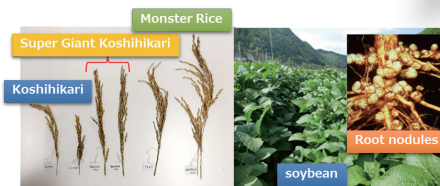
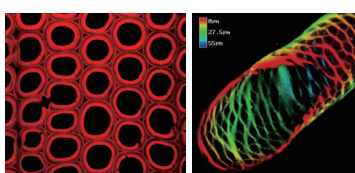
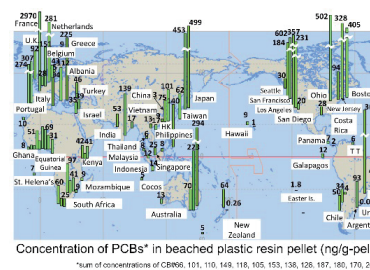
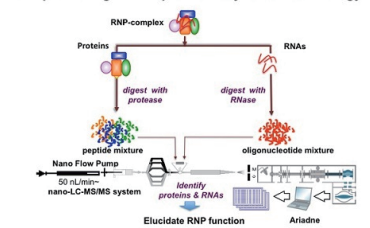


Food

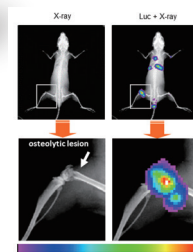
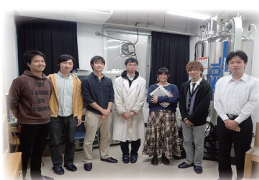
Energy



Strategy for the characterization of RNA-protein (RNP) complex using mass-spectrometry based technology



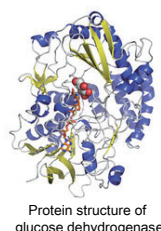
Life Science



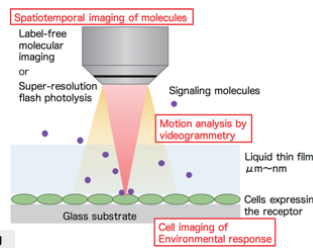
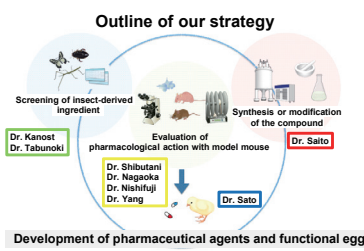
Center of excellence for marine omics



Crystal structure of glucose dehydrogenase



Protein structure of glucose dehydrogenase



-Fuchu Campus

3-5-8 Saiwai-cho, Fuchu-shi, Tokyo 183-8509

□By JR Chuo line, Kokubunji Station

Take the Keio bus (Fuchu Station via Meisei Gakuen, Tera No91) from bus terminal no. 2 boarding area of Kokubunji Station south exit and get off Harumicho bus stop. About 10 minutes bus ride.

□By Keio line, Fuchu Station

Take the Keio bus (Kokubunji Station south exit via Meisei Gakuen, Tera No91) from bus terminal no. 2 of boarding area of Fuchu Station north exit and get off Harumicho bus stop. About 7 minutes bus ride.

□By JR Musashino line, Kita-Fuchu Station

Walk about 12 minutes to campus.

-Koganei Campus

2-24-16 Naka-cho, Koganei-shi, Tokyo 184-8588

□Take the JR Chuo Line from Tokyo Station (rapid train) to Higashi-Koganei Station: 40 minutes. Walk about 10 minutes to campus.

□Take the JR Chuo line to Musashi-Koganei Station.

Walk about 20 minutes to campus.

<Contact>

Institute of Global Innovation Support Office, Research Support Office, Research Advancement Division

3-8-1 Harumi-cho, Fuchu-shi, Tokyo 183-8538 TEL: +81-42-367-5646

Institute of Global Innovation Support Room (Koganei)

2-24-16 Naka-cho, Koganei-shi, Tokyo 184-8588 TEL/FAX: +81-42-388-7122

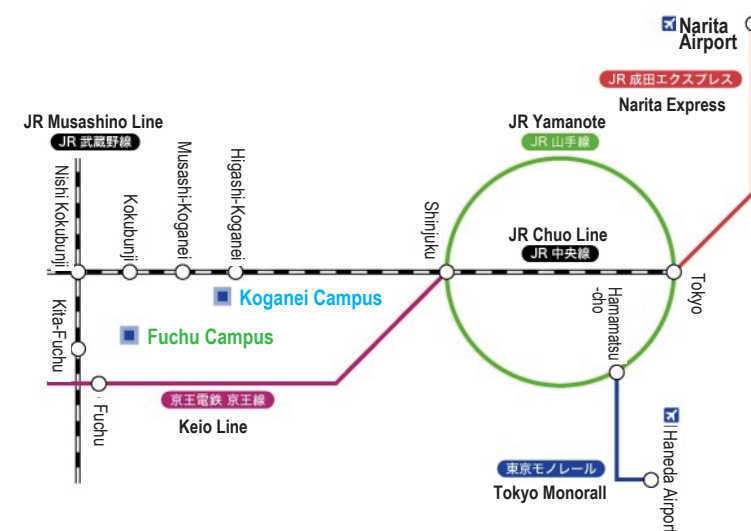
Institute of Global Innovation Research Website

E-mail: giri@cc.tuat.ac.jp

URL: <https://www.tuat-global.jp/>

Tokyo University of Agriculture and Technology
Institute of Global Innovation Research

March. 2017. rev.ed.



Challenge to the global problems of "food" and "energy"

Tokyo University of Agriculture and Technology

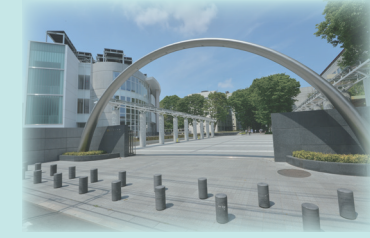
Institute of Global Innovation Research



2017. 3



Tokyo University of Agriculture and Technology
Institute of Global Innovation Research



Message



President
Prof. Tadashi Matsunaga

Tokyo University of Agriculture and Technology (TUAT) distinctively focuses on education and research in the fields of agriculture and engineering that constitute the core of industry today. Our future vision based on a third medium-term objectives/plan is to achieve competitive research capabilities on the world stage. Resolving serious problems such as environmental degradation, energy issues, and food and constructing a sustainable society requires efforts from a broad range of perspectives extending beyond the pivotal agriculture and engineering framework.



Dean
Prof. Akinori Koukitu

TUAT was selected as one of the twelve national universities rapidly promoting global research in 2014. In April 2016, TUAT established the Institute of Global Innovation Research (GIR) including the three organizations: "Women's Future Development Organization," "Innovation Advancement Organization," and "Organization for Promotion of Tenure-track System". We promote the activities of fourteen strategic research teams on three major areas: "food," "energy" and "life sciences,".



Executive Acting Dean
Prof. Chisato Miyaura

Prof. Arie (Vice-Dean, Agriculture), Prof. Yohda (Vice-Dean, Technology) and I organize the GIR committee for the fourteen research teams to facilitate international collaborations. We endeavor to enhance the further globalization of younger researchers, including graduate students. The strategic research teams provide these researchers with various opportunities to interact with internationally recognized professors to increase their competitiveness and gain global-innovative human resources.

Institute of Global Innovation Research Website
<https://www.tuat-global.jp/> (Japanese)
<https://www.tuat-global.jp/english/> (English)

Approaches

As part of the National Universities' Budget for the FY2014, Tokyo University of Agriculture and Technology received priority allocation for the rapid enhancement of educational and world-class research activities. In exploiting our advantages in the agriculture and engineering fields, and as an initiative to enhance our research capabilities, we established the Institute of Global Innovation Research as a research university in April 2016. We prioritize research in three key areas: "food," "energy" and "life sciences," which constitute an interdisciplinary area between agriculture and engineering fields. We aim to develop the Global Innovation Human Resources in Science who have a broad vision of both scientific techniques and management skills, among other skills, as well as a global perspective.

Food

Food is one of the critical challenges that the international community is currently facing. Particularly, food shortages afflict many people living mainly in the Asia-Pacific region. "Food" as a priority theme encompasses both food production and environmental science to solve these issues.

Tadashi Yokoyama Team

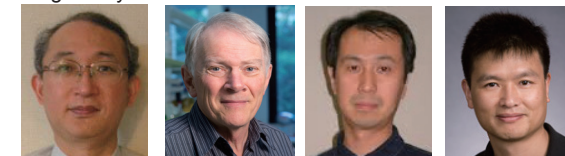
■ Research and development of technology for increasing yields of rice and soybean using their genome information and biofertilizer



Prof. Yokoyama Dr. Rowan F. Sage Dr. Gary Stacey

Nobuhiro Takahashi Team

■ Elucidation of RNA function in animal/plant cells, and development of its regulatory method



Prof. Takahashi Dr. Richard J. Simpson Dr. Hisashi Koiwa Dr. Yunde Zhao

Hideshige Takada Team

■ Global assessment of transboundary pollution across the ocean and the air



Prof. Takada Dr. Richard Thompson Dr. Hissi Karapanagioti Dr. Neng-Huei (George) Lin

Ryo Funada Team

■ Analysis of molecular structure of cell wall for advanced utilization of plant biomass



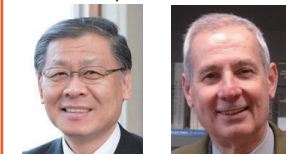
Prof. Funada Dr. Jonh Ralph Dr. Edouard Pesquet

Energy

Energy issues should be considered to be a great challenge facing humanity. "Energy" as a priority theme addresses energy problems according to the application of capacitors, LED, ionic liquids, and smart green mobility.

Hiroyuki Ohno Team

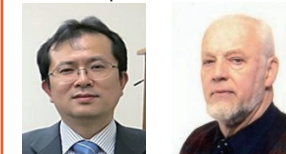
■ Development of novel energy conversion technology with ionic liquids



Prof. Ohno Dr. Bruno Scrosati

Yoshinao Kumagai Team

■ Development of AlGaIn-based deep-UV light emitting diodes



Prof. Kumagai Dr. Bo Monemar

Katsuhiko Naoi Team

■ Platform for leading world capacitor science



Prof. Naoi Dr. Patrice Simon Dr. Patrick Rozier Dr. Thierry Brousse

Toshihiko Kuwabara Team

■ Development of novel and fundamental technology to promote smart green mobility



Prof. Kuwabara Dr. Frédéric Barlat Dr. Roman Henze Dr. Tamim Asfour

Life science

Life science has a significant impact on our health and well-being. "Life Science" as a priority theme pushes and precedes the edge of technical possibility, mainly in protein synthesis and life science.

Kazuhiro Chiba Team

■ Synthesis of bioactive particles toward new drug delivery system



Prof. Chiba Dr. Esko I. Kauppinen Dr. Sanjay Mathur Dr. Aibing Yu

Masaki Inada Team

■ Research approach on Collagen Molecule Complex (CMC) metabolisms for bio-medical application



Assoc. Prof. Inada Dr. Hideaki Nagase Dr. Florian Grundler Dr. Carlos Lopez-Otin

Tsuyoshi Tanaka Team

■ Center of excellence for marine omics



Prof. Tanaka Dr. Chris Bowler Dr. David Kisailus Dr. Chiara Zurzolo

Koji Sode Team

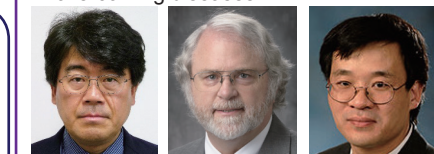
■ Development of innovative biodevices employing autonomous sensing actuator



Prof. Sode Dr. Christopher Robin Lowe Dr. Ashok Mulchandani Dr. Antonio Ortega

Makoto Shibutani Team

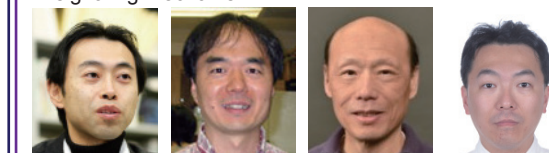
■ Seed investigation of insect-derived ingredients on the efficacy for overcoming diseases



Prof. Shibutani Dr. Michael R. Kanost Dr. Peixin Yang

Kazuhiko Misawa Team

■ Interdisciplinary research initiative of optical science for clarifying in-vivo signaling mechanism



Prof. Misawa Dr. Hiroaki Matsunami Dr. Tianshu Liu Dr. Atsushi Yabushita

Priority Field 1 Food

Food Science	Animal Science
Environmental Science	Protein Synthesis

Production of Food
Environmental Science



Tokyo University of Agriculture and Technology
Institute of Global Innovation Research

Priority fields: Strategic research teams

■ Employment of world's leading researchers as core professors
"Carrier challenge" (Tenure Track system) etc

- Advancement of international collaboration
- Development of young researchers

Biomolecule	Life science
Biodevice	Advanced measurement

Priority Field 3 Life Science



Protein Science
Life and Medical Science

Priority Field 2 Energy

LED	Ionic Liquid
Capacitor	Green Mobility



Energy Control
Energy efficiency