Announcement date: February 15, 2021

[Webinar] 2021 Tokyo Tech Research Showcase "Agriculture and Livestock Industry"

Tokyo Institute of Technology (Tokyo Tech), in cooperation with the National Science and Technology Development Agency (NSTDA) of Thailand, will host the **2021 Tokyo Tech Research Showcase** online on Monday, March 8.

This event will focus on research relevant to agriculture and the livestock industry. Leading researchers from Tokyo Tech and NSTDA will introduce cutting-edge technology applicable to "smart agriculture" and "food for the future," which Thailand has listed as priority industries under Thailand 4.0. Q&A will follow each presentation.

Date:	Monday, March 8, 2021
Time:	13:00–15:00 (THA)
Entry fee:	Free of charge / Advance registration required.
Registration:	https://forms.gle/UqNrr9FfQ3qNkYoF6

Please register through the link above by Thursday, March 4, 2021. Registration will be on a first-come, first-served basis, and only those registered will be sent the webinar link. This event will be conducted in English.

Tokyo Tech Research Showcase is
organized by Tokyo Tech ANNEX Bangkok,
co-sponsored by Tokyo Tech and NSTDA,
supported by Tokyo Tech Alumni Association Thailand (Thai Kuramae Kogyokai).

Tokyo Tech, NSTDA and partner universities in Thailand have administered Thailand Advanced Institute of Science and Technology-Tokyo Tech (TAIST-Tokyo Tech) since 2007. Based on this network, Tokyo Tech has established strong linkages with industry and academia in Thailand. To further advance academia-industry collaborations, Tokyo Tech established Tokyo Tech ANNEX Bangkok at Thailand Science Park in March 2018. Tokyo Tech ANNEX Bangkok facilitates the identification of potential seeds for international collaborative research with companies and organizations in Thailand and the surrounding region.

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[Webinar] 2021 Tokyo Tech Research Showcase

Monday, March 8, 2021

Program

*Times are indicated in THA.

13:00–13:10 Opening remarks
Tokyo Tech Vice President Jun-ichi Takada
NSTDA Executive Vice President Chadamas Thuvasethakul

13:10–13:35 Dr. Ayumi Nagashima, Assistant Professor, School of Life Science and Technology, Tokyo Tech
"How can fragrance be applied to agriculture?"

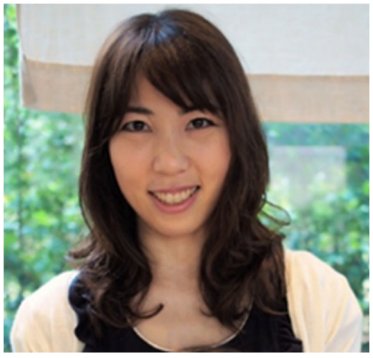
13:35–14:00 Dr. Siwat Sangsritavong, Principal Researcher, Physiology and Nutrition Research Team, Veterinary Health Innovation and Management Research Group, BIOTEC, NSTDA
"Appropriate technologies for sustainable improvement of the production efficiency in the smallholder dairy farms"

14:00–14:25 Dr. Takumi Ohashi, Assistant Professor, School of Environment and Society, Tokyo Tech
"Smart livestock farming for animal welfare-friendly industry"

14:25–14:50 Dr. Naoyuki Yamamoto, Professor, School of Life Science and Technology, Tokyo Tech
"*Probiotic bacteria for health"*

14:50–15:00 Closing remarks

Speakers' Profile



Ayumi NAGASHIMA
Assistant Professor,
School of Life Science and Technology
Tokyo Institute of Technology

Ayumi NAGASHIMA received her Dr. of Agriculture from University of Tokyo in 2013. She conducted researches on the mechanism of volatile sensing in plants in 2013-2017 as a research scientist of JST-ERATO Touhara Chemosensory Signal Project.
Since joining Tokyo Institute of Technology in 2017, she has been studying on chemical sensing and physiology. She has been also conducting several collaborative research using the mass spectrometer in Open Research Facilities for Life Science and Technology. She is the recipients of several awards for her contributions to the olfactory and chemical sensing field, e.g. JBC Herbert Tabor Early Career Investigator Award (2020), ISOT Young Investigator Award (2016).

Siwat Sangsritavong
Principal Reseracher
Physiology and Nutrition Research Team
Veterinary Health Innovation and Management Research Group
National Center for Genetic Engineering and Biotechnology, NSTDA

Siwat Sangsritavong received his Ph.D. (Endocrinology and Reproductive Physiology) from the University of Wisconsin-Madison in 2002. He conducted researches in multidisciplinary aspects of dairy science. He focuses on appropriate technologies that fit the smallholder dairy farms where financial investment is limited. He is interested in a wide array of research ranging from synchronized ovulation to nano-encapsulation of Thai medicinal herbs to treat subclinical mastitis. His research's main objective is to improve the production efficiency of dairy cows raised in smallholder farms. In the reproduction field, he started inducing the effective method for ovulation synchronized

into the dairy farm.　Nowadays, the method is wildly used throughout the country for both dairy and beef cattle. For research in feed and ruminant nutrion, he worked on starter cultures for silage production and converted agricultural waste such as corn husk/corn cob and cassava pulp to be a good quality feed for ruminants. He was also interested in the rumen's microbial ecology changes when the animal received the same feed but fermented by different cultures; also, the changes of metabolites produced in the rumen when the changes in rumen ecology were observed. Oxidative stress in transition cows was also one of his interested areas. The radical oxygen species (ROS) balance for improving reproductive efficiency, increase immunity of the transition cows is his current research area of his interest.

Takumi OHASHI
Assistant Professor
School of Environment and Society
Tokyo Institute of Technology

Takumi OHASHI received his B.E., M.E., and Ph.D. degrees in electrical engineering from the Tokyo Institute of Technology (Tokyo Tech), Japan, in 2014, 2015, and 2018, respectively. He also received his Master of Management of Technology (MOT) from Tokyo Tech in 2018. He is currently an Assistant Professor at Tokyo Tech. He was a Visiting Assistant Professor at Center for Design Research, Stanford University, USA, in AY2019-20. He is currently engaged in “Co-Design” to create the state of science and technology together with stakeholders through dialogue and collaboration in a wide range of fields such as livestock breeding, nursing care, education, food, drug discovery, and disaster evacuation, and to transform the practices in the field.

Naoyuki YAMAMOTO
Professor, School of Life Science and Technology
Tokyo Institute of Technology

ACADEMIC EXPERIENCE

1984	Master of Science, Tokyo Institute of Technology, Yokohama
2002	PhD (Science), Tokyo Institute of Technology, Yokohama

RESEARCH AND PROFESSIONAL EXPERIENCE

1984-1985	R&D Center, Asahi Kasei Industry
1986-2014	R&D Center, Calpis Co., Ltd
2013-2014	Director, Microbiology & Fermentation Laboratory
2014-2016	Director, R&D planning department
2016-2017	R&D Center, Asahi Group Holdings
2017-present	Tokyo Institute of Technology

RESEARCH AREA

Functional material: probiotic bacteria, lactic acid bacteria, food peptides
Functional target: gut health (immune system, nerve system, endocrine system)

RESEARCH CONCEPT

The immune, endocrine, and nervous systems in our gastrointestinal tract are thought to exhibit advanced functions; thus, we are attempting to find functional molecules that act on sensors displayed on the surface of gut cells. We are working to find novel sensing molecules, displayed on the surface of the epithelial cells in the gut, that might be useful in understanding the role of functional food materials.