Laudation for Prof. Dr. Sonoko Dorothea Bellingrath-Kimura, winner of the JACA Prize of the German JSPS Alumni Association 2023, in Kiel

Professor Dr. Bellingrath-Kimura was born in Nagoya to German-Japanese parents and grew up in Japan. She attended her school-time in Japan and began her studies at Hokkaido University in 1995 in the field of plant cultivation and plant nutrition. She graduated with a *Bachelor of Science* degree in 2000 and a *Master of Science* degree in 2002. During her studies she already spent a year at the University of Göttingen. In 2005 she finally received her PhD from Hokkaido University with a thesis in soil science.

After completing her studies, she became a tenure-track associate professor at the Tokyo University of Agriculture and Technology (TUAT). Here she was engaged in research of soil science until 2015. In Tokyo she began to focus on International Environment and Agricultural and developed her interest in international research cooperation – *apart from Antarctica, she has already researched on all continents*. In 2014 she moved from Tokyo to a visiting professorship at the Technical University of Munich at the Institute for Plant Nutrition. A year later, in 2015, she became head of the institute at the Leibniz Center for Agricultural Landscape Research (ZALF) in Müncheberg and a W2 Professor for "Land Use Systems" at the Humboldt University in Berlin. Since mid-2018, she has been W3 Professor for "Land Use Systems" at the HU Berlin, and Co-Head of Research Area 2, "Land Use and Governance" at the ZALF.

Scientific Career: Cooperation and interdisciplinary science

INNISOY (2017-2021, EIC Concert Japan, BMBF)

Here, the impact of changing environmental conditions, e.g., availability of water and sulfur on symbiotic nitrogen fixation and the associated impact on soybean yield was investigated.

Results: Contribution to food security through improved soy production under the challenges of global changes and the climate change. Development of a network for soy research in Japan, Germany, Turkey and France.

FiSBea (2021-2024, Federal Ministry of Education and Research)

A cooperation project, in which information and communication technology (ICT) and the most modern techniques of remote sensing and image data analysis are used. The project uses the existing cooperation between the Leibniz Center (ZALF) and the Tokyo University of Agriculture and Technology (TUAT).

The project goals are about exploring a possible applicability of growth-promoting rhizobacteria (PGPR) resources. Is it possible to achieve better yields using innovative methods, e.g. Soy-Rhizobium Symbiosis and ultimately the expansion of Soy Production in Central Europe in order to have a greater variety of bio-resources available. (The FISBea project is part of the Japanese "Moonshot" field experiment at TUAT, aiming at climate-resilient agricultural systems through cyber-physical monitoring. The Moonshot program is part of the current *6th Science, Technology and Innovation Basic Plan*.)

Japanese cooperation projects

- 2020-2022 JSPS: Japan-Europe joint research to improve sustainable soybean cultivation technology in different environments.
  https://kaken.nii.ac.jp/en/grant/KAKENHI-PROJECT-20KK0136/
- Also the JSPS-Fund for the Promotion of Joint International Research: "A novel nitrogen footprint method to link producers and consumers: development of a method to visualize agricultural production conditions to consumers"
- Partners are NARO- and Hokkaido University and the research regions Brandenburg (ZALF), Mikasa (Hokkaido Univ.) and Shizuoka (NARO). Here different soil-climatic conditions as well as socio-ecological conditions are compared with each other.
- As in other projects, here are opportunities created for young scientists to do doctorates in both countries. (Over 25 publications have resulted from cooperation with Japanese scientists in recent years.)

Commitment to the exchange of young scientists between the two countries!

Professor Bellingrath-Kimura is not only committed and successful in her scientific field, but also in the cultural and social exchange between Japan and Germany.

- She has been a visiting professor at the Tokyo University of Agriculture and Technology (TUAT) since 2015. Through this engagement, but also other functions in Japan, she is the contact person for students from Japan or Germany who want to study in the other country. They approach Professor Bellingrath-Kimura because of the visibility of her activities and position.
- She is also active in the *Wise Program - Excellent Leader Development for Super Smart Society by New Industry Creation and Diversity*. In addition, there is the supervision of students at the Institute of Global Innovation Research - only virtual due to Covid-19, real visit to Germany planned again in November 2023.
- Due to this special role, she also receives invitations to conferences, like a "talk in Japanese" at conferences in Japan about research in Germany, or vice versa the "talk in German".
- Not to be forgotten is her acceptance of guest students at her institute.

She is a board member of various scientific societies in Japan and Germany, e.g. the *Japanese Society of Soil Science and Plant Nutrition* and the *Japanese Society of Organic Agriculture* and has been an ambassador of Hokkaido University since 2019.

- She is also currently a member of the *Soil Protection Commission at the Federal Environment Agency* and on the board of the *German Society for Agronomy*.
- In Japan, she is proposed from *Japanese Society of Soil Science and Plant Nutrition* as Contributing Member (*Renkei kaiiin,* 連携会員) of the *Science Council of Japan* – that is under discussion.
- She is also involved in *Scientist 4 Future*, a new digital specialist group to be founded, and is committed to bringing scientific knowledge to society.

Professor Dr. Sonoko Dorothea Bellingrath-Kimura receives the JACA Prize 2023 because of her commitment to scientific and cultural exchange between Japan and Germany, ultimately internationally. She is involved culturally, politically and for students, and ultimately also for sustainable environmental issues and smart agriculture, and therefore deserves the utmost respect.

Congratulations on this award. We wish you all the best for the future and a continued successful harvest.