



REPORT TO THE LUPUS SASK BOARD
PEDIATRIC RHEUMATIC DISEASE RESEARCH LABORATORY
DEPARTMENT OF PEDIATRICS
UNIVERSITY OF SASKATCHEWAN
September 17, 2011

1. Where is the research being done?

The research is being conducted in the Pediatric Rheumatic Disease Research Laboratory which is located in the Health Sciences Building within the College of Medicine, University of Saskatchewan. However, our research program is multi-disciplinary with many research scientists, research staff and trainees involved in the program. Thus, research activities are also undertaken within the Royal University Hospital and in association with collaborators in other laboratories including in the Colleges of Veterinary Medicine, Arts and Sciences, Physiotherapy, the Toxicology Research Centre, and the Plant Biotechnology Institute, as examples.

2. Who all is involved with the research (specialists, administration etc.)?

One of the major strengths of our research program is that all the research we do is multi-disciplinary. Approximately 40 local team members representing are involved in our research teams and are affiliated with the following:

- 10 Colleges/Agencies (Medicine, Nursing, Arts and Sciences, Kinesiology, Pharmacy and Nutrition, Veterinary Medicine, Toxicology Research Centre, Vaccine and Infectious Disease Organization, Canadian Light Source, Edwards Business School)
- 22 Departments/Divisions including:
 - o Pediatrics (rheumatology, general pediatrics, cardiology, neonatology, gastroenterology)
 - o Medicine (nephrology, Centre for Health and Safety in Agriculture),
 - o Community Health and Epidemiology,
 - o Medical Imaging
 - o Infectious Diseases
 - o Anatomy and Cell Biology
 - o Obstetrics and Gynecology
 - o Nephrology
 - o Family Medicine
 - o Community Health and Epidemiology
 - o Physiotherapy
 - o Psychology
 - o Veterinary Microbiology

- Environmental Toxicology
- Wilson Centre for Entrepreneurship
- Dietetics
- Computer Sciences

In addition, we have 3 research nurses, 1 research scientist, 1 post-doctoral fellow, 1 data entry research assistant, 1 research technician, and 3 graduate students affiliated with our program.

3. How much time is spent doing the research in one year period?

Our various research projects are ongoing on a full-time basis throughout the year.

4. Are you researching only one project at a time or multiple projects.

Currently we have 21 research projects ongoing as listed below. Of the current projects 14 have direct relevance to lupus (as indicated with an asterisk below).

- BBOP Study (**B**iologically-based **O**utcome **P**redictors in Juvenile Idiopathic Arthritis)*
- PreDICTR Study (**P**renatal **D**eterminants of **I**nflammatory-mediated **C**onditions **T**ransdisciplinary **R**esearch)*
- Diffraction Enhanced Imaging of Growing and Inflamed Joints using Synchrotron Light*
- Population Survey of Childhood Rheumatic Diseases in Saskatchewan*
- Risk and Determinants in JIA (with K. Siminovitch)
- Pain in Early versus Late JIA (with K. Oen)
- LEAP (with C. Duffy *et al*)*
- Metabolomic Profiles in JIA Serum and Synovial Fluids
- Novel Pain and Inflammation Networks (NoPAIN) *
- Oral Vaccine for Treatment of Inflammatory and Autoimmune Disease*
- Use of Administrative Data in Childhood Rheumatic Diseases*
- Vitamin D Status in the Pediatric Population*

Trainee Projects

- Within Day Variability of Pain in JIA (trainee Susan Tupper)*
- Synchrotron Musculoskeletal Imaging (trainee Glendon Rhodes)
- Teenage Attitudes to Participating in Research (trainee Andrea Fong)
- Prenatal correlates of future autoimmune disease (trainee Kate Neufeld)*
- Stressful Life Events Antedating inflammatory disease (trainee Kate Neufeld)*
- Sustainability of Immunization Responses in inflammatory joint disease (trainee Krupal Patel)
- Exposure to smoke induces Heat shock protein 70 (HSP70) Exposure to smoke induces Heat shock protein 70 (HSP70) (With M. Newkirk)
- HMGB1 in Sepsis (Abid Lodhi)*
- Vitamin D Status in Newborns*

5. How long does it take to do a research a project?

This is a difficult question to answer directly. Research is an ongoing process. While a discrete project might take two to six years, on average, the results of a discrete project will then help guide the next phase of that research agenda. Until, for example, we have a cure and are able to prevent diseases such as lupus research will be ongoing.

6. After research is completed, then what?

This is by far the most important question. Over the past several months we have been focussing on developing a strategy for ensuring that all of the research we do is translated promptly and efficiently into action. We are committed to more effectively informing patients and families, our colleagues, our communities, governments and health care administrators what research we are doing, why we are doing, what the results of the research are, and how those results should be translated into action to improve the health and well being of our patients and communities. This process of effectively translating new knowledge to others and acting on our research results is a daunting one but is crucial. We aim to work more closely with organizations such as Lupus SK to enhance the dissemination of our research activities and results.