



**RAMAPO COLLEGE OF NEW JERSEY**  
**Office of Institutional Advancement**  
**Press Release**  
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## **Unique Research Brewing in the Ramapo College Biology Lab**

MAHWAH, N.J. –According to Associate Professor of Biology Yoost Monen, the most meaningful learning happens when students are actively engaged in the scientific process, and there is no better place for that than when working on a research project that excites them, he said.

With this in mind, Monen said he made a change to his research directive to “make it more tractable to students by tying it to a more relatable and practical application, namely brewing.”

Thanks to a Ramapo College Foundation grant, Monen and six Honors students are studying the role that yeast genetics plays in the beer product brewing industry.

“The inspiration for this project came to me a few years back when I reflected on my teaching and research experiences with undergraduates,” he said. “I spent the summer of 2019 learning all that I could about cutting-edge yeast methodology at the Cold Spring Harbor Laboratory and brought back with me the tools to move this research forward at Ramapo.”

To date, Monen said, he and the students have extracted the genomes of twelve different yeast strains and identified mutations in three important genes known to play a role in the flavor and aroma of beer. “We have also been working towards simulating the fermentation process in the lab to mimic the conditions

that the yeast are exposed to in breweries to understand the variation in gene expression that occurs in these strain,” he added.

The implications of this research can be quite advantageous for young researchers looking to enter a career in a genetics lab setting.

“By uncovering the yeasts’ genetic profiles and expression patterns, we can inform brewers and gain insight into the development of new yeast strains with even more desirable flavor attributes,” Monen said. “I am grateful to the Ramapo Foundation for providing funding to help facilitate the piloting of this research, and I am thrilled to have six Honors students working diligently on various facets of the project, each of whom is gaining independence while developing the skillset and knowledgebase to uncover the genetics of yeast.” The rise in popularity and consumption of beer products has led to an increase in the supply and demand. As a result, [market research analyses](#) shows that the beer product industry will see significant growth between 2021-2027, with special attention being paid to the craft beer market with a focus on grains, flavors, fragrance and, of course, yeast.

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Ramapo College of New Jersey is the state’s premier public liberal arts college and is committed to academic excellence through interdisciplinary and experiential learning, and international and intercultural understanding. The College is ranked #1 among New Jersey public institutions by College Choice; is recognized as the state’s top college on the list of Best Disability Schools by *Great Value Colleges*; was named one of the 50 Most Beautiful College Campuses in America by *CondéNast Traveler*; and is recognized as a top college by *U.S. News & World Report*, *Kiplinger’s*, Princeton Review and *Money* magazine, among others. Ramapo College is also distinguished as a Career Development College of Distinction by *CollegesofDistinction.com*, boasts the best campus housing in New Jersey on *Niche.com*, and is designated a “Military Friendly College” in *Victoria Media’s Guide to Military Friendly Schools*.

Established in 1969, Ramapo College offers bachelor’s degrees in the arts, business, data science, humanities, social sciences and the sciences, as well as in professional studies, which include business, education, nursing and social work. In addition, the College offers courses leading to teacher certification at the elementary and secondary levels, and offers graduate programs leading to master’s degrees in Accounting, Business Administration, Creative Music Technology, Data Science, Educational Technology, Educational Leadership, Nursing, Social Work and Special Education, as well as a post-master’s Doctor of Nursing Practice.