

Six Touro College Undergrads Discover That Tea Compounds Inhibit Dangerous Microbes

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Six undergraduate biology students in Touro College's Lander College of Arts & Sciences, Flatbush, who researched the antimicrobial effects of polyphenol, a natural ingredient found in teas and fruits, were invited to present their research findings... at the 109th annual American Society for Microbiology (ASM) convention held recently in Philadelphia.

They were one of the few undergraduate groups invited to present papers at the convention, according to their advisor, Dr. Milton Schiffenbauer, a microbiologist and professor in the department of biology at Pace University's Dyson College of Arts & Sciences, who also teaches at Touro College. The ASM is the oldest and largest life science membership organization in the world.



(L-R): Max Shenberger, Yechiel Weiss, advisor Dr. Milton Schiffenbauer, Rivkah Borger, Henya Sandhaus, Abby Moskowitz, and Dina Kupfer.

“Most impressive were our findings that these natural additives destroyed MRSA, a drug-resistant Staphylococcus, and VRE, a drug-resistant Enterococcus faecium, two extremely dangerous pathogenic bacterial organisms,” Dr. Schiffenbauer said. “Our findings indicate that the tea plant and templar white tea may have positive implications in the treatment of potentially pathogenic microorganisms.”

For more than a year, the Touro College students tested the effects of polyphenols and white tea on 11 strains of bacteria and have found that both white tea, which is high in polyphenol concentration, and pure white tea polyphenol are very effective in killing numerous varieties of disease-causing bacteria. They also discovered that certain compounds added to the tea, such as skim milk, soy milk, and rice milk, inhibited the effects of the polyphenols.

The antibacterial effect of an instant hand sanitizer was also investigated. The addition of polyphenols or white tea to an instant hand sanitizer destroyed Staphylococcus aureus and Bacillus cereus. In the absence of the additives, the hand sanitizer was ineffective, it was observed.

“The convention featured hundreds of presentations from microbiology laboratories and universities from around the world,” said Henya Sandhaus of Crown Heights, Brooklyn, who was one of the Touro students who participated. “The event was truly awe-inspiring and demonstrated the depth of knowledge in the field of microbiology. At the same time, it conveyed many unanswered questions and hypotheses whose answers are sought out in laboratories around the globe.”

In addition to Ms. Sandhaus, other Touro students presenting the research included Rivkah Borger of Flatbush; Dina Kupfer of Crown Heights; Abby Moskowitz of Denver; Max Shenberger of Flatbush; and Yechiel Weiss of Toronto.

Chaya Baras of Crown Heights, Yocheved Stern of Borough Park, and Aryeh Grossman of Flatbush also contributed to the research paper but did not attend the conference.

The Lander College of Arts and Sciences in Flatbush, with separate divisions for men and women, is located at Avenue J and East 16th Street in the Midwood section of Brooklyn. More than 1,000 students in separate men’s and women’s divisions are enrolled each semester at the Flatbush campus. Students are pursuing studies in more than 20 different majors, pre-professional, and professional fields. To learn more, visit www.touro.edu.