

Department Seminar Series

UC DAVIS
**FOOD SCIENCE AND
TECHNOLOGY**

Exit Seminar: Science of mousey off-flavor in mixed culture fermented sour beer



Paulina Martusevice

Visiting Scientist, Glen Fox's Brewing Lab

3:00 PM PST, Tuesday December 5th, 2023

Room 1207 Robert Mondavi Institute-South

Or attend remotely by Zoom

URL: <https://ucdavis.zoom.us/j/98032142511>

BIO: Dr. Paulina Streimikyte-Martusevice is a visiting scientist from Lithuania at UC Davis Sierra Nevada Brewing Co. laboratory and Sudwerk Brewing Co., granted by the Baltic American Freedom Foundation, where she is building her young researchers' experience in brewing sciences. Paulina has a BSc, MSc and PhD in Food Science and Technology from Kaunas University of Technology, Vytautas Magnus University and the Lithuanian Research Centre for Agriculture and Forestry. In 2023, she got the Lithuanian Younger Scientist award from the Lithuanian Academy of Sciences. She also held a research internship at the University of Manchester. These experiences involved the research fields of enzyme-assisted extraction and fermentation of plant materials and proteins, fermented beverages and functional food projects.

SUMMARY: Mousy off-flavor describes a spoilage-identifying N-heterocycles compounds known for decades and primarily identified in the wine industry. However, recent scientific and industrial approaches captured mousy off-flavor in spontaneously fermented sour beer. Preventing spoilage N-heterocycles development is essential to preserve end-products and obviate high economic losses. To this day, no method or preventative protocols lead to identifying mousy-off flavor compounds in beer matrix and preventing their development. The main goal of the research was to develop an acetyl-tetrahydropyridine (ATHP) identifying method in beer matrix and quantify it. Over a dozen different cask-aged sour beers and mixed-culture beverages were selected to determine the variation in ATHP levels. The research states the abundance of mousy off-flavor beer matrix, and invites to explore possibilities to ensure safe and high-quality end-products.