



# Tsukuba Life Science Promotion Association, TLSK

June 8<sup>th</sup>, 2021

Takashi Inutsuka, Executive Director of TLSK



# Outline of Tsukuba Science City

- 1963 Cabinet decision to build Tsukuba Science City
- Area: 283.72km<sup>2</sup>
- Population: 244,528 (Oct., 2020)
- Population increase: 105.8% (2015 census)
- Foreign residents: 9,457 (Oct., 2020)
- 300 Research institutes
  - 29 National Research institutes
- 20,000 Researchers
- 4 Nobel-Prize winners
- 2019 G20 Ministerial Meeting on Trade and Digital Economy



- 50 km northeast of Tokyo
- 45 minutes from Tokyo Station by the Tsukuba Express Line(TX)
- 40 km northwest of Narita International Airport

# President Makoto Asashima

■ **Name:** Makoto Asashima, Ph.D.

■ **Position (present, 2020), Institution**

Research Professor, Strategic Innovation and Research Center, Teikyo University

Professor Emeritus, Department of Life Sciences (Biology) Graduate School of Arts and Sciences, The University of Tokyo

Emeritus Fellow, Research Center for Stem Cell Engineering, National Institute of Advanced Industrial Science and Technology (AIST)

Academic Adviser, Japan Society for the Promotion of Science (JSPS)

■ **Education**

Doctor of Science from The University of Tokyo in March 1972

■ **Professional:** Developmental Biology, Cell Biology, Organogenesis

1. Mechanism of egg development using from experimental biology to molecular biology
2. Control of Organogenesis in vitro
3. Molecular biology of cell differentiation and embryonic development.
4. Cloning and analysis of organ specific genes and early embryonic development



■ **Professional Career**

- |           |  |
|-----------|--|
| 1993-1995 | Professor at The University of Tokyo, Faculty of Arts and Sciences   |
| 1995-2003 | Professor at The University of Tokyo, Graduate School of Arts and Sciences   |
| 2003-2005 | Dean and Head at The University of Tokyo, Graduate School of Arts and Sciences   |
| 2005-2007 | Director of Life Sciences Network in The University of Tokyo   |
| -2008     | Vice-President of Science Council of Japan   |
| 2007-2009 | Managing Director, Executive Vice President, Visiting Professor in The University of Tokyo                               |
| 2009-2010 | Fellow, Organ Development Research Laboratory in National Institute of Advanced Industrial Science and Technology (AIST) |
| 2010-     | Director of Life Science Center of Tsukuba Advanced Research Alliance  |
| 2011-     | Japan Society For The Promotion of Science Executive Director  |
| 2013-     | Emeritus Fellow, National Institute of Advanced Industrial Science and Technology (AIST )                                |
| 2016-2018 | Vice President, Tokyo University of Science  |



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# Some of the Members of TLSK



## University of Tsukuba

University of Tsukuba is a research-type university with high research capabilities in a wide range of academic fields. it pursues expertise in each field and promote interdisciplinary collaboration.



## National Institute of Advanced Industrial Science and Technology, AIST

As one of the largest public research institutes in Japan, AIST focuses on the creation and practical application of technologies that are useful for Japanese industry and society.



## Institute of Physical and Chemical Research, RIKEN

RIKEN is Japan's largest comprehensive research institution renowned for high-quality research in a diverse range of scientific disciplines. It encompasses a network of world-class research centers and institutes across Japan.



## National Agriculture and Food Research Organization, NARO

NARO is an institution that conducts research and development in a wide range of fields from basics to applications for the development of Japan's agriculture and food industry.



## National Institute for Materials Science, NIMS

NIMS carries out fundamental research and generic/infrastructural technology research and development in the field of materials science, and with improving the level of materials science and technology.



## High Energy Accelerator Research Organization, KEK

KEK is one of the world's leading accelerator science research laboratories, using high-energy particle beams and synchrotron light sources to probe the fundamental properties of matter.



## Ibaraki Prefecture/ City of Tsukuba

Local governments

# Some of the Members of TLSK



**Astellas Pharma Inc.** Capital: 84 million Euro Number of employees: 16,000

Astellas Pharma Inc. is one of the largest pharmaceutical companies in Japan, and its main products are Prostate Cancer Treatment, Acute Myeloid Leukemia (AML) Treatment, Metastatic Urothelial Cancer Treatment.



**Eisai Co., Ltd.** Capital: 37 million Euro Number of employees: 11,000

Eisai positions "neurology" and "oncology" as two strategically important areas where patients' true needs remain unmet and it can become a front-runner. Accordingly, it is promoting drug discovery activities in these two areas.



**Taiho Pharmaceutical Co., Ltd.** Capital: 1,600,000 Euro Number of employees: 2,300

Taiho has continued to embrace the challenge of developing medicines that can contribute to cancer. Meanwhile, it have also worked intensively on the development of innovative pharmaceuticals in the allergy, immunology, and urology fields.



**Kyowa Hakko Bio Co., Ltd.** Capital: 8 million Euro Number of employees: 1,900

Kyowa Hakko Bio uses cutting-edge fermentation technology to produce the highest quality materials and contributes to medical care and health around the world.



**NH Foods Ltd.** Capital: 29 million Euro Number of employees: 2,200

Nippon Ham Ltd. is a major food processing manufacturer in Japan, and covers a wide variety of ingredients and products such as many processed food products, marine products, dairy products, and health foods.



**Kirin Holdings Co., Ltd.** Capital: 82 million Euro Number of employees: 31,000

Kirin Group position fermentation and biotechnology as the core technologies and are corporate group unlike any other in the world with expertise not just in the alcoholic and non-alcoholic beverage business but also in the pharmaceutical business.

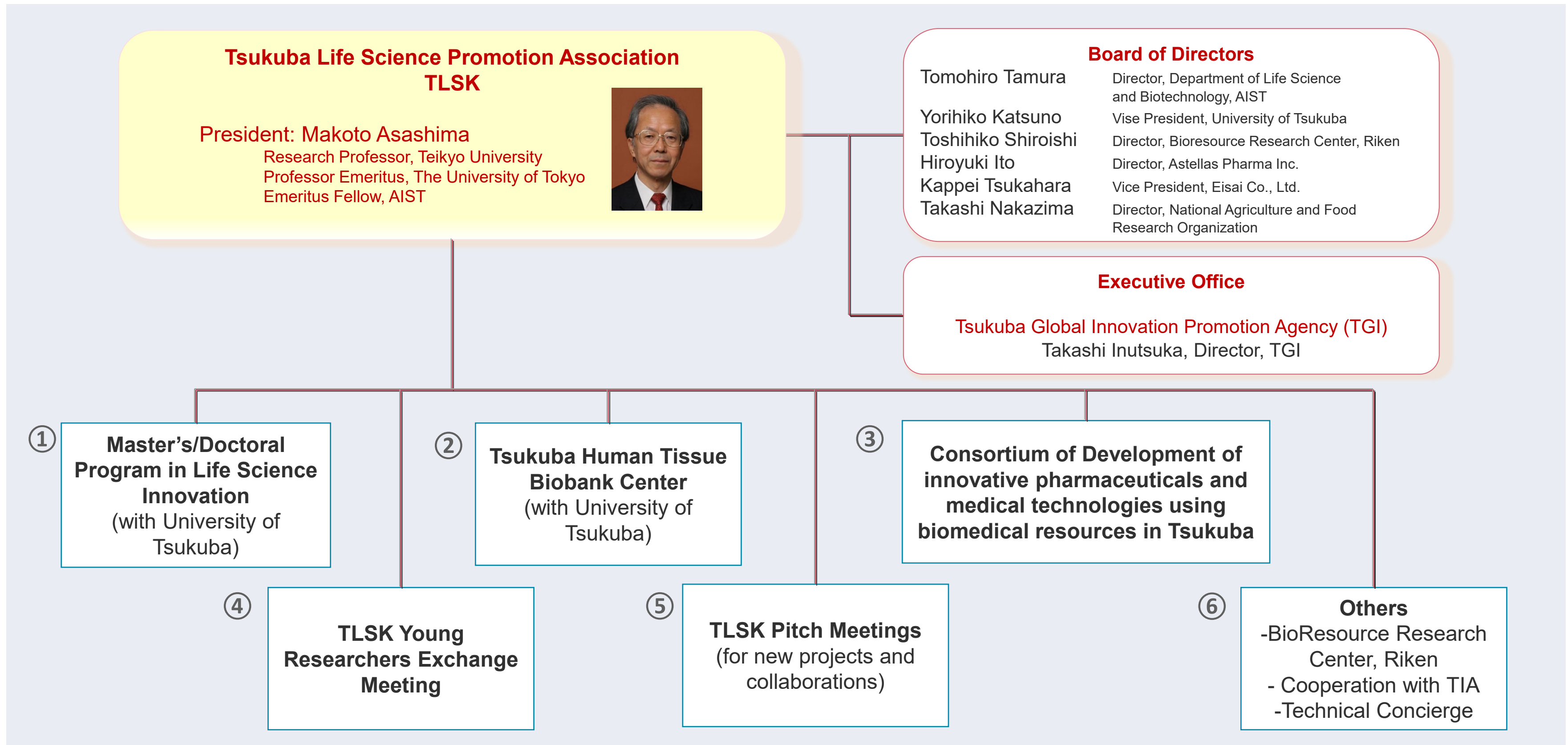


**AgroDesign Studios** Capital: 870,000 Euro

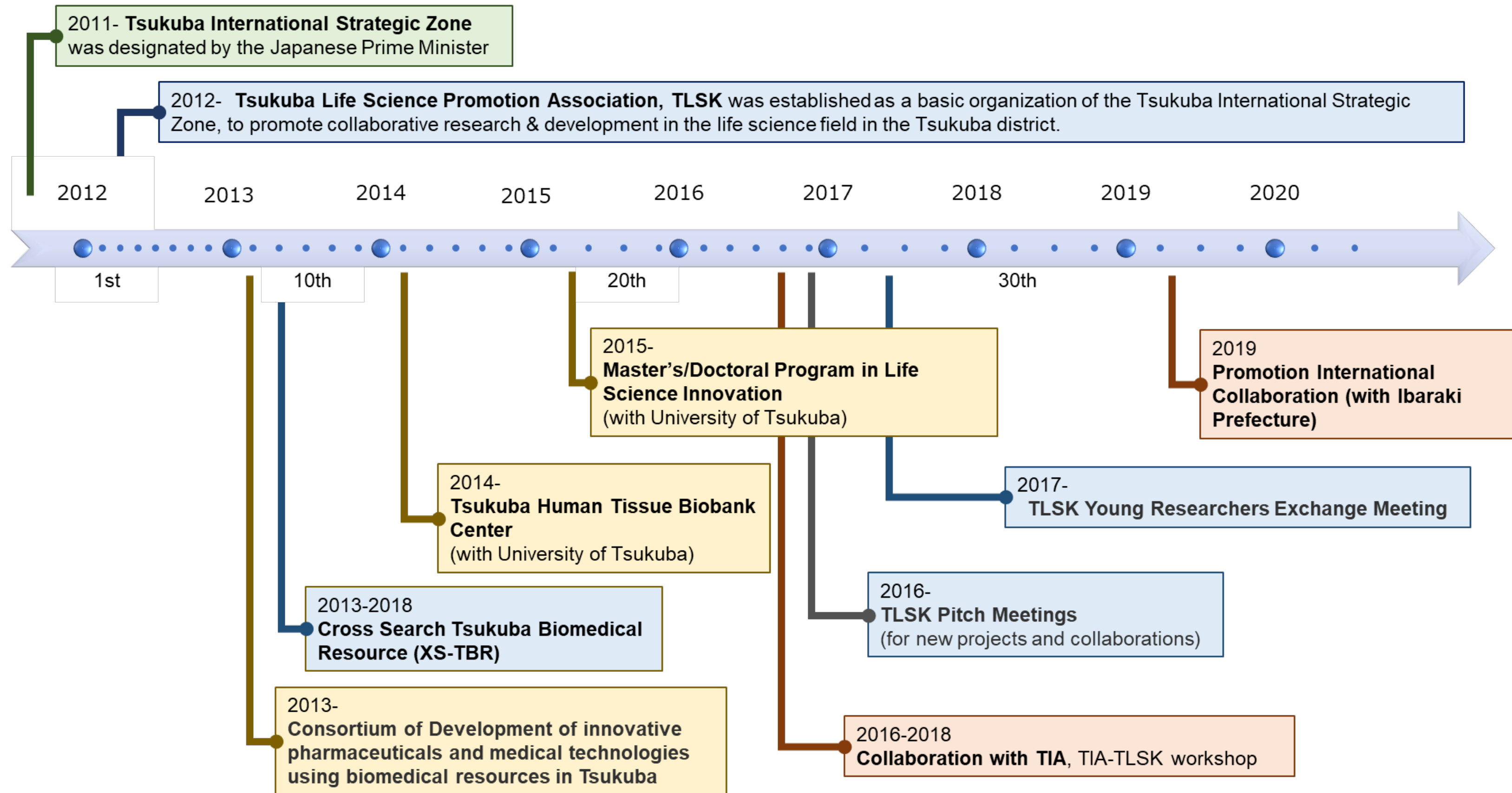
AgroDesign Studios is a start-up company that conducts research and development of pesticides that achieve both safety and medicinal properties through a unique pesticide creation process based on bioscience technology.



# Activities of TLSK for Ecosystem



# History of development and activity of TLSK





# Examples of Projects and Collaborations created by TLSK

## ■ Tsukuba Human Tissue Biobank Center

Tsukuba Human Tissue Biobank Center distributes tissues and blood to various research and educational institutions for research aimed at drug development and finding causes of diseases, and for medical education.



## ■ Master's/Doctoral Program in Life Science Innovation

The Master's/Doctoral Program in Life Science Innovation is a new degree program jointly established by University of Tsukuba and TLSK. The program offers talented students from Japan and around the world unique education and research experiences that become a catalyst for creative innovation, encouraging students' interaction with leading world experts in its four specific fields of specialization – disease mechanisms, drug discovery, food innovation, and environmental management.

## ■ Creation of new national research projects, Useful Material Production System utilizing genome-edited plants

This Project aim to develop and commercialize a system thant produces useful materials beneficial in preventing disease and promoting human health using easy-to-grow plants, such as tomatoes. In this way, we hope to contribute to the effective prevention of illness, including lifestyle-related diseases such as diabetes and hypertensive diseases.



## ■ International Collaboration

In 2019, a pharmaceutical company belonging to TLSK and Inoviem Scientific of France signed a joint research agreement.





Thank you