

CUTTING EDGE KITCHEN

NAIT'S NEWEST INNOVATION
HUB FOCUSES ON FOOD



RESEARCH
CHEF
MAYNARD
KOLSKOG
AT NAIT'S
CENTRE FOR
CULINARY
INNOVATION

ICE CREAM MADE FROM OAT MILK AND FRACTIONATED MUNG BEAN PROTEIN; VEGAN AND GLUTEN-FREE



If you walk into any noteworthy restaurant in Edmonton, there's a very good chance that the chef was trained at NAIT. The polytechnic has earned a reputation as a culinary hub in Edmonton, and the Department of Culinary Arts and Professional Food Studies has been the driving force behind that. Now, there's a new addition to the culinary world at NAIT — and it's taking things in a new, innovative direction.

It all started with an institution-wide mandate. "NAIT had a mandate to get all the departments potentially into applied research," says research chef Maynard Kolskog, who was a culinary instructor with NAIT at the time. "I got involved with a research project with Alberta Pulse Growers. That was my first project, to come up with value added, different types of pulse dishes... those were called downloads. Somebody would cover my courses,

FOUR MAIN AREAS OF FOOD FOCUS

ENHANCED FOOD EXPERIENCES

Forget simply tweaking existing recipes to incorporate certain ingredients — at the centre, it's all about novel ingredients and new techniques.

NUTRITION AND HEALTH

Through partnerships with institutions like Alberta Health Services and Covenant Health, research looks at ways to formulate products that provide high nutrition and health benefits.

SUSTAINABILITY

Research will look at the use of by-products and alternative proteins to help create more sustainability within the agri-foods sector, and focus on ways to utilize local products and create value adds for local suppliers.

KITCHEN EFFICIENCY

Labour can be a big constraint when it comes to food processing, so the centre will examine technologies and processes that help support automation, reduce operating costs, cut water and energy consumption, and make the overall process more effective.

and then from there I started getting more and more downloads."

NAIT began applying for funding, eventually getting a \$2-million grant from the Natural Sciences and Engineering Research Council of Canada (NSERC) in 2017. It then brought in Dana Gibson, Director of Business Development, to lead the project, and she started by examining the agri-foods landscape and what was really required.

"We were looking around the ecosystem here — what could we be complementary with, what were the companies looking for — and they really wanted support in that chef-driven product development," says Gibson. With that focus in mind, NAIT's newest innovation centre was born.

The Centre for Culinary Innovation, set to open in fall 2019, is a 2,150 square foot space located next to the popular Ernest's restaurant on the main campus. Kolskog had to study food science in order to obtain his certified research chef status, but he is a chef, first and foremost. "I need to be always looking at being innovative, but also making things tasty," Kolskog says. It's a unique blend of creativity and innovation that he's honed over his time in the research kitchen. The product-development process isn't dissimilar to creating a new recipe — "a lot of it is just our own imagination," says Kolskog. "We try to be as innovative as we possibly can be and that's where the ideas come from. How can we push this as far as we can go?"

Oats serve as a perfect

example. The average person may think of hiding ground oats in a recipe to up the nutritional value a bit. Kolskog worked with the University of Alberta to create products using fractionated oats. Fractionation is a process where proteins are separated from the starches in an ingredient, and both can then be used to craft new products. "We realized we can push it into a vegan product, a gluten-free product, we were able to discover that they [fractionated oats] had specific characteristics, they

can emulsify, they can foam, they can replace eggs, they can replace dairy products. That was a huge epiphany for us. I realized that this could apply to other different types of products. If we're given something like straight oats, we want to push it in a different direction as opposed to just hiding it under other food products."

Kolskog is constantly working on new products, and the Centre's overall focus is on forging a strong partnership with industry. "Anything that we develop, it is that industry solution, it has to be near or at the commercialization stage," says Gibson. "You have to have someone who wants this. The oat miso, for example, we have some clients who are saying 'we're really interested, we have oats, we want to do something different, we want to diversify.' We're presenting options for them in a solution-selling model."

NAIT itself does not hold



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the intellectual property rights to what has been created — the industry partner seeking the innovative new addition to their line-up of offerings holds the rights. "If you come in and you work with us and Maynard makes this vegan ice cream, it is yours," says Gibson.

While Kolskog and his research assistant, Mariana Lamas, will be constantly formulating new products, other individuals can utilize the workstations in the Centre to focus on their own projects as well. NAIT's culinary team can lend expertise with special areas, from charcuterie to chocolate, and can bring instructors in on downloads for clients. "It's one huge effort to diversify our economy," says Gibson.

So far, Kolskog has worked with local powerhouse Honest Dumplings, as well as Camola Sustainable Foods — and more products, including an oat ice cream, are coming to the market soon. ☺