehabilitation Counselor and former Director of GF Strong), Alice Klinkhoff, Andrew Chalmers, Angela How, Graham Reid, Jim Dunne, John Kelsall, **Kam Shojania,** Raheem Kherani, Barry Koehler, Shahin Jamal, The Arthritis Society, Vandana Ahluwalia and Vaughan Marshall. She has had tireless support from **Pam Rogers,** who has a Masters in documentary film and adult education.

Diane Lacaille received funding from the Canadian Rheumatology Association’s Canadian Initiative for Outcomes in Rheumatology Care to develop a Patient Passport for rheumatoid arthritis that will encourage patients to be more actively involved in the management of their disease. She will be working with co-investigators Paul Adam, **Linda Li, Anne Townsend, Charlie Goldsmith,** Bev Mitchell, Gwen Ellert and CAB member **Nadia Prestley** to develop and pilot test the tool. The tool will allow patients to track their own disease activity, recognize early warning signs, and ultimately create a more collaborative decision-making process between patients and their physicians.

The 2011 Roundtable On Arthritis Research (ROAR VI) team was awarded funding by the Canadian Institutes of Health Research for their grant titled “Empowering people to take control of their arthritis”. The Principal Investigator was **Allen Lehman,** with major input from ROAR’s CAB leaders **Colleen Maloney, Nadia Prestley, Lianne Gulka** and other CAB members. Speakers named in the application included ARC Board member and President of Arthritis Consumer Experts, **Cheryl Koehn,** as well as ARC staff **Lindsay Wall Burns, Jolanda Cibere, John Esdaile, Michael Hunt, Diane Lacaille** and **Linda Li,** and CAB member **Otto Kamensek.** ROAR VI was also supported by The Arthritis Society of BC, the Government of BC, the Vancouver Sun, Lupus BC, the Scleroderma Association of BC, the Vancouver Community Group, Hang Tough Community Group, BC Biomedical, Smiley’s Fundraiser for Arthritis Research and Tom Harris Cellular-TV-Internet. ROAR’s goal is to present current research on arthritis, engaging 250 participants in meaningful discussions about what is known about arthritis and to articulate key messages.

Marie Westby and co-investigator **Catherine Backman** received funding for a Canadian Institutes of Health Research Café Scientifique. A Café Scientifique is a public presentation of research results by an Expert Panel with lots of time for questions from the public, sort of like a mini-ROAR. The topic was “Hip and knee replacement surgery and rehabilitation in BC: ‘The best place on earth?’” Additional panel members included Dr. Ramin Mehin (a reconstructive surgeon in the Fraser Health Authority studying patient outcomes), Ms.

Pamela Fayerman (a Vancouver Sun Health Reporter) who discussed navigating the health care system, and the **Hon. Pat Carney** who covered patient engagement in surgery and rehabilitation.

Antonio Aviña was awarded a grant from GlaxoSmithKline for his proposal entitled “The epidemiology of systemic lupus erythematosus”. Using administrative health databases from BC, the research team will characterize the economic burden of systemic lupus erythematosus and assess the associated health risks including acute myocardial infarction, cerebrovascular accidents and osteoporotic fractures.

Diane Lacaille is a co-investigator (principal investigator: Dorcas Beaton, University of Toronto) on a grant titled “Interpretability of measures of worker productivity: A study defining meaningful benchmarks and changes in scores for use in clinical trials and clinical practice in arthritis”. **Pamela Montie**, a member of ARC’s Consumer Advisory Board, is also a co-investigator on this grant. Funded by the Canadian Arthritis Network, this project is an international collaboration of Canada, the United Kingdom, the Netherlands, Sweden and France. The study will survey 200 employed people with arthritis to determine what level of at-work productivity is “good enough” and what amount of change is “important”. These benchmarks will be applied in future research, clinical trials and day to day clinical practice.

Shauneen Kellner and **Helen Prlic** received funding from the Ministry of the BC Solicitor General (BC Gaming Commission) to support the ACTION (Arthritis Connection through Information, Outreach, Network) program. This funding has given ARC the ability to get our research results into the hands of the public via ROAR, our research videos and the website. ARC’s success in knowledge translation is getting increased recognition.

Catherine Backman, Anne Townsend, and Paul Adam received funding from the Canadian Institutes of Health Research for their project “Exploring e-health and multi-morbidity”. Using an ethics framework to guide the analysis, the project will address questions like: 1) How and in what ways does the Internet support people to live better lives with chronic illness?; 2) How may e-health strategies (internet sites, blogs, support groups, decision aids) change the patient-health care provider relationship?; and, 3) What are healthcare providers’ views about e-health? Collaborators are CAB members **Sheila Kerr** and **Gordon Whitehead**; ARC scientists **Linda Li** and **Kam Shojanja**; and, Michael McDonald (W. Maurice Young Centre for Applied Ethics, UBC), and Sally Wyke (Institute of Health & Wellbeing, University of Glasgow).

Salary Awards and Scholarships

Linda Li, the Harold Robinson/Arthritis Society Chair in Arthritic Diseases and Canadian Institutes of Health Research New Investigator, was awarded yet another salary award - a Health Services Research Scholarship from the Michael Smith Foundation for Health Research. This scholarship is an 8-year award. Dr. Li’s research is optimizing the health of Canadians with arthritis by harnessing the power of digital media to deliver research knowledge when and where it is needed. Digital media offer a range of applications – social networking tools, interactive games, animation, and video/audio recordings – that provide tremendous flexibility for delivering “just-in-time” information to improve the use of effective treatments. Dr. Li’s work includes building and evaluating interactive tools that deliver unbiased treatment information and programs that coach people to be physically active. Dr. Li is the foremost authority in the world for this topic in arthritis.

Jolanda Cibere was awarded a 4-year Arthritis Society Investigator Award. This was the first competition that the Society held in five years. She previously held a Canadian Institutes of Health Research Clinician Scientist Award as both a Research Fellow and Research Scholar (UBC Faculty member). This new award is great acknowledgement of Dr. Cibere’s pioneering work in osteoarthritis.

AWARDS/DISTINCTIONS/PROMOTIONS

Antonio Aviña received a travel award from the Kirkland Foundation in New York to attend the Mary Kirkland Center for Lupus Research Scientific Conference and deliver a presentation entitled “Direct medical costs for systemic lupus erythematosus in British Columbia”.

Linda Li was promoted to Associate Professor of Physical Therapy with tenure at the University of British Columbia. This is an achievement that requires one be ‘superior’ in every aspect of one’s research and teaching. The ARC Board appointed **Linda Li** to the position of Senior Scientist at ARC. Criteria for a Senior Scientist include a position of Associate Professor, and that the person: 1) Have received considerable competitive research funding; 2) Have conducted original arthritis research of exceptional merit; AND, 3) Have contributed to the public and academic success and recognition of the Arthritis Research Centre of Canada.

Linda Li was appointed an Associate Member at the Peter Wall Institute for Advanced Studies. This program is highly competitive and for the first time this year the Associate member status was added to take advantage of the talents of additional high quality faculty in meeting the program objectives of fostering collaborative interdisciplinary research.

Jolanda Cibere was promoted to Associate Professor of Medicine at the University of British Columbia. It is a huge accomplishment and recognizes her significant contributions to osteoarthritis research that have received international recognition for the high quality and originality of the science. Again, this requires one be superior – above average is not good enough.

At the Canadian Rheumatology Association (CRA) 2012 annual meeting, the CRA Young Investigator Award was awarded to **Jolanda Cibere**. The winner must have “performed landmark research in Rheumatology as judged by peers and citations” (citations are how many times your scientific papers are cited in papers by scientists other than yourself). This award is not necessarily given annually and is the premier award for a young arthritis scientist in Canada.

In January 2012, **Catherine Backman** accepted the position of the Head, Department of Occupational Science & Occupational Therapy, University of British Columbia. We know Dr. Backman best for her research – she has held over \$7.4 million of research grant funding (as PI and/or Co-I). Outside of ARC she has an international reputation as a teacher. She has won numerous awards and honours including a Killam Teaching Prize, the Muriel Driver Memorial Lectureship Award from the Canadian Association of Occupational Therapists and a Distinguished Scholar award from the American Association of Rheumatology Health Professionals.

Aslam Anis was one of three recipients to receive the Award for Excellence in Mentoring Early Career Faculty from the Faculty of Medicine at UBC. This award recognizes faculty members who have formally been identified as mentors and who exemplify a deep commitment to fostering the professional and personal development of faculty in the early stages of their academic careers.

Cheryl Barnabe was appointed an ARC Research Scientist by the ARC Board. She was chosen because of the tremendous impact of her work on the lives of First Nations People in Alberta who are living with arthritis. She has also made major contributions to developing new technologies that will assist early diagnosis and appropriate intervention for inflammatory arthritis.

John Esdaile was awarded the IMHA Research Ambassadors Knowledge Translation Award by the Canadian Institutes of Health Research’s Institute of Musculoskeletal Health and Arthritis (IMHA). This award is given to the Principal Investigator who submitted the best lay abstract in a competition among IMHA-funded grants and awards. The lay abstract for the CIHR Team in IMPAKT-HIP - Investigations of Mobility, Physical Activity, and Knowledge Translation in Hip Pain was chosen because it was considered well written, easily understood by a

lay audience, comprehensive and highly informative. The review was done by non-scientist consumers identified by health charities relevant to IMHA.

MISCELLANEOUS

ARC had its first Fellows Circle Event on June 19th, 2012 at the Arbutus Club. There was a great ARC turnout with **Jacek Kopec**, **Catherine Backman**, **Charlie Goldsmith**, **John Esdaile** and **Aslam Anis** attending. **Diane Lacaille**, **Jolanda Cibere**, **Linda Li** and **Antonio Aviña** made posters and were on hand to answer any questions to those attending. ARC staff who helped make it happen included **Shauneen Kellner**, **Christine Basque**, **Erin Carruthers**, **Morgan Barber**, **Nicole Prestley** and **Lisa Singh**. The event was co-chaired by ARC board volunteers, **Céline Pitre** and **Cheryl Koehn**. It was the first of what will be a series of Fellow's Circle events in Vancouver.

ARC QUEBEC

Following a visit to ARC in October by Louis Bessette MD (Laval Rheumatology Program Director), Jacques Brown MD (Head of Rheumatology, Laval), Michel J. Tremblay PhD (Vice-President, Research, Faculty of Medicine), and **Paul Fortin** MD (Professor at the Centre de recherche du centre hospitalier universitaire de Québec), the University of Laval in Quebec City joined ARC. In December, **Paul Fortin** was appointed an ARC Scientist by the ARC Board. Dr. Fortin is well known for his pioneering methodological and clinical research on several diseases, but particularly on systemic lupus erythematosus. Over the course of his career, he has published 167 peer-reviewed articles and has brought in \$32 million as a Principal Investigator and \$9 million as a collaborator or Co-Investigator. The expectation is ever increasing collaboration with the other ARC centres. Dr. Fortin has had several meetings with the Consumer Advisory Board and hopes to expand this to Quebec.

CLINICAL TRIALS

After 12 years of excellent clinical trials research at our centre, ARC is closing its clinical trials department. ARC supported clinical trials to bring access to the new biologic agents to people with arthritis. By participating in a trial a patient could gain access sometimes years before the agent became available for public use. The new biologic agents have greatly altered the outcomes of people with inflammatory arthritis. Yet, with more than then now available, the need to gain access to new agents as part of a trial has diminished. Much fewer patients are referred and ARC, which was the last group doing trials in BC, has had to close the unit. ARC is continuing the good work of looking for solutions to the everyday challenges that face people with arthritis.

Countless patients have benefitted from the work of everyone involved. A huge thanks goes to **Nancy Ellis**, **Selena Roy**, **Janet McKenney** and **Otto Kamensek** for their contribution to running the department and caring for the patients that were a part of it. When **John Esdaile** became scientific director of ARC, **Kam Shojania** was appointed the first Director of Clinical Trials. He did much to put the group on a firm footing. Drs. **John Esdaile**, **Jan Dutz**, **Simon Huang**, **Ken Blocka**, **Andrew Chalmers** and **Alice Klinkhoff** supported the staff and patients.

UPDATE ON STAFF

Lenny Kishi was hired as the Finance/Administrator for ARC. She comes to ARC with an amazing list of credentials, including having her CGA almost completed. Most recently, she was with the Girl Guides of Canada for seven years. She has proved herself invaluable.

Joanna Ye was hired as a part-time Research Assistant and is working on the IMPAKT-HIP project under the direction of **Linda Li**. She provides translation services (English-Chinese) to aid recruitment, data collection, knowledge translation and report writing for the IMPAKT-HiP project, which aims to determine the cause of hip pain and its link to osteoarthritis. Ms. Ye earned a Master's degree in Public Administration and Public Policy from the University of Guelph. Before joining Dr. Li's team, she was involved in researching human rights issues at schools, health centres and wider communities, as part of a 2010 study conducted by Commission on Human Rights and Administrative Justice in Ghana.

Erin Carruthers is ARC's new Research Secretary in Vancouver. This position is a shared position as she splits her time by working as the ARC Research Secretary for two days per week and then working exclusively for **Linda Li** and **Diane Lacaille** each a day and a half a week. As ARC's Research Secretary, Ms. Carruthers provides support for the administrative and research team. As a part of Dr. Li's team, she currently coordinates a study to test a new imaging system that has the potential to detect early bone damage in the hands of people with rheumatoid arthritis. As a part of Dr. Lacaille's team, she is involved in studies assessing access to care for people with rheumatoid arthritis, and the development of a web-based program to help people with arthritis stay employed. She graduated with a Bachelor of Science in Biology and Psychology from the University of Victoria.

Aliya Haji was hired as a Research Assistant for **Hyon Choi** and **Jan Dutz**. Her primary responsibility is to coordinate a clinical study on the genetic, biological, and environmental factors that predict arthritis in patients with psoriasis. **Ms. Haji** graduated with a Bachelor of Science with Honours from the University of British Columbia, and has been actively involved in community research initiatives with the Canadian Cancer Society, Dr. Peters AIDS Foundation, and ICORD (International Collaboration On Repair Discoveries).

Morgan Barber is working as a Research Assistant on the IMPAKT-HIP project replacing **Jacquie Simatovic**. Ms. Barber is responsible for recruitment and data collection of the IMPAKT-HIP Prevalence and Case-Control studies. She has an Honours Specialization Bachelor Degree in Biology from the University of Western Ontario.

NOTE FROM THE SCIENTIFIC DIRECTOR

This past year has seen ARC become full independent. While stressful, the year ended on a high note. Great thanks is due to the ARC Board for untiring work that contributed importantly to this tremendously positive outcome. A special acknowledgement for extraordinary commitment goes to **Dan Parlow**, the ARC fundraising committee led by **Céline Pitre** and **Cheryl Koehn**, and ARC's Executive Director, **Shauneen Kellner**. **Lisa Singh** has carried an extra large burden.

ARC's success results from the incredible work of all its faculty, staff and volunteers. With such an extraordinary team, now across Canada, the future has never been more exciting for arthritis research.

Signed:



John M. Esdaile, MD, MPH
Scientific Director, Arthritis Research Centre of Canada

Appendix I
FUNDING

SCIENTIST FUNDING				
Funding Source	Project Title	Funding Period	PI	Co-Is
CIHR	CIHR Skin Research Training Centre	2007 – 2013	H Lui	J Dutz, J Esdaile , A Ghahary, H Larjava, G Li, J Shapiro, Y Zhou
CIHR	Total Joint Replacement: Strategic Management for Timely Treatment	2008 – 2012	T Noseworthy	C Frank, M Carter, C Sanmartin, G Hawker, DA Marshall , B Conner-Spady, C DeCoster, E Bohm, M Dunbar, S Oh, D Lorenzetti
AIHS	Creating Bone and Joint Health from the Bedside to the Bench and Back Again	2008 – 2012	C Frank	T Noseworthy, DA Marshall , B Ritchie, W Maksymowych, D Hart, M Fritzler, W Herzog, J Dunn, R. Plotnikoff, R Zernicke
NIH	Genetics of Gout	2008 – 2012	H Choi	
CIHR	Canadian Longitudinal Study on Aging: Mobility Initiative	2008 – 2013	P Raina	J Kopec
CIHR	The CIHR team in Driving in Older Persons (CanDRIVE II) Research Program	2008 – 2013	MG Man-Soon-Hing, S Marshall	P Boase, A Byszewski, M Bedard, AB Cranney, LC Li , BL Mazer, NA Korner-Bitensky, G Naglie, JA Polgar, MM Porter, MJ Rapoport, IG Stiell, HA Tuokko, BH Vrkljan, GA Wells
CIHR	Community Alliances for Health Research and Knowledge Exchange in Pain	2008 – 2013	JL Henry	P Tugwell, LC Li , J Watt-Watson, JC MacDermid, JN Lavis, LJ Woodhouse, PE Solomon, MC Law,

Appendix I continued
FUNDING

Funding Source	Project Title	Funding Period	PI	Co-Is
CIHR	CIHR Team in Microsimulation Modeling: Simulation Technology for Applied Research	2008 – 2013	JKopec	M Abrahamowicz, D Buckeridge, P Fines; W Flanagan, S Harper, J Lynch, D Manuel, J Oderkirk, M Wolfson
CIHR	Canadian HIV Trials Network	2008 – 2013	M Schechter, A Anis , J Montaner	J Angel, B Cameron, C Cooper, MJ Gill
CIHR	Centre for Hip Health and Mobility: A Team Approach to Mobility in Vulnerable Seniors	2008 – 2014	K Miran-Khan, LC Li , TY Liu-Ambrose, CA Marra , HA McKay	M Ashe, PM Brashea, ML Cook, MS Snyader, JJ Eng, JM Fitzgerald, DA Hart, JA Kopec , JA Kornelsen, VJ Scott, RE Rhodes, H Feldman, B Lillies, AL MacKay, JE Mcelhaney
CIORA	Creation of a Validated Web-Based Curriculum in Rheumatology: Improving the Education of our Allied Health Practitioners	2009 – 2012	A Thompson	M Thompson, LC Li , Lupton T, Avern H, Harris R
NIH	Clinical and Cost-Effectiveness of Biologics in Rheumatoid Arthritis	2009 – 2012	H Choi	
MOHLTC	The Evaluation of a Nurse Practitioner-Led Inter-Professional Pain Management Team in Long-Term Care	2009 – 2012	S Kassalainen	A DiCenso, F Donald, R. Martin-Misener, DA Marshall , Lisa Dolovich, Kevin Brazil, Thomas Hadjistavropoulos, Noori Akhtar-Danesh
CIHR	Enhancing Existing Capacity in Applied Health Services and Policy Research in Western Canada	2009 – 2013	S Sheps, M Barer	A Casebeer, H Quan, DA Marshall

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Funding Source	Project Title	Funding Period	PI	Co-Is
CIHR	CIHR Team for Models of Care in Arthritis (MoCA)	2009 – 2014	AM Davis, EM Badley	CA Cott, LC Li , GA Hawker, MD Landry, CB Frank
CAN	Falling Through the Cracks: Using a Multidisciplinary Strategy to Improve DMARD Use in Rheumatoid Arthritis	2010 – 2012	C Marra	D Lacaille , LC Li , J Kaczorowski K Grindrod
CHHM	British Columbia Osteoarthritis Registry (BCOAR)	2010 – 2012	JKopec	
CAN	Burden and Co-morbidity of Systemic Autoimmune Rheumatic Diseases	2010 – 2012	A Avina-Zubieta	S Bernatsky, D Lacaille , J Esdaile , M Abrahamowicz, C Marra , JKopec , A Lehman
CIHR / TAS	A Decision Support Tool for Planning Integrated Sustainable Health Services for Patient with Osteoarthritis of the Hip and Knee	2010 – 2012	DA Marshall	C Frank, T Noseworthy, P Rogers, T Rohleder, M Carter, C Maxwell, D Mosher, S Vanderby
CHSRF / Health Canada	A Systematic Review of the Effectiveness of Advanced Practice Nurses: Patient and Provider Outcomes	2010 – 2012	F Donald, A DiCenso	DA Marshall , M Carter, R Martin-Misener, S Kassalainen, D Bryant-Lukosius
NHMRC (Australia)	Neuromuscular Exercise: A Novel Treatment to Reduce Symptoms and Joint Load in Medial Knee Osteoarthritis	2010 – 2012	KL Bennell	P Hodges, E Roos, RS Hinman, TV Wrigley, MA Hunt
AIHS	Planning a Sustainable System for the Delivery of Integrated Care for Patients with Osteoarthritis (OA) of the Hip and Knee: A Pilot Proposal Using System Dynamics Modeling	2010 – 2013	DA Marshall	

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Funding Source	Project Title	Funding Period	PI	Co-Is
CIHR	Resurfacing as an Alternative to Total Hip Arthroplasty - Knowledge Synthesis of the Causes and Rates of Early Failure	2010 – 2013	DA Marshall	C Frank, T Noseworthy, D Lorenzetti
CAN	Administrative Data for Rheumatic Disease Research and Surveillance	2010 – 2013	S Bernatsky, A Avina-Zubieta, D Lacaille, L Lix	
CIHR	Striking a Balance: Health & Employment Outcomes Related to Role Overload & Role Balance in People with Arthritis	2010 – 2013	M Gignac	C Backman, E Badley, D Beaton, D Lacaille
NHMRC (Australia)	Addressing Pain in Knee Osteoarthritis: Physiotherapist Delivered Exercise and Cognitive Behavioural Intervention	2010 – 2013	KL Bennell	FJ Keefe, G Jull, M Nicolas, MA Hunt, C Bryant
NIH / MSFHR	Leadership and Health System Redesign	2010 – 2013	G Dickson	A Anis, A Backman, R Baker, C Black, R Blais, JL Denis, J Lavis, R Lindstrom, D Persaud, D Philippon, R Tamblyn
CIHR	Natural History of Femoroacetabular Impingement. CIHR Team in IMPAKT-HIP sub-project #5	2010 – 2015	JCibere	JEsdaile, J Kopec, R Poole, LC Li, D Wilson, B Forster, M Abrahamowicz, H Wong
CIHR	CIHR Team in IMPAKT-HIP – Investigations of Mobility, Physical Activity, and Knowledge Translation in Hip Pain	2010 – 2015	JEsdaile	LC Li, JCibere, C Emery, B Forester, D Garbuz, M Gilbert, J Kopec, A Lehman, A Mackay, H McKay, D Wilson, H Wong, M Abrahamowicz
CIHR	Empowering Patients as Active Partners in Their Care: Lupus Interactive Navigator (LIN)	2011 – 2012	P Fortin	E Aghdassi, S Barr, A Avina-Zubieta
Vancouver Foundation	Development and Pilot Testing of a Culturally Relevant Family-Based Self-Management Program for First Nations Peoples	2011 – 2012	A Lehman	P McGowan, LC Li, JEsdaile, D Lacaille, C Backman, A Avina-Zubieta

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Funding Source	Project Title	Funding Period	PI	Co-Is
CIORA	Supporting Effective Consumers: Using a Decision Aid to Improve Patient's Decisions About Methotrexate Use in Rheumatoid Arthritis.	2011 – 2012	LC Li	A Jones, D Lacaille , S Brooks E Yacyshyn
CIHR	Can the Otago Falls Prevention Program be Delivered by Video? A Feasibility Study	2011 – 2012	T Liu-Ambrose	J Davis, LC Li , K Miran-Khan
CIHR	Seizing the Opportunity: Planning & Developing Future Directions in Aging Research Using the CLSA	2011 – 2012	T Liu-Ambrose	L Boyd, J Davis, LC Li , H Stewart
BCSMRF	Biomechanical Differences in Patients with Femoroacetabular Impairment	2011 – 2012	MA Hunt	MK Gilbert
UBC	Biomechanics of Femoroacetabular Impingement of the Hip: Comparison with Health Individuals and Changes Following Surgery	2011 – 2012	MK Gilbert, MA Hunt	
CIHR	Promoting Resistance Training to Tone the Aging Body & Mind	2011 – 2012	T Liu-Ambrose	L Bettie, J Davis, LC Li
CIHR	Developing a Framework for the Economic Analysis of Advanced Practice Nurses	2011 – 2012	F Donald	DA Marshall , R Martin-Misener, N Carter, A DiCenso, D Bryant-Lukosius
CIORA	Detecting Inflammatory Arthritis in a First Nations Community	2011 – 2012	C Barnabe	
CIHR	Capitalizing on the Teachable Moment: The OPEN (Osteoarthritis Physical Activity & Exercise Net) for Improving Physical Activity in Early Knee Osteoarthritis	2011 – 2013	LC Li	JCibere , V Crooks, JEsdaile , C Jones, JKopec , S Lear, R Rhodes

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Funding Source	Project Title	Funding Period	PI	Co-Is
GSK	The Epidemiology of Systemic Lupus Erythematosus	2011 – 2013	A Avina-Zubieta	
CIHR	Arthritis in First Nations People in Alberta: Prevalence and Health Care Utilization	2011 – 2013	B Hemmelgarn	C Barnabe , S Bernatsky, J Esdaile , C Goldsmith , L Joseph, C Peschken
CHSRF	Engaging Patients as Collaborators to Improve Osteoarthritis Care in Alberta	2011 – 2013	T Wasylak	DA Marshall , N Marlett, T Noseworthy
CIORA	Detecting Inflammatory Arthritis in a First Nations Community	2011 – 2012	C Barnabe	M Fritzler, H El-Gabalawy, S Mintsoulis, S LeClercq, D Mosher
EULAR	Towards a Patient Global Measure to Assess At-Work Limitations / Productivity Loss in Patients with Inflammatory Arthritis and Osteoarthritis	2011 – 2014	S Verstappen	B Fautrel, S Dadoun, A Boonen I. Petersson, D Lacaille , D Beaton, K Tang, M Gignac
CIHR	RCT Evaluating the Effectiveness of the Making It Work Program at Preventing Work Loss and Improving At Work Productivity in Employed People with Inflammatory Arthritis	2011 – 2016	D Lacaille	C Backman , J Esdaile , M Gignac, CH Goldsmith , LC Li , CA Marra
CIHR	New Statistical Models for Population-based Studies of Comparative Effectiveness and Safety of Medications: Development, Validation and Application	2011 – 2016	M Abrahamowicz	S Bernatsky, J Brophy, D Buckeridge, R Capek, J Delaney W Dixon, R Ionescu-Ittu, D Lacaille , L Levesque, A Levy, Y Moride, L Pilote, R Tamblyn
CAN	Interpretability of Measures of Worker Productivity: A Study Defining Meaningful Benchmarks and Changes in Scores for use in Clinical Trials and Clinical Practice in Arthritis	2012 – 2013	D Beaton	K Tang, P Smith, D Lacaille , R Escorpizo, C Hofstetter, P Montie, S Verstappen, A Boonen

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CIORA	The Window of Opportunity: Seizing the Opportunity for Positive Lifestyle Modifications in Early Inflammatory Arthritis	2012 – 2013	C Barnabe	
CIORA	Access and Utilization of Healthcare for Rheumatoid Arthritis in Aboriginal People in Alberta	2012 – 2013	C Barnabe	
TAS	Promoting preference-based decision making: A proof-of-concept study to evaluate the effect of an enhanced decision aid for medication choices in knee osteoarthritis	2012 – 2013	N Bansback	S Bryan, LC Li , L Lynd, J Cibere , P Brascher, CA Marra
CIORA	Development and Pilot Testing of a Patient Passport for Rheumatoid Arthritis	2012 – 2013	D Lacaille	P Adam, LC Li , A Townsend , CH Goldsmith , B Mitchell, G Ellert, N Prestley
CIHR	Economic Impact for Spondyloarthropathies: Estimates from the DESIR Cohort of Patients with Early, Undifferentiated Spondyloarthropathy	2012 – 2014	S Harvard	A Anis , B Fautrel
CIHR	Exploring E-health Ethics and Multi-Morbidity	2012 – 2014	C Backman	A Townsend , P Adam
AIHS	Aboriginal Albertan's Perceptions of Health Service Delivery for Osteoarthritis and Total Joint Replacement	2012 – 2014	C Barnabe	DA Marshall , A Jones
HSFC	Effectiveness of Fast Muscle Activation and Stepping Training (FAST) on Balance and Mobility Post Stroke	2012 – 2015	SJ Garland	MA Hunt , D Bryant
CIHR	The Scleroderma Patient-Centered Intervention Network (Emerging Team Grant)	2012 – 2017	B Thombs	CA Marra , 30 other investigators

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TRAINEE FUNDING				
Funding Source	Project Title	Funding Period	PI	Supervisors
CAN	Graduate Student Award - Impact of Osteoarthritis on Developing Comorbid Conditions and Mortality in British Columbia, Canada	2009 – 2012	M Rahman	J Kopec
CAN	Postdoctoral Fellowship Award - Incorporating Patients' Values into Preference Sensitive Healthcare Decisions	2010 – 2012	N Bansback	LC Li, S Bryan
CIHR	Cardiovascular and Mortality Impact of Depression Among Individuals with Psoriasis and Psoriatic Arthritis: A Population-Based Study	2010 – 2012	L Wall	J Dutz, H Choi
CAN	Network Scholar - Epidemiology of systemic autoimmune rheumatic diseases	2010 – 2012	A Avina-Zubieta	J Esdaile
MSFHR	Postdoctoral Fellowship - Imaging Early Micro-Structural Bone Changes in the Rheumatoid Hand: A High Resolution-Peripheral Computed Tomography (HR-pQCT) Study in People With Newly Diagnosed RA	2010 – 2012	L Feehan	LC Li, H McKay
CAN	Graduate Student Award	2010 – 2013	B Sharif	J Kopec, A Anis
AIHS	Post-doctoral Fellowship Award - Analysis of Preventable Infections in Patients with Systemic Autoimmune Rheumatic Diseases (SARDs)	2011 – 2013	C Barber	DA Marshall, J Esdaile
CIHR	Frederick Banting and Charles Best Canada Graduate Scholarships - Doctoral Award - Impact of Osteoarthritis on Developing Comorbid Conditions and Mortality in British Columbia, Canada	2011 – 2014	M Rahman	J Kopec

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AIHS - Alberta Innovates Health Solutions; AHPA - Arthritis Health Professions Association; BCSMRF – British Columbia Sports Medicine Research Foundation; CAN – Canadian Arthritis Network; CHSRF – Canadian Health Services Research Foundation; CIORA – Canadian Initiative for Outcomes in Rheumatoid Arthritis; CIHR – Canadian Institutes of Health Research; CRA - Canadian Rheumatology Association; CCO – Cancer Care Ontario; CHHM – Centre for Hip Health and Mobility; HSFC – Heart and Stroke Foundation of Canada; EULAR – European League Against Rheumatism; GSK – Glaxo Smith Kline Inc; MSFHR – Michael Smith Foundation for Health Research; MOHLTC – Ministry of Health and Long Term Care; NCI – National Cancer Institute; NIH – National Institutes of Health; NHMRC – National Health and Medical Research Council (Australia); NCE – Networks of Centres of Excellence; OICR – Ontario Institute for Cancer Research; TAS - The Arthritis Society; PFC - Physiotherapy Foundation of Canada; UBC – University of British Columbia

Appendix II

PUBLICATIONS

1. Alberta Hip Improvement Project, MacKenzie JR, O'Connor GJ, **Marshall DA**, Faris PD, Dort LC, Khong H, Parker RD, Werle JR, Beaupre LA, Frank CB. Functional outcomes for two years comparing hip resurfacing and total hip arthroplasty. *J Arthroplasty* 2012;27(5):750-7.e2.
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exercise in the treatment of varus malaligned knees with medial knee osteoarthritis: a randomised controlled trial protocol. *BMC Musculoskelet Disord* 2011;12:276.

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ABSTRACTS

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