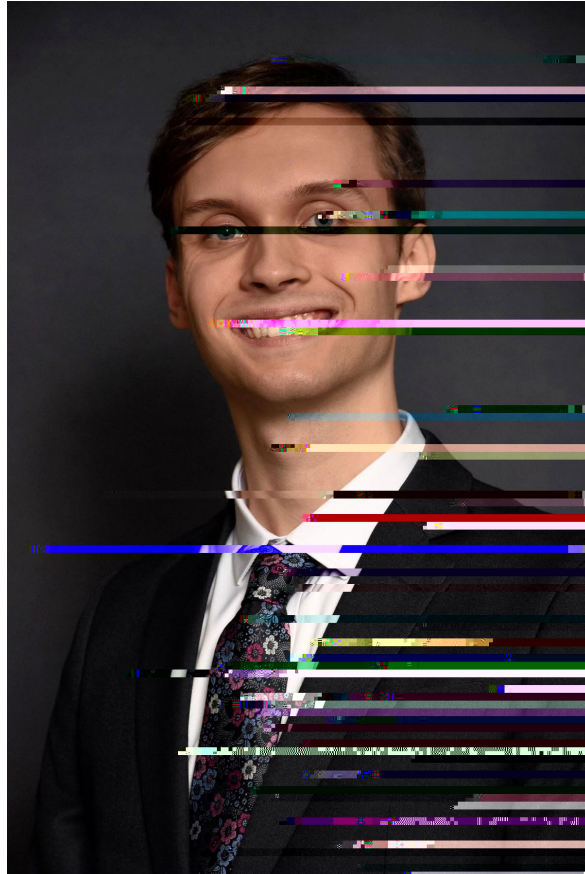


ILLINOIS TECH



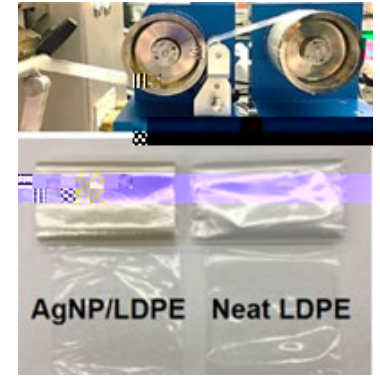
New Hires



Ian Klug, M.S.
FDA/ORISE

Research Areas

- Migration of packaging constituents and contaminants (including nanoparticles)
- Mitigation of chemical hazards
- Processing effects on detection and formation of chemical hazards
- Allergen detection, sampling and control
- Development and evaluation of novel analytical methods for chemical (and biological) hazards



Current Projects: Packaging and Method Development

Title	PIs	Area of Focus
Quantification of sorption behavior of polypropylene towards various chemical contaminants under FDA		

Current Projects: Allergens

Title	PIs	Area of Focus
Assessment of undeclared allergens in peanut, nut, and seed butters and pastes	Hillary Green; Lauren Jackson	Reducing allergen cross contact risk
Evaluation of wiping and washing treatments for removal of allergens and gluten from food contact surfaces*	Jeremiah Kidd; Lauren Jackson; Aman Sandhu	Allergen control in retail and food service
Transfer of seafood allergens to frying oil and subsequent fried products	Xingyi Jiang; Lauren Jackson	Mitigation of allergen cross contact during frying operations
Evaluation of allergen cross contact risk associated with production of oil roasted nut and peanut products	Robert Beverly; Lauren Jackson	Mitigation of allergen cross contact during frying operations

* Funded in part by Diversey

2024 Publications

1. Adhikari, L., Sayeed, M., Mudiredy, V., Vallalon, K., Shekhawat, G., Bleher, R., and T.V. Duncan. 2024. Surface heterogeneity at the polymer/food interface influences Ag migration from plastic packaging incorporating exchanged zeolites. *ACS Appl. Mater. Interfaces*. <https://doi.org/10.1021/acsami.4c05581>
2. Duncan, T.V., Kahn, S.A., Patri, A., and S. Wiggins. 2024. Regulatory Science Perspective on the Analysis of Microplastic Nanoplastics in Human Food. *Anal. Chem.* 96, 11, 4343-4358. (Invited) <https://doi.org/10.1021/acs.analchem.3c05408>
3. Green, H. and L.S. Jackson. 2024. Dry Cleaning and Sanitization Technologies. Encyclopedia of Food Safety (Second Edition), pp. 732-738, <https://doi.org/10.1016/B9780-12-8225219.002252>
4. Green, H., Kidd, J. and L.S. Jackson. 2024. Novel and Emerging Cleaning and Sanitization Technologies. Encyclopedia of Food Safety (Second Edition), pp. 735-739 <https://doi.org/10.1016/B9780-12-8225219.002318>
5. Jiang, X. and L.S. Jackson. 2024. Encyclopedia of Food Safety (Second Edition), pp. 1295-1306 <https://doi.org/10.1016/B9780-12-8225219.002331>
6. Redan, R.W., Zuklic, J., Cai, J., Warren, J., Carter, C., Wan, J., Sandhu, A.K., Black, D.B., and L.S. Jackson. 2024. Large scale high temperature short time (HTST) processing on the retention of key micronutrients in a fortified almond based beverage: Implications for fortification of plant based milk alternatives. *Frontiers in Nutrition*. In press.
7. Zhang, L., Bedford, B., Warren, J., Sharma, G., Brown, A.L., Hopfer, H., Ziegler, G.R., and L.S. Jackson. 2024. Effect of dry cleaning treatments for removing milk chocolate from valve/pipe assemblies and scale in chocolate processing equipment. *J. Food Protect.* 2024. <https://doi.org/10.1016/j.jfp.2024.100346>

New Research Capabilities

- LGMS/MS Systems
 - Waters ACQUITY UPLC Class Xevo TQ S Micro IVD System
 - Agilent 6475 triple quadrupole LC/MS



Thank you!

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