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# Connections

## Bariatric Care Team Grant: Exploiting the Therapeutic Effects of the Fecal Microbiome in Bariatric Care



Back row: Drs. Herb Gaisano (2<sup>nd</sup> from left) and Johane Allard (5<sup>th</sup> from left) and their research team.

Johane Allard and Herb Gaisano, both physician-scientists at Univ. Toronto and the University Health Network, are co-Principal Investigator of a team that will investigate the hypothesis that changes in intestinal microbiota composition and metagenome independently confer either a lean or obese/metabolic syndrome phenotype. The clinical parts of this study employ the obese patient as a model to characterize and compare same patient stools before and after bariatric surgery (laparoscopic Roux-en-Y gastric bypass) and to perform fecal microbial transplantation (FMT) of healthy lean donors into obese patients. The mechanistic part of the study is to perform FMT of pre- and post-bariatric patients' stools into lean and high fat-fed germ-free mice, and assess transfer of obese and lean phenotypes and determine consequent organ-specific changes.

The research team is led by Johane Allard, who has expertise in obesity-related diseases and leads the clinical group which includes laparoscopic surgeons Timothy Jackson and Allan Okrainec, Susy Hota (Infectious Diseases), Susan Poutanen (Medical Microbiology), Elena Comelli (Nutritional Sciences), Wendy Lou (Biostatistics), and Greg Gloor (Microbiome Sequencing). Herb Gaisano has expertise in animal models of diabetes and islet cell biology and leads the group performing germ-free mouse studies, including Kate Banks (Comparative Medicine)

and Dana Philpott (Immunology). Bariatric surgery is associated with significant weight loss and health improvements in comorbid conditions, such as diabetes and hypertension, although the long-term durability of these changes has not been fully studied and surgery carries its own risks.

This study will add to the literature and has the potential to change how severe obesity is treated by potentially manipulating the intestinal microbiome.

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# Researcher Profile

## Patrick Couture, MD, PhD

*Canadian Lipoprotein Conference 2016 Physician Scientist Award Recipient*



Patrick Couture received his medical degree from Laval Univ. in Québec City. He completed residency in internal medicine and a PhD in physiology at Laval Univ. and Univ. Montréal before heading to Tufts Univ. in Boston, MA for a research fellowship at the Jean Mayer USDA Human Nutrition Research Center on Aging. Returning to Québec City, he joined the Institute of Nutrition and Functional Foods, where he contributed

to the establishment of a clinical research center focused on nutrition and lipoprotein metabolism. Dr. Couture is currently a Professor in

the Department of Medicine at Laval Univ. He was the director of the university's residency training program in internal medicine from 2007 to 2012. His interests in nutrition led him to uncover the effects of dietary fatty acids on lipoprotein kinetics and on the expression of key genes involved in intestinal lipid metabolism in humans. His work is funded by grants from the Canadian Institutes of Health Research, Fonds de recherche du Québec (Santé) and industry (Dairy Farmers of Canada, Merck, Amgen, and Kaneka). Dr. Couture is currently the director of the Lipid Apheresis Program at the Laval Univ. Medical Center, and he is also involved in the clinical care of patients with various lipoprotein disorders. Patrick is the recipient of the Canadian Lipoprotein Conference 2016 Physician Scientist Award.

## CIHR Project Grant Peer Review

CIHR is implementing changes to the Project Grant peer review process. The changes will reflect the recommendations of the [Peer Review Working Group](#) and discussions from the [July 13 Working Meeting participants](#). CIHR is also implementing a new and distinct iterative peer review process for Indigenous health research applications, which is being designed with members of the Indigenous health research community. [Read more.](#)

## EveryBODY Matters 3<sup>rd</sup> Canadian Weight Bias Summit Summary

The Canadian Obesity Network (CON) has released the 3<sup>rd</sup> Canadian Weight Bias Summit Summary. Click [here](#) to download and read the Summary Report!

## CIHR Funding Opportunities

### *Operating Grants—Canadian Community Health Survey, Nutrition Analysis*

The CIHR Institutes of Nutrition, Metabolism and Diabetes and Circulatory and Respiratory Health, in partnership with Health Canada, Statistics Canada, and the Canadian Nutrition Society are pleased to launch *Operating Grants: Canadian Community Health Survey – Nutrition Analysis*. This funding opportunity will support research related to the use of the 2015 CCHS data to answer population health questions. **Application deadline: November 15, 2016.** For more information on how to apply, please visit the [ResearchNet website](#).

## Canadian Health Measures Survey (CHMS) Biobank—Call for Proposals



From November 1 to December 31, 2016, Statistics Canada is inviting researchers to apply for access to blood, urine and DNA samples from the CHMS Biobank for use in health studies. Further details about the application and review process may

be found by visiting the Biobank section of the [CHMS website](#) or by contacting the [CHMS biobank coordinator](#). Other information about the survey, including the CHMS bibliography with links to analytical products previously disseminated, is also available. For more information on the CHMS, please contact Statistics Canada's National Contact Centre.

### *INMD New Investigator Partnership Prizes (2016/2017)*

INMD New Investigator Partnership Prizes will support Prizes awarded by voluntary health sector organizations (such as non-profit organizations, professional organizations, and registered charities) that recognize outstanding research relevant to the Institute's mandate. **Application deadline: November 30, 2016.** For information on how to apply, please visit the [CIHR website](#).

### *INMD Doctoral/Post-Doctoral Partnership Prizes (2016/2017)*

INMD Doctoral/Post-Doctoral Partnership Prizes will support Prizes awarded by voluntary health sector organizations (such as non-profit organizations, professional organizations, and registered charities) that recognize outstanding research relevant to the Institute's mandate. **Application deadline: November 30, 2016.** For information on how to apply, please visit the [CIHR website](#).

**The CIHR Institute of Nutrition, Metabolism and Diabetes (INMD)** invests in research on diet, digestion, and metabolism. By addressing the causes, diagnosis, treatment, and prevention of a wide range of conditions and problems associated with hormones, the digestive system, kidneys, and liver function, INMD seeks to improve health for all Canadians.

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