A TASTE FOR RESEARCH

NUTRITION RESEARCHER ANDRE DIAS PAIRS WITH GEORGE BROWN TO DECODE WHY WE EAT WHAT WE EAT

Why do you taste what you taste? What makes us want to eat what we eat? Is taste something we inherit, or acquire? These are the questions that drive nutrition researcher Andre Dias.

Dias is a PhD student in the Nutritional Sciences program at the University of Toronto. He explains that the way each of us perceives tastes is very different: cilantro, for example, can taste fresh and citrus to some, while to others it’s closer to soap suds with a hint of wet sock. One of the primary reasons behind these individual differences could be genetic variation, and decoding the specific genetic differences responsible for taste variance is the aim of Dias’s research.

Dias’s research is of great interest to food companies and health practitioners. For food companies, understanding the genetics of taste could allow them to design foods that appeal strongly to certain cultural groups, all based on their unique genetic attributes. For health practitioners, predicting what foods people should avoid (or are particular drawn towards) can help them craft individualized healthy diet plans.

GBC is collaborating with Dias and Advanced Foods & Materials Canada (AFM Canada) to advance the study on ties between genetics and taste. Specifically they are looking at any genetic reason for why each of us tastes sweet, salt and fat in different ways.

The most recent phase of the project involved testing for fat taste. Culinary Management-Nutrition student Cassandra Brown explains the process: students first mixed fat solutions at 16 different states of dilution. “The next day, we would have the taste testers in.”

The participants sampled different solutions while an objective measurement of their taste function was made. Curiously, some people were able to taste things at more than 1000X lower concentration than others in the study. Finding out how these outliers are genetically different than the others is one of the main goals of the research.

Principal Investigator Moira Cockburn says applied research projects like this one opens up valuable learning opportunities for students. “The AFM Canada collaboration provided students with the opportunity to apply their knowledge of sensory evaluation techniques learned in class.”

As Brown says, “This is where research starts. It’s really cool to be part of it.”

Analysis of results is ongoing, but Dias cautiously offers that the outcome is promising. “We’re finding there’s some evidence that taste is based on genetics.”

The project has received financial support from Natural Sciences and Engineering Council of Canada (NSERC) and Ontario Centres of Excellence (OCE).