SUMMARY

Introduction - Clinical

Divisional members provide clinical services on Clinical Teaching Unit (CTU), out-patient clinic coverage, consult service as well as supervision of Internal Medicine residents and Rheumatology fellows as follows:

CTU: 2 weeks/year (Dr. Baron);
Consult service: 3 months/year (Dr. Baron, Dr. Berkson, Dr. Fallavollita, Dr. Gyger); Dr. Hudson: 1.5 months
Out-patient clinic: (Dr. Baron 7 half days per week; Dr. Berkson 6 half days per week; Dr. Fallavollita 6 half days per week; Dr. Gyger 7 half days per week)
Musculoskeletal ultrasound: (Dr. Fallavollita 1 day)
Video capillaroscopy: (Dr. Gyger ½ day)
In-Patient Follow up: (Dr. Hudson 3 hours per day)

Staff members strive for clinical innovation: use of anakinra for pericarditis (Dr. Berkson), multidisciplinary clinics (Dr. Baron).

1. Research and publications:

An important study was published showing the longitudinal relationship of calcinosis in scleroderma to underlying ischemia (Baron M, Pope J, Robinson D, et al. Calcinosis is associated with digital ischaemia in systemic sclerosis-a longitudinal study. Rheumatology (Oxford) 2016;55:2148-55)

We published the last of a series of articles regarding oral abnormalities in scleroderma. This series will represent the definitive set of articles on this topic. (Baron M, Hudson M, Dagenais M, et al. Relationship between Disease Characteristics and Oral Radiologic Findings in Systemic Sclerosis: Results from a Canadian Oral Health Study. Arthritis Care Res (Hoboken) 2016;68:673-80.

Dr Hudson led a team of clinical researchers, geneticists and statisticians to identify the methylome signature of systemic autoimmune rheumatic diseases. The paper has just been published (Epigenetics. 2017 Apr 7:0. doi: 10.1080/15592294.2017.1303581).

Dr Hudson is supervising Dr Sabrina Hoa who is performing scleroderma fellowship.

Dr. Baron’s primary research interest is scleroderma and focused on ways of measuring disease activity and damage in scleroderma, as well as on aspects of nutritional deficiencies caused by the disease.

Dr. Hudson pursues research in systemic autoimmune rheumatic diseases and translational
research aimed at studying the etiopathogenesis of systemic autoimmune rheumatic diseases (SARDs). Dr. Hudson is also the Director of the Canadian Inflammatory Myopathy Study (CIMS).

2. Teaching and learning (undergraduate and graduate):

The division continues to participate in undergraduate and post-graduate medical education. Its members provide clinical supervision to medical students, residents and fellows regularly during their 2-week as attendings on the medical wards, full-day weekly general rheumatology clinics and consult service. They participate in the CaRMS Admission Committee for Internal Medicine (3 hours/year).

Dr. Berkson has developed a Rheumatoid Arthritis versus Osteoarthritis lecture, a didactic and interactive lecture for first year medical students. Every two years since 2013, she has presented a seminar series on osteoporosis for rheumatology fellows. In 2016 she was appointed chair of the Faculty of Medicine's Program Evaluation and Curriculum Outcomes Committee (Undergraduate).

**Dr. M. Baron**
Formal Teaching: 2 hours
Clinical Teaching: 200 hours
Supervision: 50 hours Rheumatology fellows
Frequently with students and residents in outpatient clinic

**Dr. L. Berkson**
Clinical Teaching: 2.4 weeks
Supervision: 2 hours Research trainee; ½ day/week residents in ambulatory care
Rheumatology Training Committee: 10 hrs/year
Program Evaluation and Curriculum Outcome Subcommittee: 2-2 ½ days per week

Osteoporosis Seminar x 3 for Rheumatology Fellows (6 hours)
Lecture for Med1 x 1

**Dr. S. Fallavollita**
Undergraduate: 82 hours: 6 hrs MSK physical exam; 2 hrs Approach to arthritis; 2 hrs Inflammatory back pain; 72 hrs TCP small group tutor
Postgraduate: 22 hours (15 hrs McGill Simulation Center; 4 hrs: PGY4 Academic Half Day MSK exam and Approach to rheumatoid arthritis; 2 hrs Rheumatology Half Day;
Supervision: 3 hrs/week 2 residents Continuity Clinic
JGH Site Director of Rheumatology Program: 2 hrs/month
Rheumatology Training Committee: 4 hrs/year

**Dr. G. Gyger**
Capillaroscopy course: 24 hours: (Rheumatology week-end 12 hrs; IM Residents MSK week-end 12 hrs
Capillaroscopy course to rheumatologists: approximately around 25-30 hours per doctor
RAC course: 13 hours 45 min
Scleroderma introduction yearly: 1 hour
Resident teaching on a weekly basis
Clinical Teaching: 20% of time on clinical service supervising trainees
Supervision: Rheumatology fellow for publications on scleroderma and hematology fellow for case report

**Dr. M. Hudson**
Supervision: Research project: Mohamed Mansour, McGill Medical student; Teresa Semalulu, Northern Ontario School of Medicine, Formulation of evidence-based guidelines
Supervision and clinical teaching to Rhumatology and Internal Medicine fellows: 1 day/week general rheumatology and 6 weeks on consult service
Research Trainee supervision: 9 trainees

3. **Involvement in the community:**

Dr Baron holds the position of President of the Scleroderma Clinical Trials Consortium.

Dr Hudson co-leads a Scleroderma Clinical Trials Consortium working group on scleroderma renal crisis.

Dr Hudson was guest editor (with Dr Susanna Proudman) on a special issue on connective tissue diseases of Best Practice and Research: Clinical Rheumatology published in February 2016 (5-year IF 4.275).

Dr Hudson is medical advisor for Myositis Canada, a national grass-roots advocacy organization and AWISH, a local self-help group for patients with arthritis.

We have initiated our own vaccine clinic for our patients who are immunocompromised.

4. **Partnerships:**

Dr. Berkson is collaborating with Dr. Vartan Mardigyan (cardiology) in the treatment of patients with refractory pericarditis.

Dr Fallavollita is a member of a national organization developing a core clinical dataset for quality care for Rheumatoid Arthritis
Dr Gyger is part of an international consortium studying rare GI manifestations of scleroderma.

Dr Gyger is on a committee of the Scleroderma Clinical Trials Consortium seeking to establish training programs and a certification process for the use of video capillaroscopy in Scleroderma.

The rheumatology research group has instituted the development of a new international research organization called The International Systemic Sclerosis Inception Cohort (InSync) with the aim of closely following the first few years of illness in patients with scleroderma from many different countries to develop a large enough cohort for important research. InSync includes researchers from Canada, United States, Germany, Holland, Sweden, Australia and Spain.

Dr. Baron is President of scleroderma clinical trials consortium, a worldwide body of scleroderma researchers.
Dr. Hudson participates in research on epigenetics of rheumatic diseases with a group at McGill University (CAN_STAR) and has established a new national cohort in inflammatory myopathies (CIMS).

The Division runs an osteoporosis clinic in partnership with endocrinology. It has a once/month clinic for rheumatic disease with lung disease and/or pulmonary hypertension. Scleroderma patients are seen once per week for collection of data for the Canadian Scleroderma Research group.

5. Milestones:

There were no changes in staffing.

6. Honours, awards, and prizes:

Dr. Berkson is the inaugural chair of the Program Evaluation and Curriculum Outcome Committee for McGill University's Undergraduate Medical Education Program. She was honored as the Osler Fellow to the class of 2019.

Dr Hudson was the recipient of the Jeffry Shiroky prize (in recognition of her contribution to the field of inflammatory arthritis research), awarded at the Laurentienne Conference in Rheumatology held in Mont Tremblant, May 2016.

Dr Sabrina Hoa, a post-doctoral fellow under the supervision of Dr Hudson, was awarded The Arthritis Society’s Post-doctoral fellowship award (2016-18), the CIHR Canada Graduate Scholarship award (2017-2019) and the Drug Safety and Effectiveness Cross-Disciplinary Training (DSECT) Program award (2017-2018).

7. Fundraising: None to report

SECTION I - DIVISION STATUS UPDATE

1. Mission and objectives of the Division

The Division strives to provide high level clinical care, education and research.

Our academic activities in terms of teaching require adequate time and space to teach in the outpatient setting. Any attempt to remove our offices and exam rooms from inside the hospital will seriously affect this. This would also likely affect our research as that also depends on seeing patients with adequate time and space to collect data.

2. A nominative list of academic staff, their academic rank

Murray Baron, MD: Professor of Medicine
Marie Hudson, MD: Associate Professor with tenure
Genevieve Gyger, MD: Assistant Professor
Laeora Berkson, MD: Associate Professor of Medicine
Sabrina Fallavollita, MD: Assistant Professor
SECTION II - GRANTS, PUBLICATIONS, AND SERVICE OUTSIDE OF McGill

1. Grants and awards received

Baron, Murray

CIHR grant for pragmatic trial; established researcher -pharma roundtable re scleroderma; multiple publications

Scleroderma Society of Ontario

Canadian Scleroderma Research Group

Grouping of Canadian Companies and Corporations:
A multicenter, open label study to describe the safety of daily subcutaneous injections of Anakinra (r-metHuIL-1ra) in patients with rheumatoid arthritis.

University Of Michigan
A phase II study to evaluate subcutaneous abatacept vs placebo in diffuse cutaneous systemic sclerosis-a double-blind, placebo-controlled, randomized controlled trial (IM101-344)(ASSET)

Bayer (Canada) Inc.
A randomized, double-blind, placebo-controlled phase II study to investigate the efficacy and safety of riociguat in patients with diffuse cutaneous systemic sclerosis (dcSSc) (Study 16277)

Mount Sinai Hospital:

Hoffmann-La Roche Ltd, Canada :
A Phase II/III, multicentre, randomized, double-blind, placebo-controlled study to assess the efficacy and safety of tocilizumab vs placebo in patients with systemic sclerosis.

JSS Medical Research
A Canadian randomized controlled trial (RCT) of real world Cimzia treatment in RA: Randomizing to stop vs continued DMARDs.

Abbott Laboratories:
Real life evaluation of rheumatoid arthritis in Canadians taking HUMIRA.

Hudson, Marie

2016/10-2019/09 The Arthritis Society, Strategic Operating Grant
Improving Influenza Immunization Responses in Rheumatoid Arthritis: A Strategy To Enhance Protection against a Preventable Cause of Death in an at Risk Population?
Co-Principal Investigator with Ines Colmegna (nominated PI); Ward B, Bernatsky S, Piccirillo C $359,906

2016/10-2019/09 The Arthritis Society, Strategic Operating Grant Randomized Controlled
Trial of an Internet-based Exercise Program to Improve Hand Function in Patients with Scleroderma: A Scleroderma Patient-centered Intervention Network (SPIN) Study
Co-Investigator with Bartlett SJ, Larche MJ, Baron M, Johnson SR, Fortin PR, Steele R, Pope J PI: Thombs BD
$359,686

2016/07-2019/07
grant - Canadian Institutes of Health Research, project
Randomized Controlled Trial of an Internet-based Scleroderma Self-Management Program: A Scleroderma Patient-Centered Intervention Network (SPIN) Study
Co-Investigator with Baron, Murray; Bartlett, Susan J; Boutron, Isabelle; Cuijpers, Pim; Fortin, Paul R; Gottesman, Karen; Johnson, Sindhu R; Kwakkenbos, Linda; Larche, Maggie J; Malcarne, Vanessa; Mayes, Maureen; Mouton, Luc; Poiraudeau, Serge; Pope, Janet E; Riper, Heleen; Ruwaard, Jeroen; Sauve, Maureen; Schouffoer, Anne M; Steele, Russell J; Welling, Joep; Wigley, Fred
PI: Thombs, Brett D
$561,909

2016/08-2019/07 Canadian Institutes of Health Research, Operating Grant: North America Re: Rare Pragmatic, multicentre, cluster, cohort randomised controlled treat-to-target trial for treatment of small intestinal bacterial overgrowth in systemic sclerosis
Co-Investigator with Frech T; Greene T; Masetto A; Pimentel M; Szilagyi A
PI: Murray Baron
$117,000

2016/07-2017/06 Canadian Institutes of Health Research, Project Grant (Bridge Funding)
Randomized Controlled Trial of an Internet-based Exercise Program to Improve Hand Function in Patients with Scleroderma: A Scleroderma Patient-Centered Intervention Network (SPIN) Study
Co-Investigator with Baron, Murray; Bartlett, Susan J; Boutron, Isabelle; Cuijpers, Pim; Fortin, Paul R; Gottesman, Karen; Johnson, Sindhu R; Khanna, Dinesh; Kwakkenbos, Linda; Larche, Maggie J; Malcarne, Vanessa; Mayes, Maureen; Poole, Janet L; Pope, Janet E; Riper, Heleen; Ruwaard, Jeroen; Sauve, Maureen; Schouffoer, Anne M; Steele, Russell J; Van den Ende, Cornelia; Welling, Joep; Wigley, Fred
PIs: Thombs, Brett D; Mouton, Luc; Poiraudeau, Serge
$100,000

2016/07-2017/12 Department of the army- US Army Medical Research Acquisition Activity (USAMRAA)- DoD Peer Reviewed Medical Discovery Award Pollution, epigenetics and serologic markers of rheumatoid arthritis
Co-Investigator with Ines Colmegna; Philip Awadalla; Marvin Fritzler; Audrey Smargiassi; Tomi Pastinen
PI: Sasha Bernatsky
$244,838

2015/6 - 2018/1 Canadian Initiative for Outcomes in Rheumatology Care
Preventing rheumatoid arthritis (Pre-RA): perspectives of people at risk and of rheumatologists on selected interventions
Principal Investigator
$82,933
2012/1-2017/1 Canadian Institutes of Health Research (CIHR) Emerging Team: The Scleroderma Patient-centered Intervention Network
Co-investigator; PI: Thombs, Brett
$1,499,765

2012/1- 2016/12 Canadian Institutes of Health Research (CIHR) - CCREES Epigenomic platform
Multidimensional Epigenomics Mapping Centre (EMC) at McGill
Co-Investigator with Bartha Knoppers; Guillaume Bourque; Gustavo Turecki; Ines Colmegna; Jacek Majewski; Jacques Drouin; Jacquetta Trasler; Mathieu Blanchette; Rob Sladek; Sasha Bernatsky; Yann Joly Principal Investigator: Mark Lathrop; Michael Meaney; Tomi Pastinen
$5,665,000

2015-2019 FRSQ Chercheur-clinicien Senior
Recherches observationnelles portant sur les maladies systemiques autoimmunes rhumatismales
Salary Award

Grouping of Canadian Companies and Corporations:
The 1000 Canadian faces of lupus study.

Regroupement de compagnies, fondations et particuliers (Canada)
Canadian inflammatory myopathy study group

Regroupement de particuliers
LDI PI:
Epigenetic signatures of systemic autoimmune rheumatic diseases - A Pilot Study

JSS Medical Research:
Prospective observational study to evaluate the use of musculoskeletal ultrasonography to improve rheumatoid arthritis management: Canadian experience (Echo Study).

Fallavollita, Sabrina

JSS Medical Research:
Prospective observational study to evaluate the use of musculoskeletal ultrasonography to improve Rheumatoid arthritis management: Canadian experience (Echo Study).

MUHC PI: Dr. Ines Colmegna:
-liT Profile and functional implications of the production of age-associated inflammatory cytokines by hematopoietic progenitor cells in RA

Abbott Laboratories Ltd:
Drug Canadian HUMIRA. Post Marketing Observational Epidemiological Study: Assessing Effectiveness in AS. Site contact and in charge of patient recruitment

Thombs, Brett

Personal Support Awards
McGill University William Dawson Scholar Award ($125,000, 2012-2017).

Research Grants

CIHR

Project Scheme Grant. Randomized Controlled Trial of an Internet-based Scleroderma Self-Management Program: A Scleroderma Patient-Centered Intervention Network (SPIN) Study ($569,909, 2016-2019)

Project Scheme Grant. Randomized Controlled Trial of an Internet-based Exercise Program to Improve Hand Function in Patients with Scleroderma: A Scleroderma Patient-Centered Intervention Network (SPIN) Study ($100,000, 2016-2017)

Emerging Team Grant: Rare Diseases. Emerging team: The Scleroderma Patient-centered Intervention Network ($1,499,765 + $205,000 partner funding, 2012-2017)

Arthritis Society
Strategic Operating Grant. Randomized Controlled Trial of an Internet-based Exercise Program to Improve Hand Function in Patients with Scleroderma: A Scleroderma Patient-centered Intervention Network (SPIN) Study ($359,686, 2016-2019)

Past Grants as Co-Investigator
Rare Disease Foundation. Microgrant Program. Illuminating the experience of caring for a patient with scleroderma through focus groups (PI Rice DB; $3,467, 2016)

Grouping of Individuals:
International Consortium for Behavioral/Educational/Psychological Interventions for Scleroderma. SPIN COHORT NETWORK (Director of project with over 40 sites from 8 countries and over 100 participating investigators)

2. Research Trainees Supervised

Hudson, Marie

Undergraduate students

Teresa Semalulu, MDCM 2018 (Northern Ontario School of Medicine). Formulating evidence-based guidelines for the rational use of cardiac echocardiography to screen for pulmonary arterial hypertension (PAH) in systemic sclerosis (SSc) (funded by Canadian Rheumatology Association-Roche Summer Studentship). Abstract accepted for an oral presentation at the 4th Systemic Sclerosis World Congress, Lisbon, Portugal, February 2016

Charles Massie, MCDM 2016 (McGill), was funded by the Canadian Scleroderma Research Group STIHR grant. He completed a study looking at an association between anti-Ro antibodies
and prolonged QTc in SSc. He is first author on a manuscript published in Seminars in Arthritis Rheumatism (impact factor 4.1).

**Postgraduate students**

Mohamed Mansour, McGill Medical student, supervised for a research project. He successfully applied and was awarded both a summer and winter research bursary. He presented a poster at the McGill Research Day. He will be presenting a poster at the Canadian Rheumatology Association annual meeting in Ottawa, in February 2017.

Teresa Semalulu, MDCM 2018 (Northern Ontario School of Medicine). Formulating evidence-based guidelines for the rational use of cardiac echocardiography to screen for pulmonary arterial hypertension (PAH) in systemic sclerosis (SSc) (funded by Canadian Rheumatology Association-Roche Summer Studentship). Abstract accepted for an oral presentation at the 4th Systemic Sclerosis World Congress, fr Portugal, February 2016.

Koray Tascilar- post-doctoral fellow (2015-2016)

Research trainee supervision (MSc and PhD graduate students, postdoctoral fellows, medical students, residents). Thesis committees 1-2 hrs per week per trainee

Published one first-authored manuscript (A and R, IF 9) and co-authored a paper in Nature Review Rheumatology (IF 10.5)


Published 3 full length papers (Autoimmunity Reviews, IF 8.5; SAR, IF 4; and Medicine, IF 2), and one case report (A and R, IF 9); Awarded Arthritis Society's post-doctoral award ($50,000 per year for 2 years)

Valerie Leclair- PGY5 (McGill)

Poster presentation at CRA February 2016; published 2 full-length manuscripts (PLOSone, IF 4; JSRD, no IF yet) and one case report (A and R, IF 9); first author on a book chapter (in press)

Secured a position as post-doctoral fellow at the Karolinska Institute, Stockholm, Sweden (2016-2018)

Neha Srivastava- PGYS (McGill)

Poster presented CRA February 2016, full-length manuscript in preparation.

Yael Luck- PGY5 (McGill)

Co-authored a full-length manuscript (Medicine, IF 2)

Nicolas Richard- PGY5 (McGill)

Oral presentation at CRA February 2016- won best presentation in clinical research, full-length manuscript published (Rheumatology, IF 4)

Michael Wodkowski- PGY4 (McGill)

Poster to be presented at CRA February 2017, full-length manuscript in preparation
2. Scholarly works published in the 2016 calendar year


--Nevskaya T, Baron M, Pope JE. European scleroderma study group activity index captures variations in disease activity over time and predicts organ damage in early systemic sclerosis: Data from the Canadian scleroderma research group. Annals of the Rheumatic Diseases 2016;75:65-6


--Leclair V, Regart M, Wojcik S, Hudson M. Health-Related Quality of Life (HRQoL) in Idiopathic Inflammatory Myopathy: A Systematic Review. PloS one 2016;11:e0160753


--Thombs BD, Hudson M. No Evidence for Depression Screening in Rheumatoid Arthritis, Psoriasis, or Psoriatic Arthritis. The Journal of rheumatology 2016;43:992


--Racine M, Hudson M, Baron M, Nielson WR. The Impact of Pain and Itch on Functioning and Health-Related Quality of Life in Systemic Sclerosis: An Exploratory Study. Journal of pain and symptom management 2016;52:43-53


--Levis B, Rice DB, Kwakkenbos L, Steele RJ, Hagedoorn M, Hudson M, Baron M, Thombs BD.


3. Grant reviews

Hudson, Dr. Marie
FRQS Comité d'évaluation des demandes de bourses chercheurs-cliniciens J2-Senior - 2016

Submitted by:

Murray Baron, MD
Chief, Division of Rheumatology, JGH