# UM | Richardson Centre for Food Technology and Research

# July 2022 Newsletter

## DIRECTOR'S MESSAGE

Hello researchers, students and industry stakeholders. I am happy to share a number of positive Centre developments since the last newsletter published in October 2021.

The Centre has a new name! Our new name is the Richardson Centre for Food Technology and Research. The previous name served the Centre very well, but the food and agricultural sector has evolved considerably since the building's opening in 2005. The new name better reflects current and future activities within the Centre and aligns with provincial and national mandates. A special sign unveiling event is planned for the summer for members of the university, industry and the public to attend. Stay tuned for more details.

We are very happy to announce that Dr. Dylan Mackay, recently hired as Assistant Professor in the Department of Food and Human Nutritional Sciences, joined the Centre where he is establishing an active research program in human nutrition interventions. In addition, Dr. Cristina Rosell was recently hired as Head, Department of Food and Human Nutritional Sciences. Her research interests are in designing innovative grain based-foods, complementing Centre research activities. We are excited to have Dr. Rosell leading the Department.

In addition, the Faculty of Agricultural and Food Sciences and NRC-IRAP finalized a Contribution to Organization (CtO) agreement providing short-term scientific assistance to Canadian, for-profit, companies. To date, over $22,000 in CtO funds have supported five Canadian companies through research activities performed at the Centre.

On a personal note, it was an honour to be awarded a Tier 1 Canada Research Chair in Bioactive Peptides. The award advances my research program in natural food peptides for improving health and ameliorating common metabolic disorders. This research award will strengthen the research intensity at RCFTR.

We look forward to continued growth at the Centre aligned with our mission of "Advancing food quality and human nutrition through traditional and innovative food processing techniques."

**Rotimi Aluko, PhD**
Director

## ABOUT US

The Richardson Centre for Food Technology and Research (RCFTR) is a 55,000-ft$^2$ state-of the-art research centre within the Faculty of Agricultural and Food Sciences, University of Manitoba, located on the Fort Garry campus. Our mission is to advance food quality and human nutrition through traditional and innovative food processing techniques. Our mandate is to support the food and agriculture value chain by engaging in collaborative research and development activities with the food industry.

## STUDENT CORNER

**Adam Franczyk** is a PhD candidate in the Department of Food and Human Nutritional Sciences investigating factors related to protein digestibility and quality. Adam has been working under the supervision of Dr. James House since 2015, during which time he completed a MSc investigating the potential of in vitro protein digestibility assays as an alternative to rodent bioassay. His thesis primarily focuses on pulsebased proteins, subject to different milling conditions and pre-treatment in bread, pasta, and extrudates. The primary goal of his research is to build models which better estimate the nutritional value of protein for human consumption.

## POST DOC CORNER

**Dr. Oladipupo Odunayo Olatunde** is a Post-Doctoral Fellow in Dr. Nandika Bandara's Food Protein and Bioproduct Lab. He obtained his Bachelor and Masters degrees in Nigeria and his PhD degree in Thailand. His research interests include food chemistry, food processing, food safety, and food co-streams utilization. Currently, he is working on developing sustainable protein ingredients with improved technofunctional properties, increased digestibility, and reduced inherent allergenicity from Canadian pulse and oilseed crops, particularly those grown in the Prairie provinces. He is optimistic that his project outputs will be invaluable to Canadian Agri-Food in developing strategies to produce superior plant-based protein ingredients, thereby increasing their competitiveness and contributing to Manitoba's economy.

## NEW CENTRE NAME!

We are excited about the name change – it is a key component of the Centre's five year strategic plan for intensifying research, enhancing collaborations and aligning with provincial and national mandates. The agricultural and food sector has evolved considerably since the Centre opened over 15 years ago and the new name better reflects current and future research activities. We look forward to a bright future for the Centre under its new name.

## RCFTR TENANT HIGHLIGHTS

Burcon is a global technology leader in the development of plant-based proteins for foods and beverages. With over two decades of experience formulating high-purity proteins that have superior functionality, taste and nutrition, Burcon has amassed an extensive patent portfolio covering its novel plant-based proteins derived from pea, canola, soy, hemp, sunflower seed, among other plant sources. In 2019, Merit Functional Foods Corporation ("Merit Foods") was established between Burcon and three veteran food industry executives. Merit Foods has since built and commissioned a state-of-the-art protein production facility in Manitoba, Canada that is producing, under license from Burcon, best-in-class pea and canola proteins for the food and beverage industries. For more information, visit www.burcon.ca

## RCFTR STAFF UPDATE

In November 2021, **Finn Makila** joined the RCFTR as Pilot Plant Technician. Previously, Finn worked at Merit Functional Foods in Quality Assurance and graduated from the University of Manitoba with a Bachelor in Food Science. Finn's research experience includes ultrasound assisted protein extraction of fava beans working as a Research Assistant in Dr. Bandara's Food Protein and Bioproduct lab. Finn's role at the Centre includes assisting Centre operations and maintaining the food safety system of the RCFTR Dry Milling Facility.

## RCFTR RESEARCH COMMUNITY

**Dr. Dylan Mackay's** research program is focused on nutritional interventions for chronic diseases. He has expertise in the appropriate design and implementation of clinical trials, particularly clinical trials involving nutrition that are conducted within the healthcare system. His work concentrates primarily on type 2 diabetes and chronic kidney disease. However, he has a strong personal connection with type 1 diabetes research in which he is both a researcher and a patient partner. He is also very interested in how to combat misinformation related to nutrition and health, especially on the internet and social media. He is currently running multiple projects investigating health and food effects on blood sugar control, blood pressure control, and for treatment of metabolic acidosis. Welcome Dr. Mackay!

**Dr. Cristina Rosell** joined the Department of Food and Human Nutritional Sciences in January 2022 as Department Head. Her knowledge and experience will be a great support for our research community. Her research interests are focussed on the inclusion of cereals and grains in the human diet through developing innovative and sensory accepted foods. Food products are assessed for their techno-functional performance and are modulated by physical and chemical treatments to obtain fermented, cooked, or baked foods. Dr. Rosell has broad experience in gluten free breads, bakery products, and starch-based foods. Welcome Dr. Rosell!

**Dr. Nancy Ames**, AAFC Research Scientist and UM Adjunct Professor, retired from AAFC in January 2022. Nancy led an active cereal chemistry research program throughout her >30 year career at AAFC with several years co-located at the Centre, where she extended her investigations into health aspects of grains and pulses. Nancy collaborated with numerous individuals and organizations, publishing over 100 peer-reviewed articles, numerous book chapters and two patents. Among Nancy's contributions to the agri-food sector was her role as Scientific Lead in the therapeutic health claim petition "Barley beta-glucan soluble fibre and reduction of blood cholesterol, a risk factor for cardiovascular disease," which was approved by Health Canada in 2012. In addition to her scientific achievements, Nancy has provided tremendous leadership in mentoring undergrad students and advising graduate students and postdocs. We wish Nancy all the best in her retirement and future endeavours.