Annual Report Division of Rheumatology Department of Medicine - Jewish General Hospital January 1 - December 31, 2020

Introduction:

A new member of the division is Dr. Sophie Wojcik who joined in July 2020. She is returning from year of postdoctoral study in spondyloarthropathies at U of T with Dr. Robert Inman.

Divisional members provide clinical services at the out-patient clinics, consult service, specialty clinics as well as supervision of Internal Medicine residents and Rheumatology fellows as follows:

Out-patient clinic: Dr. Baron seven ½ days per week; Dr. Berkson six ½ days per week; Dr. Fallavollita six ½ days per week; Dr. Gyger seven ½ days per week; Dr. Hudson 1 day per week; Dr Leclair 1 day/week; and, Dr Wojcik six ½ days per week and 2 ½ days per week at the Lakeshore General Hospital.

Consult service: Drs Wojcik, Berkson, Fallavollita and Gyger, ~3 months/year each; Dr Baron ~2 months/year; and Drs Hudson and Leclair 1 month/year each.

Musculoskeletal ultrasound: Dr. Fallavollita 1 day/week

Nailfold videocapillaroscopy: Dr. Gyger ½ day/week

Supervision of PGY residents undertaking research electives: Dr. Hudson ½ day/week

Covid has altered practice this year with 90% of patient care delivered via telemedicine and 10% outpatient care delivered face-to-face.

Our service also provided many weeks on the Covid ward in 2020: Dr Hudson 8 weeks, Dr Leclair 3 weeks, Dr Gyger 3 weeks and Dr Fallavollita 3 days.

Staff members strive for clinical innovation:

Drs. Baron, Gyger and Hudson have an ongoing scleroderma clinic and rheumatic disease/lung clinic. Drs. Hudson and Leclair have a myositis clinic and participate in monthly inter-disciplinary neuromuscular rounds at the Montreal Neurological Institute.

Drs Baron and Berkson attend an osteoporosis clinic.

Dr Hudson has a clinic for rheumatic manifestations of checkpoint inhibitors and attends bi-monthly immuno-oncology tumour board at the JGH.

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

1. Research:

Dr. Baron's primary research interest is scleroderma. Dr. Baron has established the Canadian Scleroderma Research Group (CSRG) and the International Systemic Sclerosis Inception Cohort. Dr. Baron's research has focused on ways of measuring disease activity and damage in scleroderma. He is involved in multiple working groups of the Scleroderma Clinical Trials Consortium and sits on the extended executive.

Dr. Hudson has been funded by CIHR to conduct a Phase I/II randomized controlled trial of mesenchymal stromal cells in severe systemic sclerosis. Although there have been delays because of Covid, she was able to secure ethics approval and an NOL from Health Canada. The cells are being

produced in the US and she hopes to begin recruitment in early 2021. Dr. Hudson is recognized internationally for her work in scleroderma renal crisis. In 2020, she launched the *International Scleroderma Renal Crisis Study II*, published 2 book chapters and one invited review, and was a keynote speaker at the annual meeting of the Groupe Francophone de la Recherche sur la Sclérodermie (Paris, France [meeting held virtually]). Dr. Hudson is also leading novel research in scleromyositis. She was invited to present her work at the Karolinska Institutet, Stockholm, Sweden in January 2020.

Dr. Hudson's other research interests include immune-related adverse events from cancer immunotherapies. She is the director of the Montreal Immune-Related Adverse Events (MIRAE) Biobank at the JGH (https://www.jgh.ca/care-services/segal-cancer-centre/research/biobanks/about-us/) and co-director of the national Canadian Research Group of Rheumatology in Immuno-Oncology (CanRIO) cohort. In December 2020, she was chair of the McGill Inter-disciplinary Initiative in Infection and Immunity (MI4) annual scientific symposium on immuno-oncology which drew local, national and international faculty.

Finally, Dr. Hudson is leading a McGill inter-divisional initiative to implement personalized care in rheumatoid arthritis. She has prepared a feasibility study for a pragmatic trial which she plans to launch in 2021.

Dr. Leclair is enrolled as a PhD student in Clinical Epidemiology at Karolinska Institutet in Stockholm Sweden under the supervision of Dr. Marie Holmqvist and the co-supervision of Prof. Ingrid Lundberg and Dr. Marie Hudson. Her research projects are focused on clinical outcomes in myositis. She held her PhD halftime seminar in January 2020 in Stockholm, Sweden and passed with high honors.

2. Teaching and learning (undergraduate and graduate):

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

Dr. Berkson continues as Chair of the Program Evaluation and Curricular Outcomes Committee UGME and as Liaison for Comparability between the Montreal and Outaouais campuses UGME (Responsible Academiques-Concordance et Liaison Montreal—Outaouais).

In September of 2020 Dr. Fallavollita was appointed Assistant Dean Undergraduate Medical Education (2 days/week)

Dr. M. Baron

2 months on rheumatology consult service, Frequently with students and residents in outpatient clinic Co-supervision of rheumatology fellow with Dr. Hudson

Dr. L. Berkson

12 weeks attending on consult service ½ day per week supervising residents in ambulatory care

Dr. S. Fallavollita

12 weeks attending on the rheumatology consult service

1-2 days/week supervising residents in ambulatory clinic

Supervision of Rheumatology Resident Continuity Clinic 3 hrs/ week 2 residents

JGH Site Director Rheumatology Program

Transition to Clinical Practice Component Director at McGill (end Dec 2020)

Member of Internal Medicine Promotions/Competency Committee (end July 2020)

MSK US course at the MS Quebec Rheumatology week end (not done in 2020 because of COVID)

McGill Simulation Center: Ethics (Internal Medicine R2 and 3) and Shoulder and Knee Injection and Aspiration (Internal Medicine R4) (15 hrs)

McGill Internal Medicine PGY4 Academic Half Day MSK exam (3 hr)

Family Medicine academic half day: Commonly encountered joint complaints (1 hr)

Internal Medicine PGY1-2 half day: Approach to Rheumatoid Arthritis (1 hr)

Rheumatology Academic half-Day: Gout review of treatment guidelines and Febuxostat (3 hrs)

Rheumatology Review Course: Approach to joint injections (1 hr)

Inflammatory Back Pain Lecture for UGME Block H (1 hr)

RAC for UGME course 2020 (3 hours)

Transition to Clinical Practice EPA 1 Encounters (9 hrs)

Dr. G. Gyger

12 weeks on the rheumatology consult service

Capillaroscopy course at the Rheumatology week-end (12 hours) (not done in 2020 re Covid)

RAC course (13 hours 45 min) (not done in 2020 re covid)

Scleroderma presentation for internal medicine fellows (1h30 min)

Presentation on Raynaud's phenomenon at St-Mary's Rounds (1h00)

Supervising pediatric fellows regularly at the capillaroscopy clinic and scleroderma clinic

Dr. Hudson

4 weeks on the rheumatology consult service

Supervision of research trainees, including:

PhD students

Valerie Leclair, Karolinska Institute, Stockholm, Sweden; Co-supervisor 2018/09-2021/08.

Project: Autoantibodies and clinical phenotypes in Idiopathic Inflammatory Myopathy

Master students

Nancy Maltez, Epidemiology, Ottawa University; Principal supervisor 2018/09-2021/08

Project: Autologous hematopoietic stem cell transplant for systemic sclerosis - Real-World Outcomes Funding: Clinical fellowship funded by The Ottawa Hospital (08/2018-08/2020) and Fonds France Quebec pour la recherche travel scholarship (\$3500)

Outputs: 2 first-authored manuscripts (Arthritis Rheumatol, Seminars in A and R)

<u>Peter Jeon</u>, Master in experimental medicine, McGill University; Co-supervisor with Dr Ines Colmegna 2018/09-2021/08

Project: Characterization of umbilical cord mesenchymal stromal cells as therapeutic products for systemic sclerosis

Medical residents

Christina Ly, McGill, PGY5, Rheumatology, 2020

<u>Project: Pre-existing autoimmune diseases and immune-related adverse events from cancer immunotherapy – a mutli-center case series</u>

Outputs: performed chart review for ~25 cases from the JGH; co-author on a paper accepted in *Cancer Immunol Immunother*.

Karel Venne, McGill, Rheumatology, 2020

<u>Project: Recognizing a novel 65-kDa Protein Associated with Scleromyositis with Head Drop and Bent Spine</u>

Output: Abstract presented at the 2020 American College of Rheumatology

Julie D'aoust, McGill, PGY5, Rheumatology, 2020

Project: The spectrum of scleromyositis - novel serological and histopathological findings Outputs: Poster presented at the 2019 American College of Rheumatology in Atlanta, GA in November 2019; manuscript submitted

Boyang Zheng, McGill, PGY5, Rheumatology, 2019

Project: A comparison of the trajectories of interstitial lung disease in systemic sclerosis by autoantibody subset

Outputs: Poster presented at the 2019 American College of Rheumatology in Atlanta, GA in November 2019; manuscript submitted; World Scleroderma Congress travelling scholarship, Prague, Czechoslovakia, March 2020. He has undertaken a post-doctoral fellowship in interstitial lung disease at UBC.

Harmony Tsui, McGill, PGY5, Internal medicine, 2020

<u>Project: Myositis as a complication of cancer immunotherapy – histopathology as a clue to understanding mechanisms</u>

Fatema Alkhamees, McGill, PGY3, Internal medicine, 2020

Project: Gender differences in systemic sclerosis

Dr. V. Leclair

4 weeks attending on consultation service Teaching post-graduate fellows

Dr Wojcik

10 weeks on the rheumatology consult service Presentation on Spondyloarthritis at GI and Dermatology rounds (total 2 hours) Teaching post-graduate fellows

3. Involvement in the community:

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

Dr Hudson is Co-director (Immunity) of MI4. She also sits as a member of the McGill University Department of Medicine Departmental Promotions/Tenure Committee.

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. She was the keynote speaker at the 2020 National Scleroderma Conference organized by patient advocacy groups across the country.

4. Partnerships:

Dr. Fallavollita is a member of a national organization developing a core clinical dataset for quality care for Rheumatoid Arthritis and has been involved in developing a core rheumatology curriculum for Undergraduate Medical Education.

Dr. Gyger is part of the EULAR Study Group on Capillaroscopy, seeking to establish training programs and a certification process for the use of video capillaroscopy in Scleroderma. This group has recently published a paper in Autoimmunity Reviews. See below. She is also participating in CIMS.

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. In Sync includes researchers from Canada, United States, Germany, Holland, Sweden, Australia and Spain.

Dr. Baron is past President of scleroderma clinical trials consortium, a worldwide body of scleroderma researchers. He co-leads working groups that are developing a disease activity index for scleroderma and one to develop classification criteria for scleroderma heart disease.

Dr. Hudson co-leads 2 Scleroderma Clinical Trials Consortium working groups, one on scleroderma renal crisis (with Prof. Christopher Denton from the UK) and another on defining disease onset (with Dr Thomas Medsger from the US). Dr. Hudson has been invited to be on the steering committee of the international CLASS study (PIs Drs Aggarwal (US) and Cavagna (Italy)) which aims to develop classification criteria for anti-synthetase syndrome. Dr. Hudson participates in numerous other local, national and international research networks including CSRG, INSYNC, Tri-Nation cohort, CIMS and CAN-RiO.

Dr. Leclair is an International Myositis Assessment & Clinical Study group (IMACS) member and participates in CIMS and Euromyositis. Member of the Canadian Rheumatology Association annual meeting scientific planning committee.

5. Milestones: There were no changes in staffing except as above.

6. Honours, awards, and prizes:

Dr. Leclair received funding for her PhD salary from the Dahlin Börje foundation in Stockholm, Sweden.

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.

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 Valerie Leclair, MD: Assistant Professor Sophie Wojcik, MD: Assistant Professor

SECTION II - GRANTS, PUBLICATIONS, AND SERVICE OUTSIDE OF McGill

1. Grants and awards received

Baron, Murray

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 Anakinar (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:

-The Canadian ArTritis CoHort (CATCH): A prospective cohort study of adults with new-onset inflammatory arthritis symptoms.

Hoffmann-La Roche Ltd, Canada:

-A Phase II/III, multi-centre, randomized, double-blind, placebo-controlled study to assess the efficacy and safety of tocilizumab versus placebo in patients with systematic 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

Current operating funds (ordered by end date)

10/2019-01/2023 CIHR

Phase I/II trial of umbilical cord-derived mesenchymal stem cells in systemic sclerosis

ΡI

\$420,000

12/2020-11/2021 BMS

MIRAE

PIs: Hudson and Miller

\$65,000

08/2018-07/2021 Genome Canada/Genome Quebec

Precision Medicine in Cellular Epigenomics

Co-Investigator with Lakhal-Chaieb, Lajmi; Daley, Denise; Labbe, Aurélie; Zhang, Tieyuan

PIs: Greenwood, Celia and Oualkacha, Karim

\$660,512

06/2019 - 05/2021 SCTC

International Scleroderma Renal Crisis Study II

PΙ

\$30,000 USD

06/2017 - 01/2020 CIORA

Bringing Patients and Therapies Together Sooner: Building Clinical Research Capacity to Improve

Outcomes in Myositis

PI: Hudson \$119,300

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. lnes 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

Leclair, Valérie

Personal salary support

-Fonds de la recherche en santé du Québec (FRSQ) – Master salary award (2019-2021)

Nouvelles perspectives sur la classification et l'atteinte gastrointestinale en myopathies inflammatoires autoimmunes à partir de registres cliniques nationaux

Operating grant

-Myositis Canada (2019-2020)

Looking at scleromyositis (SM) through a modern lens – novel histopathological description to improve outcomes

Co-PI with Dr Océane Landon-Cardinal (CHUM) 10000\$

2. Research Trainees Supervised

Hudson, Marie

Dr. Hudson supervised 9 research trainees during 2020, including 2 master and 1 PhD student. She is also on the mentorship committee of 2 junior faculty members at Université de Montréal.

3. Scholarly works published in the 2020 calendar year

- He C, Levis B, Riehm KE, Saadat N, Levis AW, Azar M, Rice DB, Krishnan A, Wu Y, Sun Y, Imran M, Boruff J, Cuijpers P, Gilbody S, Ioannidis JPA, Kloda LA, McMillan D, Patten SB, Shrier I, Ziegelstein RC, Akena DH, Arroll B, Ayalon L, Baradaran HR, Baron M, Beraldi A, Bombardier CH, Butterworth P, Carter G, Chagas MHN, Chan JCN, Cholera R, Clover K, Conwell Y, de Man-van Ginkel JM, Fann JR, Fischer FH, Fung D, Gelaye B, Goodyear-Smith F, Greeno CG, Hall BJ, Harrison PA, Härter M, Hegerl U, Hides L, Hobfoll SE, Hudson M, Hyphantis TN, Inagaki M, Ismail K, Jetté N, Khamseh ME, Kiely KM, Kwan Y, Lamers F, Liu SI, Lotrakul M, Loureiro SR, Löwe B, Marsh L, McGuire A, Mohd-Sidik S, Munhoz TN, Muramatsu K, Osório FL, Patel V, Pence BW, Persoons P, Picardi A, Reuter K, Rooney AG, da Silva Dos Santos IS, Shaaban J, Sidebottom A, Simning A, Stafford L, Sung S, Tan PLL, Turner A, van Weert H, White J, Whooley MA, Winkley K, Yamada M, Thombs BD, Benedetti A. The Accuracy of the Patient Health Questionnaire-9 Algorithm for Screening to Detect Major Depression: An Individual Participant Data Meta-Analysis. Psychotherapy and psychosomatics 2020;89:25-37.
- 2. Levis B, Sun Y, He C, Wu Y, Krishnan A, Bhandari PM, Neupane D, Imran M, Brehaut E, Negeri Z, Fischer FH, Benedetti A, Thombs BD, Che L, Levis A, Riehm K, Saadat N, Azar M, Rice D, Boruff J, Kloda L, Cuijpers P, Gilbody S, Ioannidis J, McMillan D, Patten S, Shrier I, Ziegelstein R, Moore A, Akena D, Amtmann D, Arroll B, Ayalon L, Baradaran H, Beraldi A, Bernstein C, Bhana A, Bombardier C, Buji RI, Butterworth P, Carter G, Chagas M, Chan J, Chan LF, Chibanda D, Cholera R, Clover K, Conway A, Conwell Y, Daray F, de Man-van Ginkel J, Delgadillo J, Diez-Quevedo C, Fann J, Field S, Fisher J, Fung D, Garman E, Gelaye B, Gholizadeh L, Gibson L, Goodyear-Smith F, Green E, Greeno C, Hall B, Hampel P, Hantsoo L, Haroz E, Harter M, Hegerl U, Hides L, Hobfoll S, Honikman S, Hudson M, Hyphantis T, Inagaki M, Ismail K, Jeon HJ, Jetté N, Khamseh M, Kiely K, Kohler S, Kohrt B, Kwan Y, Lamers F, Asunción Lara M, Levin-Aspenson H, Lino V, Liu SI, Lotrakul M, Loureiro S, Löwe B, Luitel N, Lund C, Marrie RA, Marsh L, Marx B, McGuire A, Mohd Sidik S, Munhoz T, Muramatsu K, Nakku J, Navarrete L, Osório F, Patel V, Pence B, Persoons P, Petersen I, Picardi A, Pugh S, Quinn T, Rancans E, Rathod S, Reuter K, Roch S, Rooney A, Rowe H, Santos I, Schram M. Shaaban J. Shinn E. Sidebottom A. Simning A. Spangenberg L. Stafford L. Sung S. Suzuki K, Swartz R, Tan PLL, Taylor-Rowan M, Tran T, Turner A, van der Feltz-Cornelis C, van Heyningen T, van Weert H, Wagner L, Li Wang J, White J, Winkley K, Wynter K, Yamada

- M, Zhi Zeng Q, Zhang Y. Accuracy of the PHQ-2 Alone and in Combination With the PHQ-9 for Screening to Detect Major Depression: Systematic Review and Meta-analysis. Jama 2020;323:2290-300.
- 3. Imazio M, Andreis A, De Ferrari GM, Cremer PC, Mardigyan V, Maestroni S, Luis SA, Lopalco G, Emmi G, Lotan D, Marcolongo R, Lazaros G, De Biasio M, Cantarini L, Dagna L, Cercek AC, Pivetta E, Varma B, **Berkson L**, Tombetti E, Iannone F, Prisco D, Caforio ALP, Vassilopoulos D, Tousoulis D, De Luca G, Giustetto C, Rinaldi M, Oh JK, Klein AL, Brucato A, Adler Y. Anakinra for corticosteroid-dependent and colchicine-resistant pericarditis: The IRAP (International Registry of Anakinra for Pericarditis) study. European journal of preventive cardiology 2020;27:956-64.
- 4. Hoa S, Bernatsky S, Steele RJ, **Baron M**, **Hudson M**. Association between immunosuppressive therapy and course of mild interstitial lung disease in systemic sclerosis. Rheumatology (Oxford, England) 2020;59:1108-17.
- 5. Mahler M, **Hudson M**, Bentow C, Roup F, Beretta L, Pilar Simeón C, Guillén-Del-Castillo A, Casas S, Fritzler MJ. Autoantibodies to stratify systemic sclerosis patients into clinically actionable subsets. Autoimmunity reviews 2020;19:102583.
- 6. Maltez N, Puyade M, Wang M, Lansiaux P, Marjanovic Z, Charles C, Steele R, **Baron M**, Colmegna I, **Hudson M**, Farge D. Autologous hematopoietic stem cell transplant in systemic sclerosis is associated with marked improvement in health-related quality of life. Arthritis & rheumatology (Hoboken, NJ) 2020.
- 7. Valenzuela A, **Baron M**, Rodriguez-Reyna TS, Proudman S, Khanna D, Young A, Hinchcliff M, Steen V, Gordon J, Hsu V, Castelino FV, Schoenfeld S, Li S, Wu JY, Fiorentino D, Chung L. Calcinosis is associated with ischemic manifestations and increased disability in patients with systemic sclerosis. Seminars in arthritis and rheumatism 2020;50:891-6.
- 8. Ross L, Stevens W, Wilson M, Strickland G, Walker J, Sahhar J, Ngian GS, Roddy J, Major G, Proudman S, **Baron M**, Nikpour M. Can Patient-Reported Symptoms Be Used to Measure Disease Activity in Systemic Sclerosis? Arthritis care & research 2020;72:1459-65.
- 9. Fortin PR, Da Costa D, Neville C, Julien AS, Rahme E, Haroun V, Singer W, Nimigon-Young J, Morrison AL, Eng D, Peschken CA, Vinet E, **Hudson M**, Smith D, Matsos M, Pope JE, Clarke AE, Keeling S, Avina-Zubieta JA, Rochon M. The Challenges of Perceived Self-Management in Lupus. Arthritis care & research 2020.
- 10. Zheng B, Nevskaya T, Baxter CA, Ramey DR, Pope JE, **Baron M**. Changes in skin score in early diffuse cutaneous systemic sclerosis are associated with changes in global disease severity. Rheumatology (Oxford, England) 2020;59:398-406.
- 11. Nevskaya T, Zheng B, Baxter C, Ramey D, Pope JE, **Baron M**. Comment on: Skin improvement is a surrogate for favourable changes in other organ systems in early diffuse cutaneous systemic sclerosis: reply. Rheumatology (Oxford, England) 2020;59:1783-4.
- 12. **Hudson M**, Dell'Aniello S, Shen S, Simon TA, Ernst P, Suissa S. Comparative safety of biologic versus conventional synthetic DMARDs in rheumatoid arthritis with COPD: a real-world population study. Rheumatology (Oxford, England) 2020;59:820-7.
- 13. Aguiar M, Harrison M, Munro S, Burch T, Kaal KJ, **Hudson M**, Bansback N, Laba TL. Designing Discrete Choice Experiments Using a Patient-Oriented Approach. The patient 2020.
- 14. Wu Y, Levis B, Riehm KE, Saadat N, Levis AW, Azar M, Rice DB, Boruff J, Cuijpers P, Gilbody S, Ioannidis JPA, Kloda LA, McMillan D, Patten SB, Shrier I, Ziegelstein RC, Akena DH, Arroll B, Ayalon L, Baradaran HR, **Baron M**, Bombardier CH, Butterworth P, Carter G, Chagas MH, Chan JCN, Cholera R, Conwell Y, de Man-van Ginkel JM, Fann JR, Fischer FH, Fung D, Gelaye B, Goodyear-Smith F, Greeno CG, Hall BJ, Harrison PA, Härter M, Hegerl U, Hides L, Hobfoll SE, **Hudson M**, Hyphantis T, Inagaki M, Jetté N, Khamseh ME, Kiely KM, Kwan Y, Lamers F, Liu SI, Lotrakul M, Loureiro SR, Löwe B, McGuire A, Mohd-Sidik S,

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- 16. Puyade M, Maltez N, Lansiaux P, Pugnet G, Roblot P, Colmegna I, **Hudson M**, Farge D. Health-related quality of life in systemic sclerosis before and after autologous haematopoietic stem cell transplant-a systematic review. Rheumatology (Oxford, England) 2020;59:779-89.
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- 18. Jamal S, **Hudson M**, Fifi-Mah A, Ye C. Immune-related Adverse Events Associated with Cancer Immunotherapy: A Review for the Practicing Rheumatologist. The Journal of rheumatology 2020;47:166-75.
- 19. Zheng B, **Hudson M**, Wang M, **Baron M**. Immunosuppressive treatment in diffuse cutaneous systemic sclerosis is associated with an improved composite response index (CRISS). Arthritis research & therapy 2020;22:132.
- 20. Zhao N, Smargiassi A, **Hudson M**, Fritzler MJ, Bernatsky S. Investigating associations between anti-nuclear antibody positivity and combined long-term exposures to NO(2), O(3), and PM(2.5) using a Bayesian kernel machine regression approach. Environment international 2020;136:105472.
- 21. Zhao N, Smargiassi A, Hatzopoulou M, Colmegna I, **Hudson M**, Fritzler MJ, Awadalla P, Bernatsky S. Long-term exposure to a mixture of industrial SO(2), NO(2), and PM(2.5) and anticitrullinated protein antibody positivity. Environmental health: a global access science source 2020;19:86.
- 22. Esfahani K, Elkrief A, Calabrese C, Lapointe R, **Hudson M**, Routy B, Miller WH, Jr., Calabrese L. Moving towards personalized treatments of immune-related adverse events. Nature reviews Clinical oncology 2020;17:504-15.
- 23. Zhao K, Oualkacha K, Lakhal-Chaieb L, Labbe A, Klein K, Ciampi A, **Hudson M**, Colmegna I, Pastinen T, Zhang T, Daley D, Greenwood CMT. A novel statistical method for modeling covariate effects in bisulfite sequencing derived measures of DNA methylation. Biometrics 2020.
- 24. Kaal KJ, Bansback N, **Hudson M**, Anis A, Koehn C, Harrison M. Patient-provider communication about medication cost in rheumatoid arthritis. Clinical rheumatology 2020.
- 25. Harrison M, Bansback N, Aguiar M, Koehn C, Shojania K, Finckh A, **Hudson M**. Preferences for treatments to prevent rheumatoid arthritis in Canada and the influence of shared decision-making. Clinical rheumatology 2020;39:2931-41.
- 26. **Leclair V**, Landon-Cardinal O, Aggarwal R, Bansback N, Campbell C, Feldman BM, Jarry M, McNamara S, White B, **Hudson M**. Proceedings of the 2019 Canadian Inflammatory Myopathy Study Symposium: Clinical Trial Readiness in Myositis. The Journal of rheumatology 2020;47:1584-6.
- 27. Machado M, de Moura CS, Chan K, Curtis JR, **Hudson M**, Abrahamowicz M, Jamal R, Pilote L, Bernatsky S. Real-world analyses of therapy discontinuation of checkpoint inhibitors in metastatic melanoma patients. Scientific reports 2020;10:14607.

- 28. Landon-Cardinal O, Baril-Dionne A, Hoa S, Meyer A, Leclair V, Bourré-Tessier J, Mansour AM, Zarka F, Makhzoum JP, Nehme J, Rich E, Goulet JR, Grodzicky T, Koenig M, Joyal F, Richard I, Hudson M, Targoff I, Satoh M, Fritzler MJ, Troyanov Y, Senécal JL. Recognising the spectrum of scleromyositis: HEp-2 ANA patterns allow identification of a novel clinical subset with anti-SMN autoantibodies. RMD open 2020;6.
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4. Grant reviews

Hudson, Marie

-CIORA grant review committee Chair (awards approximately \$700,000/year; third largest funding agency for arthritis research in Canada)

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