



FOR IMMEDIATE RELEASE

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More than 20 Campus Laboratories Help the U of I Win the International Laboratory Freezer Challenge for a Third Straight Year

CHAMPAIGN– Keeping laboratory samples cold can be an essential part of research activities and ensuring the safety and integrity of projects and experiments. As a Tier One research university, the numerous refrigerators, freezers, and cooling equipment used at the University of Illinois Urbana-Champaign also present a significant opportunity to further energy conservation efforts.

Winning the “hat trick,” the U of I was honored by the International Laboratory Freezer Challenge as one of the top universities at implementing cold-storage best management practices and reducing energy usage for a third straight year. Twenty-one labs on campus combined to save approximately 263 kWh/day, which is the equivalent energy use of nine average households.

Mohamed Attalla, executive director of F&S, said, “We started our Freezer Challenge program in 2017 as a way to strengthen the sustainability culture in labs and promote the mindset that everyone can make an impact regardless of the size of their lab or research area. This year’s victory among other peer institutions is a credit to all the researchers and students who implemented efficient lab management practices and continued their efforts while adapting to the health and safety protocols required during the COVID-19 pandemic.”

My Green Lab and the International Institute for Sustainable Laboratories (I²SL) will recognize the university’s three-peat with a newly created “winning streak” honor during a virtual award ceremony held at the I²SL annual conference on Wednesday, October 7, from 10:30 a.m. to 11:30 a.m. CDT.

From January to August, labs filled out a scorecard to earn points for efficient practices during the competition period. Some of the cold management storage best practices that have been used consistently in labs across campus to improve energy efficiency, reduce costs, and protect sample integrity include the following:

- Regularly managing and organizing samples to avoid overcrowding
- Defrosting units to prevent the buildup of ice
- Washing and replacing filters as recommended by the manufacturer’s guidelines
- Checking door and component seals to prevent the loss of conditioned air
- Vacuuming condenser coils and removing any debris that potentially blocks heat exchange
- Performing regular equipment checks and scheduling preventive maintenance

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Dr. Julie Nguyen, a College of Veterinary Medicine researcher and multi-year program participant, said, "I love the Freezer Challenge because it's a yearly reminder that says it's time to clean out your fridges and freezers. The U of I does a great job of being as energy-efficient as possible, for example, turning off the light switches when not in use. Freezers are some of the largest energy users on campus, and something as simple as defrosting a unit can extend its lifespan, as well as help remove unneeded samples, which is a win-win."

Labs that made significant contributions to the university's latest honor include:

TOP U OF I FREEZER CHALLENGE LABORATORIES

Deborah Katz-Downie, Stephen R. Downie Lab – School of Integrative Biology

- Performed general maintenance and defrosted 34 freezers and fridges
- Discarded approximately 30,000 samples
- Shared cold storage sample space with three research groups

Nicholas Rinehart, Denmark Lab – Department of Chemistry

- Created a digital sample inventory for 11 freezers and fridges
- Replaced two standard freezer boxes with high-density format boxes
- Moved 125 reagent tubes and kits from cold to room temperature storage
- Discarded approximately 30,000 samples

Lucienne Burrus, Center for Advanced Bioenergy and Bioproducts Innovation (CABBI) Lab – Institute for Genomic Biology

- Performed general maintenance and defrosted six freezers and fridges
- Discarded over 35,000 samples from seven cold storage units
- Shared cold storage sample space with eight research groups

Juliann Seebauer, Fred Below Lab – Department of Crop Sciences

- Adjusted an ultra-low temperature freezer from -80°C to -70°C
- Created new electronic sample inventories for all freezers and fridges
- Moved 50 sample boxes from a colder to a warmer storage temperature

Martin Gruebele, Gruebele Lab – Department of Chemistry

- Led the university in energy saving with a 38 kWh/day reduction

Molly Black, Helferich Lab – Department of Food Science & Human Nutrition

- Reduced energy usage by 35.2 kWh/day

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All campus labs are eligible to take part in the next Freezer Challenge that begins in January 2021. Researchers interested in joining the program should contact Paul Foote, energy efficiency and conservation specialist for F&S, at gfoote2@illinois.edu.

Foote said, "We encourage more research groups to take these actions where possible and evaluate what they can do to make a difference and innovate sustainable lab solutions. We are already seeing the benefits of researchers joining the program, improving their results from year to year, and sharing their success stories with their peers."

An objective of the F&S Strategic Plan is to reduce the university's energy use intensity (EUI) baseline in FY08 by 40 percent in FY25. Increasing Freezer Challenge engagement is a critical step as the university strives to meet future EUI reduction goals in the [Illinois Climate Action Plan \(iCAP\)](#).

The U of I's Freezer Challenge participation started thanks in part to \$9,900 in Student Sustainability Committee funding to promote college and departmental outreach and engagement. To date, more than 50 labs at the U of I have reduced approximately 680,000 lbs. of CO2 equivalent and provided over \$36,750 in energy cost avoidance. Internationally, the labs in the challenge this year saved a total of 3.2 million kWh/year.

More information about the U of I Freezer Challenge is available at <https://go.fs.illinois.edu/freezerchallenge>.

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