

FERMENTATION & LAB DEMONSTRATIONS

HPLC



Suneet Takhar, IBRL

Suneet Takhar joined IBRL as a part-time lab manager in November 2019. She took up the full-time analytical lab specialist role in January 2022 which includes both technical and management aspects related to the lab. She has a Bachelor's in Microbiology with a minor in Chemistry from University of Idaho and a Master's in Food Safety/Microbiology from Texas Tech University. In the past, she has worked in Food Science labs on projects ranging from food safety to food analysis.



Nancy McCrone, IBRL

Nancy McCrone joined IBRL as a Bioprocessing Lab Specialist in June 2023. She graduated from the University of Illinois at Urbana-Champaign with a BS in Crop Sciences and a concentration in Plant Biotechnology and Molecular Biology. Prior to joining IBRL, she was the QC Specialist at ADM BioProducts Lab in Decatur, Illinois.

Fermentation Process Support, Sterility & Sterile Sampling



Kevin Wu, IBRL

Kevin started working at the FSHN-PPP and IBRL in May of 2021. In August of 2024, he was promoted to Pilot Plant Specialist. What he expected was a great opportunity to become more in tune with the inner workings being on the floor of a food production factory. Previously he had prior experience with research labs and small scale chemical work, and he wanted to see a much larger scale of production. The main goal for Kevin right now is to simply just learn more about the world of Food Science.



Justin Putera, IBRL

Justin joined IBRL as an undergraduate student through the FASTER student internship program in 2023, eventually becoming an Academic Hourly Pilot Plant Technician after graduating. He has a Bachelor's of Science in Specialized Chemistry under the class of 2024, and works closely with the upstream fermentation team to run projects under other pilot plant technicians.

Fermenter Infrastructure



Hana Ostrander, IBRL

Hana Ostrander joined IBRL in October 2023 as a Junior Pilot Plant Specialist on the fermentation team. She has a Bachelor's in Integrative Biology from the University of Illinois at Urbana-Champaign. Prior to joining IBRL, she was an analytical chemist at an agronomy lab in Champaign, and she worked as a lab technician at ADM's Randall Research Center in their fermentation pilot plant.



Adam Davis, IBRL

Adam Davis joined IBRL in June 2023 as a member of the Downstream Processing Team. In the summer of 2024, Adam joined the Fermentation Team and was promoted to Pilot Plant Specialist. He has a Bachelor's in Chemical Engineering from the University of Illinois Urbana-Champaign. Previously, he worked in the oilseed industry as a process engineer for Archer-Daniels Midland. He focused on construction, operation, and optimization of various downstream processes in soybean oil extraction and refining.

Fermentation Troubleshooting



Phil Manning, IBRL

Phillip Manning joined IBRL in January 2019 as a pilot plant specialist. Phillip has a bachelors degree in Biological Sciences from Eastern Illinois University. Previously, Phillip worked at the Archer Daniels Midland Co. and Tate and Lyle pilot plants. His focus included process improvements and new fermentation opportunities. Phillip also has experience with separations and distillation at pilot scale.



Mark Tarabey, IBRL

Mark joined the IBRL fermentation team in February 2025. He holds a B.S. in Molecular and Cellular Biology and an M.Eng. in Bioengineering from the University of Illinois at Urbana-Champaign. Currently pursuing a Ph.D. in Bioengineering under Dr. Shannon Sirk, Mark aims to gain industry experience and expertise in large-scale fermentations during his time at IBRL.

SPRAY DRYING DEMONSTRATIONS

Spray Dryers and their Components

**Daniel Reyna, *Dedert***

Daniel R. Reyna is a Technical Sales Engineer at Dedert Corporation. He has been working at Dedert Corporation for three years. He started with drying technology and has since added evaporators to his repertoire. He is from the Chicago suburbs and attended Rose-Hulman Institute of Technology in Terre Haute, Indiana where he studied Chemical Engineering. When Daniel is not in the office, he is most likely traveling internationally or spending time with friends and family.

Parameters, Variables, and Outcomes

**Jedi Brown, *FSHN-PPP***

Jedi Brown joined the FSHN Pilot Processing Plant and Dining Services Team in Summer of 2017 as a Food Service Administrator III. He has spent the last 15 years training food safety and production processes to industry managers and leaders. He has a degree in Business from Parkland College in Champaign, IL and is continuing his education at Eastern Illinois University. He is responsible for overseeing the production of product for the Illinois Sustainable Food Project as well as equipment maintenance and Pilot Plant support.

Atomizers, Airflow, and Tank Geometry

**Joe Melnyk, *FSHN-PPP***

Joe joined the FSHN Pilot Processing Plant in the Fall of 2023, after spending roughly 8 years in the craft beer industry. During that time he developed a passion for recipe generation and refinement. Before starting in the beer industry Joe received a BS in psychology, and an MA in experimental psychology, from Western Carolina University. Pairing his social science background with his experience in food production, Joe is also interested in human factors and ergonomics in a production facility.

DOWNSTREAM PROCESSING DEMONSTRATIONS

Centrifugation



Richard Mathies, Alfa Laval

Richard Mathies, BS, ChE is a Business Development Manager at Alfa Laval. He has 30 years of practical engineering and sales experience helping customers solve separation related problems. Primarily focused on continuous centrifugation in Life Sciences applications and industries - Biotechnology, Industrial Fermentation but also in Brewery and Specialty Chemicals. In Biotechnology; mammalian and microbial cell separation is of particular focus.



Nathan Schumer, IBRL

Nathan joined IBRL in September 2024 as a member of the Down Stream Processing Team. He has a Bachelor's in Materials Science and Engineering and a Master's in Agricultural and Biological Engineering from the University of Illinois at Urbana-Champaign. Previously, Nathan worked as an Undergraduate Intern and then a Graduate Hourly employee at IBRL during his Master's program. Nathan is eager to apply his education and previous pilot scale experience to the bioprocessing field.

Membrane Filtration



Bobby Crowley, IBRL

Bobby joined IBRL in June 2022 as a member of the Down Stream Processing Team. In August of 2023 he was promoted to Pilot Plant Specialist. He has a Bachelor's and Master's Degree in Food Science and Human Nutrition from the University of Illinois at Urbana-Champaign. Previously, Bobby worked as a Food Technician at Tyson Foods Innovation Center in Downers Grove Illinois, was the Lead Teaching Assistant for a course of over 1000 students at UIUC, and worked at a Graduate Hourly employee at IBRL during his Master's program.



Ken Ludwig, Alfa Laval

Ken has been with Alfa Laval 28 yrs. working primarily in Sales for Alfa Laval's separation solutions, including Centrifuges, Decanters, Membranes, Evaporators and Hydrocyclones. Many year's of responsibilities have required Ken to become inherently familiar with the process for Utility Fluids, Veg. Oil Products, Plant Proteins, Animal Protein, Utility Fluids, Food, Brewery, Agriculture, Industrial Fermentation and Biopharmaceutical fermentations.

Microfiltration



Jessica Lenis, Applexion

Chemical engineer graduated from The City College of New York (CUNY). She initially began working as a Research Assistant for Procter & Gamble, primarily studying the interactions of particles found in different personal care products. She was also part of the Engineering and Commercialization group for PepsiCo, where she focused on the area of caffeinated beverages through the partnership with Starbucks. She currently works as a Technical Area Sales Manager for Applexion.



Hope Park, IBRL

Hope Park graduated from the University of Illinois at Urbana-Illinois with a Bachelor's in Chemical Engineering and a minor in Food Science. Upon graduating she interned at the ADM Modeling Center located in Illinois's Research Park, creating process simulations and financial models for various R&D and prospective optimization projects. She was later hired as an ADM Process Development Scientist, before joining IBRL in August 2023 as a member of the Down Stream Processing Team.

Smartflow Technology



Jason Bell, Smartflow

With a career dedicated to biotechnology innovation, Jason Bell, Chief Application Scientist at SmartFlow Technologies, is deeply engaged in advancing precision fermentation. At the heart of his work lies the optimization of precision fermentation techniques to align with SmartFlow Technologies' mission to Concentrate Nature's Bioactivity™ through efficient cell mass harvesting. As SmartFlow continues to innovate in precision fermentation and cell mass harvesting, the vision of a greener future for bioprocessing becomes increasingly achievable.