

Curriculum Vitae

**CV must be written in English*

Personal Information



Title (i.e. Prof., Dr., etc.)	Dr.
Name (First / Middle / Last)	Sun-Ho Lee
Degree (i.e. MD, MSc, PhD, etc.)	MD, MSc, PhD
Country	Canada
Affiliation	Mount Sinai Hospital, University of Toronto

Educational Background

2005.03 – 2011.02	Hallym University College of Medicine
2016.09 – 2018.08	Ulsan University, College of Medicine, South Korea
2019.01 – 2022.11	University of Toronto, Institution of Medical Science, Toronto, ON, Canada

Professional Experience

2023.02 – present	Clinician Scientist, Staff Gastroenterologist Mount Sinai Hospital IBD Centre, Toronto, Canada
2023.02 – present	Assistant Professor, University of Toronto, Department of Medicine, Toronto, Canada
2024.03 – present	Associate Member, University of Toronto, Institute of Medical Science, Toronto, Canada

Professional Organizations

2011.02 - present	Korean Medical License (License #106779)
2011.02 - present	Korean Board of Internal Medical (License #16272)
2017.08 - present	Korean Gastrointestinal Endoscopy Specialty Certification (License #2017 -6793)
2018.10 - present	Korean Subspecialty Board of Gastroenterology (License #1 -18-2916)
2023.02 - present	Provisional License, College and Physicians and Surgeons of Ontario

Main Scientific Publications

1. Integrating multi -omics using machine learning to understand the pre -clinical phase of Crohn's disease
 - a. Prediction and Prevention of Inflammatory Bowel Disease: A Call to Action
Sun-Ho Lee, Emily Lopes, Hamed Khalili, Kenneth Croitoru, Jean -Frederic Colombel, Inga Peter on behalf of the 2025 PROMISE Workshop participants
Gastroenterology (Accepted)
 - b. Development and Validation of an Integrative Risk Score for Future Risk of Crohn's Disease in Healthy First-Degree Relatives: A Multicentre Prospective Cohort Study.
Sun-Ho Lee, Williams Turpin, Osvaldo Espin-Garcia, Wei Xu, Kenneth Croitoru, CCC-GEM Project Research Consortium. Gastroenterology 2024 (In Press)
 - c. Gut Microbiome composition Predicts Risk of Crohn's disease in Healthy First -Degree Relatives.
Juan Antonio Raygoza Garay*, Williams Turpin*, **Sun-Ho Lee***, Michelle I. Smith, Anne M. Griffiths, Paul Moayyedi, Osvaldo Espin-Garcia, Maria Abreu, Guy L. Amais, Charles N. Bernstein, Irit A. Biron, Maria Cino, Colette Deslandres, Iris Dotan, Wael El-Matary, Brian Feagan, David S. Guttman, Hien Huynh, Jeffrey S. Hyams, Kevan Jacobson, David Mack, John K. Marshall, Anthony Otley, Remo Panaccione, Mark Ropeleski, Mark S. Silverberg, A. Hillary Steinhart, Dan Turner, Baruch Yerushalmi, Andrew D. Paterson, Wei Xu, The CCC GEM Project Research Consortium, Kenneth Croitoru.
Gastroenterology 2023 Sep;165(3):670-681 (*Co-1st authorship)
 - d. Immune response and barrier dysfunction related proteomic signatures in pre -clinical phase of Crohn's disease highlight earliest events of pathogenesis.
Haim Leibovitzh*, **Sun-Ho Lee***, Juan Antonio Raygoza Garay, Osvaldo Espin-Garcia, Mingyue Xue, Anna Neustaeter, Ashleigh Goethel, Hien Q. Huynh, Anne M. Griffiths, Dan Turner, Karen L. Madsen, Paul Moayyedi, A. Hillary Steinhart, Mark S. Silverberg, Colette Deslandres, Alain Bitton, David R. Mack, Kevan Jacobson, Maria Cino, Guy Aumais, Charles N. Bernstein, Remo Panaccione, Batia Weiss, Jonas Halfvarson, Wei Xu, Crohn's and Colitis Canada (CCC) Genetic, Environmental, Microbial (GEM) Project Research Consortium; Williams Turpin, Kenneth Croitoru. *Gut 2023 Aug;72(8):1462-1471* (*Co-1st authorship)
 - e. Anti-microbial antibody response is associated with future onset of Crohn's disease independent of biomarkers of altered gut barrier function, subclinical inflammation, and genetic risk.
Sun-Ho Lee, Williams Turpin, Osvaldo Espin-Garcia, Juan Antonio Raygoza Garay, Haim Leibovitzh, Ashleigh Goethel, Michelle I. Smith, Dan Turner, David Mack, Colette Deslandres, Maria Cino, Guy Aumais, Remo Panacionne, Kevan Jacobson, Alain Bitton, A. Hillary Steinhart, Hien Q. Huynh, Fred Princen, Paul Moayyedi, Anne M. Griffiths, Mark S. Silverberg, Andrew D. Paterson, The CCC GEM Project Research Consortium, Wei Xu, and Kenneth Croitoru. *Gastroenterology 2021 Nov;161(5):1540-1551*
2. Understanding early life environmental, microbial and genetic contribution in IBD by exploring subpopulations of interest such as early life cohort and high risk multiplex first -degree relative population
 - a. Early Life Exposure to Parental Crohn's disease is Associated with Offspring's Gut Microbiome, Gut Permeability and Increased Risk of Future Crohn's Disease.
Sun-Ho Lee, Maham Bushra, Lanhui Qiu, Anne M. Griffiths, Williams Turpin, Kenneth Croitoru, Crohn's Colitis Canada-GEM consortium. Gastroenterology 2024 (In Press)
 - b. Healthy first-degree relatives from multiplex families versus simplex families have a higher subclinical intestinal inflammation, a distinct fecal microbial signature, and harbor a higher risk of developing Crohn's disease
Pablo A. Olivera, Helena Martinez-Lozano, Haim Leibovitzh, Mingyue Xue, Anna Neustaeter, Osvaldo Espin-Garcia, Wei Xu, Karen L. Madsen, David S. Guttman, Charles N. Bernstein, Baruch Yerushalmi, Jeffrey S. Hyams, Maria T. Abreu, John K. Marshall, Iwona Wrobel, David R. Mack, Kevan Jacobson, Alain Bitton, Guy Aumais, Remo Panacionne, Levinus A. Dieleman, Mark S. Silverberg, A. Hillary

Steinhart, Paul Moayyedi, Dan Turner, Anne M. Griffiths, Williams Turpin, **Sun-Ho Lee***, Kenneth Croitoru*. *Gastroenterology* 2024 (In Press) (*Co-senior authorship)

- c. Environmental Factors Associated with Risk of Crohn's Disease Development in the CCC -GEM Project Mingyue Xue, Haim Leibovitzh, Shao Jingcheng, Anna Neustaeter, Mei Dong, Wei Xu, Osvaldo Espin-Garcia, Anne M Griffiths, A Hillary Steinhart, Dan Turner, Hien Q Huynh, Levinus A Dieleman, Remo Panaccione, Guy Aumais, Brian Bressler, Alain Bitton, Sanjay Murthy, John K Marshall, Jeffrey S Hyams, Anthony Otley, Charles N Bernstein, Paul Moayyedi, Wael El-Matary, Alexander Fich, Lee A Denson, Mark J Ropeleski, Maria T Abreu, Colette Deslandres, Maria Cino, Irit Avni -Biron, **Sun-Ho Lee**, Williams Turpin, Kenneth Croitoru, *Clinical Gastroenterology and Hepatology* 2024 Sep;22(9):1889 -1897.e12.

3. Gut microbiome and host genetics, diet, and gut barrier function

- a. Metabolomics reveal distinct molecular pathways associated with future risk of Crohn's Disease. Xue M, Lee SH, Shao J, Leibovitzh H, Huynh HQ, Griffiths AM, Turner D, Madsen KL, Moayyedi P, Steinhart AH, Silverberg MS, Deslandres C, Bitton A, Mack DR, Jacobson K, Ropeleski MJ, Cino M, Aumais G, Bernstein CN, Panaccione R, Bressler B, Espin-Garcia O, Xu W, Turpin W, Croitoru K; Crohn's and Colitis Canada Genetics Environment Microbial Project Research Consortium. *Gut Microbes*. 2025 Dec
- b. Altered gut microbiome composition and function are associated with gut barrier dysfunction in healthy relatives of patients with Crohn's disease. Haim Leibovitzh, **Sun-Ho Lee**, Mingyue Xue, Juan Antonio Raygoza Garay, Cristian Hernandez-Rocha, Karen Madsen, Jonathan Meddings, David Guttman, Osvaldo Espin-Garcia, Michelle Smith, Ashleigh Goethel, Anne M. Griffiths, Paul Moayyedi, A. Hillary Steinhart, Remo Panacione, Hien Q. Huynh, Kevan Jacobson, Guy Aumais, David Mack, Maria Abreu, Charles Bernstein, John Marshall, Dan Turner, Wei Xu, Williams Turpin, Kenneth Croitoru, The CCC GEM Project Research Consortium. *Gastroenterology* 2022 July 15 (In Press)
- c. Mediterranean-like dietary pattern associations with gut microbiome composition and sub-clinical gastrointestinal inflammation. Williams Turpin, Mei Dong, Gila Sasson, Juan Antonio Raygoza Garay, Osvaldo Espin-Garcia, **Sun-Ho Lee**, Anna Neustaeter, Michelle I. Smith, Haim Leibovitzh, David Guttman, Ashleigh Goethel, Anne M. Griffiths, Hien Q. Huynh, Levinus Dieleman, Remo Panaccione, A. Hillary Steinhart, Mark S. Silverberg, Guy Aumais, Kevan Jacobson, David Mack, Sanjay Murthy, John K Marshall, Charles N. Bernstein, Maria T. Abreu, Paul Moayyedi, Andrew D. Paterson, Wei Xu, Kenneth Croitoru, The CCC GEM Project Research Consortium. *Gastroenterology* 2022 May 25 (In Press)
- d. Increased Intestinal Permeability is Associated with Later Development of Crohn's Disease. Williams Turpin*, **Sun-Ho Lee***, Juan Antonio Raygoza Garay, Karen L Madsen, Jonathan B Meddings, Larbi Bedrani, Namita Power, Osvaldo Espin-Garcia, Wei Xu, Michelle I Smith, Anne M Griffiths, Paul Moayyedi, Dan Turner, Ernest G Seidman, Hillary A Steinhart, John K Marshall, Kevan Jacobson, David Mack, Hien Huynh, Charles N Bernstein, Andrew D Paterson, Kenneth Croitoru, CCC GEM Project Research Consortium. *Gastroenterology* Dec 2020;159(6):2092-2100 (*Co-1st authorship)
- e. Associations of NOD2 polymorphisms with Erysipelotrichaceae in stool of healthy First Degree Relatives of Crohn's Disease subjects. Williams Turpin, Larbi Bedrani, Osvaldo Espin-Garcia, Wei Xu, Mark S. Silverberg, Michelle I. Smith, Juan Antonio Raygoza Garay, **Sun-Ho Lee**, David S. Guttman, Anne Griffiths, Paul Moayyedi, Remo Panaccione, Hien Huynh, Hillary A. Steinhart, Guy Aumais, Levinus A. Dieleman, Dan Turner, Andrew D. Paterson, Kenneth Croitoru. *BMC Medical Genetics* Oct 2020;15;21(1):204

4. Novel biomarkers of clinical outcomes in Inflammatory Bowel Disease

- a. Isolated Anastomatic Ulcers Are Associated with a Higher Long-Term Risk for Postoperative Recurrence and a Differential Mucosa-Associated Microbiome Composition in Patients with Crohn's Disease

Following Ileocolic Resection.

Bak MTJ, Olivera PA, Hernandez-Rocha C, Borowski K, Turpin W, Leibovitzh H, Milgrom R, Stempak J, Silverberg M, Lee SH.

Inflamm Bowel Dis. 2025 Jul

- b. Inflammatory bowel disease associated with primary sclerosing cholangitis is associated with an altered gut microbiome and bile acid profile.
Leibovitzh H, Nayeri S, Borowski K, Hernandez-Rocha C, **Lee SH**, Turpin W, Stempak JM, Sandhu I, Milgrom R, Smith MI, Croitoru K, Hirschfield GM, Gulamhusein A, Silverberg MS.
J Crohns Colitis. 2024 Jul 9;jjae096
- c. Fecal S100A12 is associated with future hospitalization and step -up of medical treatment in patients with Crohn's disease in clinical remission: A pilot study.
Sun-Ho Lee, Bo Sun Kim, Kiju Chang, Eun Mi Song, Sung Wook Hwang, Sang Hyoung Park, Dong -Hoon Yang, Jeong-Sik Byeon, Seung-Jae Myung, Suk-Kyun Yang, Byong Duk Ye. *Accepted and in -press at Intestinal Research.*
- d. Early Changes in Serum Albumin Predict Clinical and Endoscopic Outcomes in Patients With Ulcerative Colitis Starting Anti-TNF Treatment.
Sun-Ho Lee, M. Walshe, EH Oh, SW Hwang, SH Park, DH Yang, JS Byeon, SJ Myung, SK Yang, T Greener, AV Weizman, MS Silverberg, BD Ye. *Inflammatory Bowel Disease* 2021 Aug 19;27(9):1452-1461
- e. Fecal calprotectin predicts complete mucosal healing and better correlates with the ulcerative colitis endoscopic index of severity than with the Mayo endoscopic subscore in patients with ulcerative colitis.
Sun-Ho Lee, Min-Ju Kim, Kiju Chang, Eun Mi Song, Sung Wook Hwang, Sang Hyoung Park, Dong -Hoon Yang, Kyung-Jo Kim, Jeong-Sik Byeon, Seung-Jae Myung, Suk-Kyun Yang, Byong Duk Ye. *BMC Gastroenterology* Oct 2017;17(1):110