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FRI eNews provides updates on research and events at FRI and UW-Madison and other current food safety news. View this email in your browser



FRI News

FRI FRESH seminars will continue in the fall! If you have suggestions for topics or speakers, please message Adam Borger at <u>adam.borger@wisc.edu</u>

FRI together with IAFNS and IFSH sponsored a twoday workshop, "Innovations in Cleaning and Sanitation for Low Moisture Foods," last week. Hosted by Land O'Lakes in Arden Hills, Minn., the meeting was well-attended and received high marks from those present. Meeting organizers are pictured to the right. Back row: Chuck Kaspar, Adam Borger, Brian Schaneberg, Abby Snyder, and Tim Stubbs. Front row: Caitlin Karolenko, Tina Gettis, and Kathy Glass.





FRI affiliate member/director of the Wisconsin Veterinary Diagnostic lab **Keith Poulsen** was among several experts featured on the **April 20 episode of 60 Minutes** to talk about **avian influenza**. Read the transcript or watch the episode <u>here</u>. Keith Poulsen has spoken about avian influenza to numerous other media outlets and organizations in recent months, including <u>Wisconsin Public Radio</u>, where he

discussed the effects that federal workforce reductions have had on monitoring and responding to avian influenza. Since the April 7 interview, some of the federal workers involved in avian influenza <u>are being reinstated</u>.

Ahmad Alshannaq (a past FRI Foster fellow) and Dasol Choi (a past FRI Schreiber Foods scholar) along with their former mentor, FRI executive committee member Jae-Hyuk Yu and colleagues, recently published <u>a report</u> demonstrating that an Aspergillus oryzae fermentate has potent antimicrobial activity against toxigenic strains of Clostridioides difficile. C. difficile is a spore-



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clinical *C. difficile* isolates exhibit **resistance to multiple antimicrobials**, highlighting a need for new treatment options. (*Photo by Michael P. King*)

Applying for a research position within FRI —the **FRI Summer Scholar program** — helped UW-Madison undergraduate student <u>McKenna Mahnke</u> (now a food safety and hygiene supervisor at Nestlé Health Science) get a real-world feel for the different areas she was considering in the field of food safety. While at FRI, <u>McKenna's research</u> focused on using **clean-label antimicrobials in turkey to prevent the growth of** *Clostridium perfringens* during cooling. Learn more about McKenna in <u>her profile</u> in Quality Assurance & Food Safety Magazine.





Read <u>here</u> about **Jessica Brown**, a PhD student in FRI affiliate **Steve Ricke**'s lab and a 2024 recipient of **IAFP's J. Mac Goepfert Developing Scientist Award** in this profile where she talks about how she became interested in **meat science and food safety**, her advice to Floridians on how to adapt to

Wisconsin winters, and her ambition to find a job in the meat or food industry in a food safety position.

FRI affiliate **<u>Bradley Bolling</u>** is quoted in <u>this article</u> describing how **climate change is altering Wisconsin crops**.





Registration is now closed for the <u>FRI</u> <u>Annual Spring Meeting</u> (May 20–21) in

Madison, Wisc. We look forward to seeing those of you who will be attending this year! Save the date for the 2026 meeting, which will be held May 12–13, 2026.

Food Safety News

Four new multistate outbreaks were reported by FDA in April, including two Listeria monocytogenes outbreaks (both of which were also reported by USDA) and two Salmonella Enteritidis outbreaks. No food sources have been identified yet for any of these outbreaks. Case counts for the *L. monocytogenes* outbreaks are 15 and 10, while 24 and 59 cases have been reported for the Salmonella outbreaks. No other details about these outbreaks have been announced as of May 1. Of note: Only one of the nine U.S. multistate foodborne disease outbreaks starting in 2025 have been linked to a food (and that outbreak was part of a multinational outbreak <u>that was already linked</u> to Sweet Cream mini pastries by Canadian officials).

San Diego County health officials <u>reported</u> a **Salmonella outbreak** linked to Aladdin Mediterranean Café in the Claremont area of San Diego. Those who became sick ate at the restaurant on April 25 or 26. At least 14 confirmed or probable cases have been identified, with five people requiring hospitalization.



Highly pathogenic avian influenza (HPAI) in cows and milk as well

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• Cows

 As of May 1, 1,047 dairy herds (up from 977 on March 4) in 17 states <u>have been</u> <u>affected</u> by H5N1 infections. The most recent herds affected were in Idaho, California, and Arizona.

 While no dairy herds in Wisconsin have been confirmed to have been infected with HPAI, Wisconsin has committed to start <u>state-specific</u>



<u>surveillance</u> as part of the <u>National Milk Testing Strategy</u>. No start date has been confirmed yet from DATCP. Five states have not yet enrolled in the NMTS (Florida, Massachusetts, North Dakota, Alaska, and Hawaii).

- <u>A new report</u> led by USDA scientists and other researchers describes in detail the emergence and spread of H5N1 HPAI in cattle and uses genomic data to explain how reassortment between strains in wild birds likely led to a single introduction from wild birds into cattle in late 2023. The authors recommend implementing surveillance strategies from alternate sample types such as wastewater or bulk milk and increased support for passive surveillance in wild mammals and birds. In addition, more phenotypic characterization of the many reassorted HPAI viruses that have been identified is needed to make better risk assessments.
- Birds
 - While the number of U.S. commercial poultry flocks infected with HPAI is exhibiting its typical seasonal decline in recent months, a <u>flock in Sheboygan</u> became the first Wisconsin flock to be infected in 2025. About 40,000 birds were included in the outbreak.



 No new human cases of HPAI have been reported in the U.S. since last February. The <u>total number of human</u>

<u>cases in the U.S.</u> stands at 70, with one death occurring in early 2025. The current public health risk, per CDC, is low.

- A 3-year-old child in Mexico with parainfluenza 3 and H5N1 influenza <u>died</u> <u>from respiratory complications</u> on April 8. Sequencing of the H5N1 isolate revealed the virus belonged to clade 2.3.4.4b and was a D1.1 genotype, the same one linked to serious infections in the U.S. and Canada. The source of the girl's infection is still under investigation. No other cases in humans who were in contact with the girl were sickened.
- General
 - A recent editorial in the American Journal of Public Health <u>describes results</u> from a survey of U.S. residents in 2024 that suggests "public ignorance and apathy toward bird flu (highly pathogenic avian influenza, or HPAI) could pose a serious obstacle to containing the virus and preventing a larger-scale public health crisis."

Government & Regulatory News

With cuts (and some reinstatements) of scientists



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speculated about **now tood satety could be impacted**. For example, will <u>Operation Stork Speed</u> (HHS's initiative to increase testing for contaminants in infant formula and foods) <u>be able to get off the ground</u>, given the <u>layoff of CDC's entire Lead Poisoning Prevention</u> <u>and Surveillance branch</u>? Will FDA <u>start requiring</u> **user fees** from food companies in order for FDA to perform



premarket reviews of new food additives if the current GRAS pathway is eliminated? Read more <u>here</u>, <u>here</u>, <u>here</u>, and <u>here</u>.



USDA FSIS <u>withdrew</u> its proposed rule "Salmonella Framework for Raw Poultry Products" on April 25, citing the need for further consideration of important issues raised among the >7,000 public comments received in response to its publication. Much commentary has been published since then regarding this decision, including <u>here</u>, <u>here</u>, <u>here</u>, and <u>here</u>.

Following FDA's ban on Red No. 3 food dye earlier this year, HHS and FDA <u>announced plans</u> to transition the U.S. food industry away from all petroleum-based synthetic dyes by the end of 2026. The transition is expected to be done without a federal ban on the dyes, although it remains unclear <u>what will happen if</u> <u>companies do not voluntarily comply</u>. Meanwhile, FDA has promised to authorize four new natural color additives in the coming weeks and will accelerate



review and proposal of others. For more discussion on this topic, read or listen here.



FDA <u>released</u> its final results from **PFAS testing of domestic** and imported bottled water collected at retail across the U.S. between 2023 and 2024. Ten of the 197 samples (eight domestic and two imported) <u>showed detectable levels</u> of at least one of the 18 types of PFAS that were analyzed. **None of the** samples contained PFAS at levels exceeding the EPAs maximum contaminant levels (MCLs); however, two PFAS contaminants that do not have established MCLs were detected.

Other News

Food Safety Magazine and the Food Safety Summit <u>are hosting</u> a free webinar, "**Finished Product Testing** Isn't the Answer," on May 14 at 8 a.m. CDT.

IAFP is offering a **free webinar**, "Predicting the Troublemakers: **Guidance and a Computer Tool to Predict Microbial Growth**," on May 15 at 11:30 a.m. ET. For more information and to register, go <u>here</u>.

The International Food Information Council <u>will present</u> a free webinar, "**Sensing Sweetness: Balancing Taste, Health, and Consumer Demand**," on Thursday, May 22, at 2 p.m. ET.



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and aired again at 3 p.m. PD1.



Some food science graduate students may have too much time on their hands! Watch videos of this year's Dance Your Ph.D. contest winners here. A screenshot from overall winner (by Sulo Roukka of the University of Helsinki) "Insights into oral chemesthetic perception: A focus on food-related behavior" is shown at left.

Current Literature

An explosion in scientific publications involving microplastics (MPs) has occurred in the last few years, including some with relevance to food safety. A brief peek into a few of the studies:

 Plants can take up MPs from the air! According to a new report in Nature, MPs in the atmosphere can be absorbed into plant leaves through stomatal

highly sensitive, easy to use, and easily deployed.



pathways and translocated to other parts of the plants where they can accumulate. Accumulated MP levels were higher in leaves from plants located in areas with higher atmospheric MP levels (such as near a Dacron polyester factory).

 As discussed in recent eNewsletters), microbial biofilms form readily on microplastics where they are "pathogen hotspots" that can also facilitate horizontal gene transfer between microorganisms. <u>A new report explores</u> the ability of microplastic particles to help monitor and control the dissemination of human enteric pathogens in wastewater effluent, concluding that such a sentinel surveillance system is



Shelf-life studies on Listeria monocytogenes in ready-to-eat foods in Europe are required by regulatory guidelines to assess whether growth of the pathogen in a food would exceed 100 CFU/g at the end of shelf-life. However, pathogen growth during shelf-life depends a lot on the temperature used for storage during the challenge study. Previously, a reference temperature of 12°C was used for European challenge studies. A recent report sought to assess whether that number was appropriate by collecting and analyzing existing European household refrigerator temperature data from national surveys and the scientific literature. The analysis found that average temperature of household refrigerators in Europe was 6.4°C, with 95% of

refrigerators below 10°C. The report concluded that the reference temperature used in such studies should be 10°C to simulate reasonably foreseen storage conditions in household refrigerators.

A recent study found that different Salmonella and STEC inoculum preparation methods significantly affected pathogen survival on wheat grains during desiccation, long-term storage, and tempering



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Inoculum levels provided protection to pathogens during desiccation and chemical treatments. Acid adaptation of pathogens during growth significantly



enhanced STEC tolerance to desiccation and chemical stress. The researchers plan to continue to investigate why inoculum cultivation methods can have such effects on subsequent stress responses and concluded that **inocula preparation should be standardized to allow better comparisons between safety interventions for flour (and other low moisture foods)**.

UW-Madison and Wisconsin News

Jeffrey Foster (Northern Arizona University) will present "*Brucella* **evolution and genomic epidemiology**" at noon on May 9 in room 1520 Microbial Sciences Building.



🚑 WAFP Scholarship Program 🚑

WAFP welcomes student applications for the following awards:

- \$2,000 Technical College Scholarship
- \$3,000 College or University Scholarship
- \$3,000 E.H. Marth Scholarship



Students must be currently enrolled at a Wisconsin-accredited college or university at the time of application.

- A cover letter describing why the candidate is applying for the award.
- · A resume or curriculum vitae (CV).
- An official or unofficial transcript of the candidate's academic record.
- One letter of support from a faculty member or advisor must be either attached to the online application or emailed to scholarship@wifoodprotection.org

Scholarships Applications are due June 30th

For more information, visit https://wifoodprotection.org/scholarships/



It's morel season! (But it could also be the season for something that just looks like a morel but is **poisonous**...). Listen to **UW-Madison mycologist Anne Pringle** <u>explain</u> that **identifying an edible mushroom requires more than simply looking it up on the web**; your best way to learn identify mushrooms is to go mushroom hunting with an expert and learn the variability that exists for one type of mushroom as well as for similar types.

Upcoming training opportunities on the UW-Madison campus include the following:

- Cooked and Emulsified Sausage School (May 20-25; currently waitlisted)
- <u>Confectionary Technology Course</u> ("Candy School") (July 21–Aug. 1, 2025, currently waitlisted)
- Basic Meat Processing Workshop (Aug. 26–28)



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