

Beer So Healthy Astronauts Can Drink It For Breakfast: Quantifying Antioxidants in Non-Alcoholic Beers!

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Abstract:

An almost chance encounter between a chemistry professor and the founder of then start-up Cleveland Whiskey quickly led to the pseudo-accidental creation of an independent student research program in chemistry. Undergraduate students at Lorain County Community College are using gas chromatography-mass spectroscopy (GC-MS) to identify and profile the distinct flavor compounds in unprecedented flavors of bourbon being developed by industry partner Cleveland Whiskey. Owing to the “reputation” garnered by this whiskey work, our group was subsequently recommended by the NASA Glenn Space Center for a beer research project. Now, our students are also using high performance-liquid chromatography (HP-LC) to quantify the antioxidant xanthohumol in nonalcoholic beers provided by industry partner Surreal Brewing, San Francisco. We will share some of the results of our research on a variety of topics, which proceeds something like: 101 whiskey and beer experiments with community college undergraduates. Equally important however with the scientific results are the stories of the impact this program has had on the students, and the stories of just how much fun a group of undergraduates can have doing nerdy science stuff when the topics are beer and whiskey! (p.s.: Refreshments will be served. 😊)

Speaker Biography:

Dr. Regan Silvestri is a Professor of Chemistry at Lorain County Community College, where he directs an undergraduate student research group investigating the science of the flavor of whiskey and the health benefits of beer. Dr. Silvestri previously completed a volunteer assignment in the U.S. Peace Corps as a Visiting Professor in Kazakhstan, where he lived and worked for four years ultimately serving as Acting Dean of Student Affairs. Professor Silvestri holds a doctorate degree in Macromolecular Science and Engineering from Case Western Reserve University, and is an active consultant to the chemical industry. For fun, Professor Silvestri performs his science magic show “Magical Science!!” as a volunteer at local schools, and has inspired combined audiences of 70,000+ enthusiastic young students with the wonders of science.