FRI eNews provides updates on research and events at FRI and UW-Madison and other current food safety news.

The last FRI FRESH seminar for 2023 will be held on Tuesday, Dec. 5 at 11 a.m. central time and will feature Catherine Nettles Cutter (Penn State) discussing “Recent research in controlling spoilage microbes and pathogens in foods.” You can register for this free webinar here.

FRI News

FRI executive committee member Kristin Schill has been appointed to the National Advisory Committee on Microbiological Criteria in Foods (NACMCF) where she will be serving on the sequencing and genomics committee. Congratulations, Kristin! In addition to this new responsibility Kristin continues to direct FRI’s Applied Food Safety Lab, serves as first vice-president to the Wisconsin Association for Food Protection, and does much more for FRI.

Briana Gregg, in FRI affiliate member Sabine Pellet’s lab, won a best poster award at the 2023 International Botulism Research Coordinating Committee meeting held recently in Madison. Briana also received FRI’s 2023 John Cerveny Travel Award and FRI’s graduate research award for her poster presentation this spring.

FRI executive committee members Jeff Sindelar, Andy Milkowski, and FRI affiliate member Garret Suen are coauthors on a recently published paper testing the effects of organic acids on the microbiota (specifically, inoculated spoilage lactic acid bacteria) of cured deli-style turkey.
You can listen to a recently recorded webinar where FRI affiliate member Tu-Anh Huynh talks about her lab’s research on how Listeria monocytogenes is dependent upon an essential second messenger, cyclic di-AMP, for its growth and pathogenesis.

FRI scientists have weighed in recently on consumer-related food safety conundrums. FRI associate director Kathy Glass recently discussed guidance regarding “use within X days of opening” labeling on foods and “best by” dates for shelf-stable foods with Eat Or Toss, a website which provides science-based information to reduce food waste and promote food safety. Meanwhile, FRI executive committee member Jae-Hyuk Yu spoke with National Geographic magazine about what to do when you see mold on your food.

FRI associate director Kathy Glass and former FRI Applied Food Safety Lab members Jie Yin Lim and Quinn Singer published a report investigating the ability of hydrogen peroxide (H\textsubscript{2}O\textsubscript{2}) to inactivate Listeria monocytogenes in commercial cheese brines, which are often used over and over for years. Adding 100 ppm H\textsubscript{2}O\textsubscript{2} reduced L. monocytogenes by 3 log within seven days, with faster inactivation noted when warmer brine temperatures or higher salt levels were used. Because yeasts and molds (and potentially other brine components) can inactivate H\textsubscript{2}O\textsubscript{2}, the authors noted the importance of regularly monitoring H\textsubscript{2}O\textsubscript{2} levels in the brine to ensure efficacy against L. monocytogenes.

FRI staff, executive committee members, and affiliate members have been busy leading and presenting food-safety related seminars, workshops, and conferences in recent months:

- Aug. 20: Associated Illinois Milk, Food and Environmental Sanitarians (Bloomington, Ill.) “Control of spore-forming bacteria in ready-to-eat foods” (Kathy)
- Aug. 23–24: Better Process Cheese School, Berner (Dakota, Ill.) (Kristin, Kathy, and Adam)
- Sept. 26: Wisconsin Laboratory Association, Fall Educational Conference (Elkhart Lake, Wisc.) “Pathogen control in cheese brines using hydrogen peroxide” (Kristin)
- Oct. 10–12: Advanced Meat Microbiology and Food Safety Short Course (Madison, Wisc.) (Jeff Sindelar, Andy Milkowski, Adam, Kathy, Kristin, Wendy, Chuck Kaspar)
- Oct. 16–19: Better Process Cheese School, Great Lakes Cheese, virtual class (Kristin, Kathy, and Adam)
- Oct. 17: Institute for Thermal Processing Specialists (IFTPS) Fall Webinar, “Designing and performing Clostridium botulinum challenge studies” (Kristin)
- Oct. 23: International Botulism Research Coordinating Committee meeting (Madison, Wisc.); Meeting organizers and speakers (Kristin and FRI affiliate member Sabine Pellet); discussion panel member for “Food Safety, Regulations,
Registration opens Dec. 1 for **FRI’s Better Process Cheese School**, to be held March 26–27 in Madison.

FRI science writer **Wendy Bedale**, FRI executive committee members **Andy Milkowski, Chuck Czuprynski**, and UW-Madison animal and dairy sciences professor **Mark Richards** have published a comprehensive review article on **mechanisms of carcinogenesis associated with processed meat products**.

### UW-Madison and Wisconsin News

The **Wisconsin Association for Food Protection** is holding its Fall 2023 meeting as a free virtual webinar on Dec. 6 from 9 a.m. to noon. Details will be posted on the association’s website.

Former Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) administrator (and former FRI affiliate member) **Steve Ingham** is temporarily back in his old office, as he was recently named **Interim Administrator at DATCP**.

Read about recent renewed efforts to have **Lactococcus lactis** (used in cheese production and other fermented foods) named the state microbe of Wisconsin here and here (and peruse other state microbes as well as Wisconsin’s previous unsuccessful efforts to honor *L. lactis* here).

**Highly pathogenic avian influenza (HPAI)** has been confirmed in birds in 24 states in the last month, including **Wisconsin**. HPAI was found in commercial turkey meat birds in Trempealeau County and in a backyard flock in Taylor County. USDA has indicated that fewer HPAI cases are being seen in the U.S. this year, possibly because wild birds might be gaining immunity to the virus and/or increased biosecurity at farms.

How might your diet at different times of your life affect your grandchildren? Research in the lab of UW-Madison animal and dairy sciences professor **Hasan Khatib**, detailed in a recent publication and also summarized in a recent **Grow Magazine story**, is investigating how the diet of one generation of animals (sheep) affects the DNA of its offspring (and their offspring, etc.) via transgenerational, epigenetic inheritance.
Cesar del la Fuente (University of Pennsylvania) will discuss “AI for antibiotic discovery” on Monday, Dec. 11, at 3:30 p.m. in Ebling Symposium Center in the Microbial Sciences Building.

Elias Gerrick (Stanford) will present “The lost kingdom: Commensal protists as modulators of the intestinal environment” on Tuesday, Dec. 12, at noon in room 1520 Microbial Sciences Bldg.

Applications for UW-Madison’s 2024–2025 Master Meat Crafter’s Program (directed by FRI executive committee member Jeff Sindelar) are due Dec. 30, 2023. The program includes six three-day workshops over a two-year period.

The Center for Dairy Research and the UW-Madison food science department have several short courses now (or soon) open for registration:

- Advanced Cheesemaking: American-style Varieties (May 7–9, 2024)
- Cheesemaking Fundamentals (self-study Dec. 6; in person April 3–4, 2024)
- Cheese Grading and Evaluation (March 19–21, 2024)
- Cheese Judging (March 22, 2024)
- Enhanced Gummies & Jellies (May 14–17, 2024; waitlisted)
- Candy School (July 22–Aug. 2, 2024)
- Successful Ice Cream Retailing (Jan. 8–9, 2024; registration opens July 1, 2023)
- Batch Freezer Workshop (Jan. 10–12, 2024)

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