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Newtown science teacher Frank LaBanca studies water chemistry with Laura Konkos.

Students find answers with new high school science program

By Robert Gold
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NEWTOWN

Samantha Wong wants to know what's in your food. Has your tofu been genetically altered? What about your hot chocolate?

The 16-year-old Newtown High School student knows that such information can't be found on the food labels. So she's finding out herself.

Thanks to a new science program at the high school that has students doing high-level scientific research, she's studying the DNA of certain foods. Soon, she'll figure out if their genetic structure has been changed.

"It's really cool," Wong said, readying a vial of tofu at a high school lab hall. She said her friends at school are surprised to hear that science is "so practical to their daily lives."

Wong and roughly two dozen other Newtown High School students have spent the school year researching their own science research projects. Many have picked the brains of professors and scientists across Connecticut and beyond, thanks to the science program started this year by teacher Frank LaBanca.

They're asking questions like: Can microorganisms clean up metal

refineries? Can blood plasma energy kill bacteria? What is the ecological health of Deep Brook, a Newtown stream? How do different doctors treat peanut allergies?

"Other people are going to look at what they're doing," LaBanca said. "It's a true application of real life. They have the opportunity to examine real problems."

LaBanca spent five years running a similar program at Stamford High School before coming to Newtown three years ago. First, he worked with a handful of students on science projects. This year, after getting district approval, he formed a full-time program. "We're asking them to be creative and to be logical," he said.

Meeting four times a week, the students find their own problems to solve. Many found help from around the state, thanks to networking by LaBanca and others at the school.

Christian Bruckner, a University of Connecticut assistant professor of inorganic chemistry, gladly volunteered to help out when he heard about LaBanca's class.

He hadn't seen a high school class do such original research. "That's

quite remarkable," Bruckner said.

Bruckner has answered questions for 16-year-old Jonathan Bryant, a Newtown High junior, who is trying to make new chemical compounds. He is, in essence, creating synthetic chemicals.

"It's very unusual," Bruckner said. "They (high school students) usually take an herb or a grass and extract compounds."

Bryant said Bruckner's help has been immeasurable.

"It's hard to do when you don't have a master's degree in inorganic chemistry," Bryant said.

But LaBanca said the struggles are part of the project. The students get to flex their creative muscles. "What they're doing is unique and innovative," he said.

Ivan Virovets hopes his work will springboard him into an electrical engineering or biotechnology career. He's studying how a plasma torch can kill bacteria. That could lead to one way to clean medical supplies.

"It's kind of liking having a job, with a little less stress," Virovets said about the science program.

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