

Agriculture, Food & Nutrition

Agriculture, Food, and Nutrition Symposium (AFN) will provide professional opportunities for leading and rising scientists and engineers to share, discuss, and learn the latest scientific, and technical advances in various fields of agriculture, ecology, food, and nutrition in the US, Korea, and the world. The symposium covers all areas related to the UKC 2026's topic, 'From Imagination to Innovation – Into Reality. Areas include:

1. Agricultural sciences including agricultural & bio-engineering, agricultural economics & agribusiness agronomy, animal science, crop science, entomology, environmental science, horticulture, plant science, smart farming & precision agriculture, soil science, veterinary sciences, and other emerging areas.
2. Ecology including behavioral & physiological ecology, community ecology, ecosystem, human ecology, landscape, population ecology, and other emerging areas.
3. Food sciences including food chemistry, food engineering, food microbiology, food nanotechnology, food processing, food safety & regulation, functional food, sensory science, and other emerging areas.
4. Nutritional sciences including community nutrition, intestinal microbiota and diets, international nutrition, gene & diet interactions, metabolic diseases, nutrient metabolism & physiology, muscle & protein metabolism, precision nutrition, nutrition, and other emerging areas.

Chair



Sung Woo Kim

North Carolina State
University

Co-chairs



Jooyeoun Jung

Oregon State University



Soonkyu Chung

University of
Massachusetts
Amherst

Agriculture, Food
& Nutrition

@ Congressional A

Thursday, Aug 6 5:00 – 6:45pm

Nutrition Session

Chair: Soonkyu Chung (University of Massachusetts Amherst)

Time	Title and Speaker
5:00	Welcome and introduction Sung Woo Kim (AFN chair, North Carolina State University)
5:05	Welcome Soonkyu Chung (Nutrition Session Chair, University of Massachusetts Amherst)
5:10	Obesity-induced epigenetic dysregulation of hypothalamic leptin signaling Min-Hyun Kim (Arizona State University)
5:25	Developing and evaluating a social media intervention to promote locally grown fruit and vegetable consumption among college students Seung Eun Jung (Cluster invited speaker, University of Alabama)
5:45	Toward precision zinc nutrition: from genetic regulation to aging-associated zinc dyshomeostasis Sangyong Choi (University of Connecticut)
6:00	Development and validation of an ai-generated food-as-medicine recipe platform Heewon L. Gray (University of South Florida)
6:15	The effect of US-grown Teff (Eragrostis Tef) consumption on obesity-associated metabolic dysfunction in mice Ji-Young Lee (University of Connecticut)
6:30	Repeated weight cycling disrupts hypothalamic neuroendocrine signaling through gut microbiota remodeling Soonkyu Chung (University of Massachusetts Amherst)

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Friday, Aug 7 3:15 – 5:00pm

Agriculture session

Chair: Sung Woo Kim (North Carolina State University)

Time	Title and Speaker
3:15	Welcome Sung Woo Kim (AFN chair, North Carolina State University)
3:20	Temperature-dependent energy allocation drives growth and storage trade-offs in juvenile black sea bass Gwangseok Yoon (University of New England)
3:40	A novel DNA-based vaccine for reduction of Salmonella in broilers Young Min Kwon (Cluster invited speaker; University of Arkansas)

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Friday, Aug 7 3:15 – 5:00pm

Agriculture session

Chair: Sung Woo Kim (North Carolina State University)

Time	Title and Speaker
4:00	Roles of non-starch polysaccharide degrading enzymes to mitigate non-starch polysaccharide interference with intestinal health in pigs Hyunjun Choi (North Carolina State University)
4:20	From genome editing to adaptive evolution: engineering yeast for better fermented foods Yong-Su Jin (University of Illinois)
4:40	Milk oligosaccharides for mucosal microbiota and mucosa immunity in the jejunum of young pigs post-weaning Sung Woo Kim (North Carolina State University)

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@ Congressional A

Saturday, Aug 8 8:00 – 10:00am

Food Session

Chair: Jooyeoun Jung (Oregon State University)

Time	Title and Speaker
8:00	Welcome Jooyeoun Jung (Food Session Chair; Oregon State University)
8:05	Kahweol, a diterpene found in coffee, reduces fat accumulation and extends lifespan in <i>Caenorhabditis elegans</i> Yeonhwa Park (Cluster invited speaker; University of Massachusetts Amherst)
8:25	Identification of host-associated genomic features in <i>Salmonella enterica</i> serovar Dublin using machine learning Kwang Cheol Jeong (University of Florida)
8:45	Dynamic remodeling of DNA methylation during fruit ripening in octoploid strawberry Seonghee Lee (University of Florida)
9:05	Effect of processing and cooking conditions on chicken aroma characteristics evaluated by instrumental and consumer evaluation Jihye An (Auburn University)
9:25	Development of AI and omics-based quantitative PCR (qPCR) assay for food safety and quality Si-Hong Park (Oregon State University)
9:45	Upcycling agri-food biowastes into functional fibers for sustainable molded pulp packaging Jooyeoun Jung (Oregon State University)

Poster Session
PHY

@ International
Ballroom II

Friday, Aug 7 5:00 – 6:45pm

Agriculture, Food & Nutrition Poster Session

Chair: Yong-Su Jin (University of Illinois)

P1	Development and evaluation of a bench-scale flume washer for ozone micro-nano bubble washing of fresh produce Haknyeong Hong (University of California Davis)
P2	Blue light treatment of whole avocados to inactivate <i>Listeria monocytogenes</i> and <i>Salmonella enterica</i> on their exocarp surfaces Minji Hur (University of Georgia)
P3	Comparative evaluation of expert and AI greenhouse climate control for winter strawberry cultivation Yuseok Jeong (National Institute of Agricultural Sciences)
P4	Development of an end-effector system for apple harvesting using modular design and a custom PCB Sang-Hyeon Kang (Rural Development Administration)
P5	Haplotype-resolved genome assembly of strawberry cultivars Florida Encore and Florida Ember Jaejoon Lee (University of Florida)
P6	Exploring drought adaptation mechanisms in soybean genotypes: A pathway-based metabolomics approach Namhee Lee (University of Georgia)
P7	Anti-proliferative properties of <i>Humulus lupulus</i> (hops) flavonoids in human colorectal cancer cells Seong-Ho Lee (University of Maryland)
P8	Hemp seed attenuates colon tumorigenesis and immune responses in colitis-associated colorectal cancer mouse Jieun Woo (Purdue University)
P9	Effect of thermal processing on nutritional and quality parameters of grape juice Moonsun Yang (Wilberforce University)
P10	A protective effect of aged parsnip extract on diet-induced metabolic dysfunction-associated steatotic liver disease (MASLD) in vivo Tongkewn Yoo (Purdue University)
P11	Autonomous ground robotics for precision strawberry production in Florida Daeun Choi (University of Florida)