

# Citation/Award-winning

## Main Prizes and Recognition

### Nobel Prize in Physics



Invention of efficient blue light-emitting diodes which has enabled bright and energy-saving white light sources(2014)

**Isamu Akasaki** Meijo University and Nagoya University, Japan

**Hiroshi Amano** Nagoya University, Japan

**Shuji Nakamura** University of California, Santa Barbara, USA

### Nobel Prize in Physiology or Medicine



Discovery that mature cells can be reprogrammed to become pluripotent\*1 (2012)

**Shinya Yamanaka**

Director, Center for iPS Cell Research and Application, Kyoto University

※1 Share the laureate with Sir. John Gurdon

### Japan Prize



Creation of unconventional inorganic materials with novel electronic functions based on nano-structure engineering

**Hideo Hosono**

Professor, Materials and Structures Laboratory and Director of Materials Research Center for Element Strategy, Tokyo Institute of Technology

### Canada Gairdner International Award



Discovery of regulatory T-cells, characterization of their role in immunity and application to the treatment of autoimmune diseases and cancer (2015)

**Shimon Sakaguchi**

Professor, WPI Immunology Frontier Research Center, Osaka University



Ground-breaking discovery of Toll like receptors and the array of microbial compounds that they recognize to provide innate resistance to infection (2011)

**Shizuo Akira**

Director, WPI Immunology Frontier Research Center, Osaka University

### Thomson Reuter Citation Laureates



Seminal discovery concerning the nature and function of regulatory T-cells and the transcription factor Foxp3 (2015)

**Shimon Sakaguchi**

Professor, WPI Immunology Frontier Research Center, Osaka University



Pioneering research on new multiferroic materials

**Yoshinori Tokura**

Professor, School of Engineering, The University of Tokyo



Discovery of Iron-based Superconductor (September, 2013)

**Hideo Hosono**

Professor, Materials and Structures Laboratory and Director of Materials Research Center for Element Strategy, Tokyo Institute of Technology



Elucidating the molecular mechanisms and physiological function of autophagy\*2(September, 2013)

**Noboru Mizushima**

Professor, Biochemistry and Molecular Biology, Graduate School and Faculty of Medicine, The University of Tokyo

※2 Share the laureate with Yoshinori Ohsumi Professor, Fr



Discovery of photocatalytic properties of titanium dioxide (the Honda-Fujishima Effect) (September, 2012)

**Akira Fujishima**

President, Tokyo Science University

### Thomson Reuters "Top 100 Global Innovators 2015"

**JST is the first public institution in Japan to receive the award (2015)**

Japanese companies and organizations made up 40 of the top 100 in the list. JST is the first public institution in Japan to receive the award.

### INNOVATOR OF THE YEAR



Identifying genes that cause cancer, etc.

**Hiroyuki Mano**

Professor, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo

### Selected as one of the 'Breakthrough of the year' in the US scientific journal Science



Intestinal bacteria of obese mice brew up carcinogens to trigger liver cancer.

**Naoko Ohtani** Senior Staff Scientist, The Cancer Institute of Japanese Foundation for Cancer Research

**Eiji Hara** Division Chief, The Cancer Institute of Japanese Foundation for Cancer Research



Created functional human organs made by human iPS cells such as a 'mini-liver' for the first time in the world

### Hideki Taniguchi

Professor, Yokohama City University



Clarification of structure of crystals of "photochemical complexII" which protein is required for producing oxygen from water and sunlight.

### Jian-Ren

Shen Professor, Graduate School of Natural Science and Technology, Okayama University



To produce a fertile egg by Pluripotent stem cells of mouse (ES Cells, iPS Cells)

### Mitinori Saitou

Professor, Institute for Integrated Cell-Maternal Sciences, Kyoto University

Selected as one of scientists list "Five to watch" from the British scientific journal "nature"



Using induce pluripotent stem cells (iPS) to human retinal pigment epithelium.

### Masayo Takahashi

Center for Development Biology, RIKEN

# Academic papers citation trend

With regards to the academic paper citation trend in Japan, JST corresponds to the second in rank behind The University of Tokyo; however, JST is first place excluding universities. The average number of citation is outclassing and it is indicate that presented paper is excerpt by many researchers.

Ranking of Japanese research institutions based on number of highly cited papers

Rank	Institution Name	Number of Highly cited papers	The ratio of the Number of Highly cited papers
1	The University of Tokyo	1,311	1.6%
equivalent to 2	<b>Japan Science and Technology Agency</b>	<b>827</b>	<b>2.5%</b>
2	Kyoto University	739	1.2%
3	Osaka University	590	1.2%
4	RIKEN	557	2.3%
5	Tohoku University	505	1.1%

Thomson Reuters: Press Release on April 16th, 2015

Created by JST based on "Thomson Reuters Identifies Japan's Top Scientific Research Institutions Based on Analysis of Number of High Impact Papers."

Database used for analysis "InCites Essential Science IndicatorsTM"



This study looked at papers published from January 1, 2004 to April 12, 2014.

\*Since 2015, its funding agency JST has not been listed in the rankings; however, JST's rank corresponds to second place with 827 high cited papers and 2.5% in the ratio of the number of highly cited papers, according to the report by Thomson Reuters.

# Licensing

We find out companies using networks and MEKIKI who is insight of the person in the leadership position and the other resources. Licensing of R&D based on requests from Universities, Institutions and Research result projects by JST and others.

[License] Results of 2014 No. of Companies 21 companies / No. of patents 206 patents

Example 1 of past results	Example 2 of past results
<p>●Glutathione -A New Agricultural Fertilizer for Enhancing Plant Productivity-</p> <p><b>Ken'ichi Ogawa</b> (Research Institute for Biological Sciences, Okayama (RIBS OKAYAMA) Okayama Prefectural Technology Center for Agriculture, Forestry, and Fisheries) et al.</p>	<p>●A packaging design for floating illusion graphic</p> <p><b>Hitoshi Arai</b> (The University of Tokyo)</p>
 <p><b>CREST</b> Results of CREST projects "Photo-stress in the Cryosphere and Maintenance Mechanisms of Boreal Forest" and "Innovation and Development of New CO2-Fixation-Promoting Technology for Increasing Bio-Material Production" Okayama Barley Genome Technology Co., Ltd. Kaneka Corporation</p>	 <p><b>PRESTO</b> "Mathematical models of visual perception by means of wavelet frames" Rokkatei Seika Co.,Ltd</p>