



**Nobel  
Prize  
Dialogue**

*Science & Society*



# Nobel Prize Dialogue Tokyo 2018

## The Future of Food

Organizers :



**Nobelmedia**



**JSPS**



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All discussions, lectures and panels from Nobel Prize Dialogue Tokyo 2018 are available for viewing on <https://www.youtube.com/nobeldialogue>



# Event Information

Nobel Prize Dialogue Tokyo 2018 was held to advance an open discussion between the science community and the public on a topic at the interface between science and society. It sought to raise public interest and understanding of science and technology while contributing to the promotion of scientific research. 30 world's leading scientists and top authorities from various fields including 5 Nobel Laureates took the stage as lecturers and panellists, addressing an audience comprising attentive members of the public including young researchers and representatives from industry. Besides an audience of more than 1,100 at the venue, a live broadcast gave people around the world an opportunity to watch the proceedings. (The broadcast is archived at "<https://www.youtube.com/nobeldialogue>" for viewing.)

Since 2012, an open symposium called "Nobel Week Dialogue" has been held in Sweden by Nobel Media AB, on the day before the Nobel Prize Ceremony. Nobel Media approached the Japan Society for the Promotion of Science (JSPS) with the idea of holding the Nobel Prize Dialogue in Japan. The discussion resulted in the 2015 event, which was the first Nobel Prize Dialogue to be held outside of Sweden. Building upon this success, a subsequent Nobel Prize Dialogue was held in Tokyo in 2017, and in Yokohama in 2018.

Nobel Prize Dialogue Tokyo 2018 was organized in close collaboration between JSPS and Nobel Media. It provided a valuable opportunity to increase the international presence of Japan within the global scientific community. The Nobel Prize Dialogue also achieved its goal of raising public interest and understanding of science as a trailblazing science communication activity. The event also played a particularly important role this year in strengthening the scientific partnership between Japan and Sweden as both countries celebrate the 150th anniversary of the establishment of diplomatic relations.

This report summarizes the Nobel Prize Dialogue's proceedings in the hope that it may raise the interest of the general public in science and be of wide use to scientists and administrators.

## **Nobel Prize Dialogue Tokyo 2018**

**Organizers:** Japan Society for the Promotion of Science (JSPS), Nobel Media AB

**Date:** Sun. 11 March 2018 (10:00a.m.-4:50p.m.)

**Venue:** PACIFICO Yokohama Conference Center (1-1-1, Minato Mirai, Nishi-ku, Yokohama, JAPAN)

**Theme:** The Future of Food

# Opening Remarks



## Yuichiro Anzai

President, Japan Society for the Promotion of Science

I am very pleased to welcome all of you, and thank you for joining us in “Nobel Prize Dialogue Tokyo 2018.” I am delighted that this event has brought together such a large audience of people from both Japan and other countries and regions of the world. In attendance with us today are more than a hundred doctoral students, who have come here from countries of Asia and Africa. Thank you for joining us.

This year marks the 150th year since diplomatic relations were established between Sweden and Japan. As the chairman of a promotion committee to celebrate this anniversary, I am happy that today’s Dialogue will serve to strengthen yet further the bonds that tie Sweden and Japan together in scientific partnership.

Nobel Prize Dialogue Tokyo is aimed at a wide body of the public; it seeks to heighten their interest in and deepen their understanding of science. The event derives its inspiration from “Nobel Week Dialogue,” held each year in Sweden on the day before the Nobel Prize Award Ceremony. Today’s Dialogue here is cohosted by Nobel Media, a company affiliated with the Nobel Foundation. It is the third Dialogue event to be held in Japan.

The topic of today’s Dialogue is “The Future of Food.” It asks and seeks to consider the answer to various questions. What challenges are we facing regarding food, which is essential to sustaining life? How can everyone in the world be fed? Faced with a growing population amidst limited food resources, what can science do to improve the situation? How should we eat in order to sustain long and healthy lives? What historical and cultural backgrounds underlie what we eat? What will the food on a dining table look like in the year 2050?

There are many such questions that can be pursued. In today’s Dialogue, we would like to explore with you the answers to some of them. As the organizer of this event, I am eager to join you in being edified by today’s Nobel Laureates-hearing what they will say about issues of

food and sustainability, and learning about the cutting-edge research they are advancing, and its impact on our society. To help us advance today’s discussion, I’m excited to say that 30 experts and authorities on related subjects, including five Nobel Laureates, have come here from around the world to participate in this Dialogue.

I must also mention that today, the 11th of March, marks the seventh anniversary of the Great East Japan Earthquake, which claimed many precious lives and caused unprecedented damage, particularly to communities in northeastern Japan. Taking this occasion, I wish to convey my deepest sorrow and extend my heartfelt sympathy to the victims and all those affected by the disaster. In the afternoon, we will have a session, entitled “Beyond the Disaster.” It will give us an opportunity to consider global disasters in the context of today’s theme of “food.”

Lastly, I would like to thank the Nobel Foundation, headed by Dr. Lars Heikensten, and Ms. Laura Sprechmann and the Nobel Media team for the long-standing collaboration and friendship they have accorded us at the Japan Society for the Promotion of Science, and especially for their contributions to today’s highly thought-evoking event. I would also like to thank Ambassador Magnus Roback and the Swedish Embassy staff for the strong support they have given us. An especially hearty word of thanks goes to our event partners and supporting organizations. They have been a wonderful asset in helping us to hold this event.

I look forward with great anticipation to today’s Dialogue bringing the scientific community ever-closer to society and members of the public. Now, please enjoy Nobel Prize Dialogue Tokyo 2018.

Thank you very much again, and bon-appetit!

\*These opening remarks were delivered by Dr. Yuichiro Anzai on 11 March 2018.

\*Affiliation and title are as of Nobel Prize Dialogue Tokyo 2018.



Photo: Kari Kohvakka

## Lars Heikensten

**Executive Director,  
The Nobel Foundation**

It is now the third time that I have had the privilege of welcoming you all to the Nobel Prize Dialogue here in Tokyo. When I did this the first time in 2015 it was also the first time we set this event up outside Sweden. Since then, we have been to several other countries with this and similar other events.

Japan was an obvious country in which to begin, with your scientific traditions, many Nobel Laureates and great interest in the Nobel Prize. Also, your country is based on values that we firmly share: democracy, the importance of human rights and in trying to build peace as well in the value of fact-based reasoning and science, all contributing to make the world a better place.

We are particularly pleased to do this event again together with JSPS (the Japan Society for the Promotion of Science). We have worked with you for many years, a good example of science diplomacy. This year, when we celebrate 150 years of diplomatic cooperation between Japan and Sweden, it is interesting to note that science played a role from the beginning in our relations. Carl Peter Thunberg, an important follower of Carl von Linné, was working intensively here for years even during the period when Japan was isolated.

Before telling you about today's program, let me remind you of the background. What is the Nobel Prize, what does it stand for and why are we here?

Alfred Nobel was the scientist who invented dynamite, but he had more than 350 other patents in different fields. He was also an entrepreneur who built a worldwide corporate network. He himself was a product of the Enlightenment, with a strong belief in human power, science and the value of knowledge. At the same time, he had broad interests including literature and philosophy and was deeply committed to peace efforts.

It is in this spirit - with a strong belief that the world can become better if we build our societies on knowledge and humanistic values, invest in science and do all of this in a spirit of peace and cooperation - that we award the prize that bears the Nobel name. It has now been awarded for 116 years to more than 900 Laureates. As you probably know 26 of these were from Japan, 22 of these in the sciences.

During the past few decades, Japan has become a real power in the "Nobel world". The number of science laureates from the two decades this century is 17, compared with five from the previous century. We should remind ourselves that this is not a coincidence. It was the result of deliberate actions: a well-functioning school system, policies for science that worked including integrating with the rest of the world, a willingness to prioritise science and to spend on it and a lot of hard work of course. Other countries could learn from Japan.

Today the Nobel Prize has an almost unique position. According

to the Encyclopaedia Britannica, it is the world's most prestigious prize. The Nobel Prize enjoys great trust. We believe the long period during which it has been awarded with competence and integrity to worthy recipients from all over the world is what has given the prize its position. At the same time, the position we enjoy imposes a great responsibility on us, especially in these times, when science and knowledge - even pure facts - are being questioned. The climate change issue is one example, but a potentially fatal one. There is a great need today to stand up for the values of Alfred Nobel.

Of course, we shoulder our responsibility mainly by trying to continue awarding the Nobel Prize in the way that has earned the prize its respect. In recent decades, we have also increasingly engaged in telling about the prize and those who have received it: their stories of struggle, their failures and successes. Our outreach activities are in keeping with the words in Nobel's will, stating that the prize shall be awarded to those who "have conferred the greatest benefit to mankind". By informing and engaging people, especially the younger generation, we aim at strengthening the position of the prize and, more importantly, its impact.

In this spirit, today we offer a broad range of activities on social media, with about 4 million followers from around the world - most of them aged 18 to 25, and almost as many women as men. I certainly hope you are among them! We have museums in Stockholm and Oslo and exhibitions that travel around the world. For the past five or six years, we have also organised conferences in the spirit of Nobel, both in Sweden and abroad.

Today's conference is about food. We will be dealing with the global food supply and all the challenges associated with it: The Future of Food.

Although poverty has decreased, hunger is far from eliminated. What will we need to do in order to feed nine billion people? We will need to redistribute resources between us. That is unavoidable. But is it sufficient; will there then be enough food for all?

It doesn't stop with that. Even feeding everyone might not be sufficient. The scale of that task and the technologies required might not be compatible with other restrictions we face as humankind. We are already at the limits of what the earth can handle in terms of climate, some say beyond.

We will probably be forced to change our food habits. What that in turn will mean for us as humans, for our societies, food and eating are interesting topics. The consequences need not be negative. We can come out of it with more pleasant habits and healthier lives.

As you see we have a lot to go through, plenty of important and interesting issues to cover. In our dialogue we will listen to experts from all over the world and to several of our Laureates. But remember this is a dialogue. Speak up, don't be shy, ask your questions and participate. That is the idea. We strongly believe in dialogue as a method to achieve real change.

Dear Nobel Laureates, ladies and gentlemen, friends, I am sure we have a great day in front of us. I end as I usually do, by noting that Alfred Nobel would have loved to be with us today. Thank you for listening and once again, you are most welcome to the Nobel Prize Dialogue in Tokyo 2018.

\*These opening remarks were delivered by Dr. Lars Heikensten on 11 March 2018.

# Programme

## 1. Opening

Main Hall

|         |  |
|---------|--|
| 10:00 - | <b>Opening Remarks</b><br>Japan Society for the Promotion of Science<br>The Nobel Foundation<br>Ministry of Education, Culture, Sports, Science and Technology |
| 10:15 - | <b>Introduction</b><br>Adam Smith  |

## 2. Science and Food

Main Hall

|         |   |
|---------|---|
| 10:20 - | <b>Lecture "Thinking about Food from the Perspective of Autophagy"</b><br>Yoshinori Ohsumi  |
| 10:35 - | <b>Panel Discussion "Can We Feed 10 Billion?" -Innovation and Sustainability-</b><br>Finn E. Kydland, Akinwumi A. Adesina, Marion Guillou, Masa Iwanaga,<br>Moderator: Adam Smith |
| 11:00 - | <b>Conversation "Our Health and Food -Longevity, Microbiome / Bacteria"</b><br>Tim Hunt, Suzanne Devkota, Adam Smith  |
| 11:20 - | <b>Farming the Sea: Tasting Cultivated Tuna</b><br>Keitaro Kato   |

## 3. Culture and Food

Main Hall

|         |  |
|---------|--|
| 11:35 - | <b>Panel Discussion "What We Eat and Why? Anthropological, Historical and Cultural Reasons"</b><br>Johann Deisenhofer, Claude Fischler, Stanley Ulijaszek,<br>Moderator: Mariko Hasegawa |
| 11:55 - | <b>Interview "Space Food / Futuristic Foods"</b><br>Chiaki Mukai, Interviewer: Yuichiro Anzai  |
| 12:15 - | <b>Interview "Traditional Foods and Our Culture"</b><br>Yoshiki Tsuji, Interviewer: Adam Smith   |
| 12:30 - | Lunch Break  |

## 4. Future Food and Our Challenges for Sustainability

|         |  |   |  |
|---------|--|---|--|
| 13:45 - | <b>Stream 1 (301)</b><br><b>1A: Food Innovation (What are "New Crops")</b><br><br>Johann Deisenhofer,<br>Kent J. Bradford,<br>Kenichiro Itami,<br>Moderator: Yuko Fujigaki | <b>Stream 2 (302)</b><br><b>2A: Health (The Obesity Epidemic)</b><br><br>Tim Hunt,<br>Marion Nestle,<br>Stanley Ulijaszek,<br>Nobuo Yoshiike,<br>Moderator: Adam Smith              | <b>Stream 3 (Main Hall)</b><br><b>3A: Sustainability (Emerging Countries)</b><br><br>Finn E. Kydland,<br>Akinwumi A. Adesina,<br>Howarth E. Bouis,<br>Marion Guillou,<br>Moderator: Masa Iwanaga |
| 14:30 - | Break  |   |  |
| 14:45 - | <b>Stream 1 (301)</b><br><b>1B: Food Innovation (New Agri-tech and Agri-business)</b><br><br>Finn E. Kydland,<br>Yuriko Kato,<br>Simon Pearson,<br>Moderator: Adam Smith   | <b>Stream 2 (302)</b><br><b>2B: Health (More Rules, Healthier Lives?)</b><br><br>Ada Yonath,<br>Howarth E. Bouis,<br>Claude Fischler,<br>Marion Nestle,<br>Moderator: Yuko Fujigaki | <b>Stream 3 (Main Hall)</b><br><b>3B: Sustainability (Water in the Future)</b><br><br>Johann Deisenhofer,<br>Mahmoud A. Abu-Zeid,<br>Marion Guillou,<br>Moderator: Taikan Oki                    |
| 15:35 - | Coffee Break   |   |  |

## 5. Towards the Future

Main Hall

|         |   |
|---------|---|
| 16:05 - | <b>Panel Discussion "Beyond the Disaster"</b><br>Mahmoud A. Abu-Zeid, Virginia Murray, Naoe Yakiya,<br>Moderator: Yuko Harayama                                       |
| 16:25 - | <b>Nobel Laureates Discussion "The Flavor of Creativity"</b><br>Johann Deisenhofer, Tim Hunt, Finn E. Kydland, Yoshinori Ohsumi, Ada Yonath,<br>Moderator: Adam Smith |
| 16:45 - | <b>Closing Remarks</b><br>Nobel Media AB, Japan Society for the Promotion of Science  |



# The Dialogue Day

10:20 Lecture by Prof. Yoshinori Ohsumi,  
Nobel Laureate in Physiology or Medicine 2016  
"Thinking about Food from  
the Perspective of Autophagy"



10:35 Panel Discussion  
"Can We Feed 10 Billion?"  
-Innovation and Sustainability-

Following the introductory talk  
by Dr. Masa Iwanaga, the panel  
discussion has taken place.

11:00  
Conversation  
"Our Health and  
Food -Longevity,  
Microbiome /  
Bacteria"



11:20  
Farming the Sea: Tasting Cultivated Tuna  
The panelists tried the cultivated tuna on stage.



11:35  
Panel Discussion "What We Eat and Why?  
Anthropological, Historical and Cultural  
Reasons"







11:55  
Interview  
"Space Food /  
Futuristic Foods"

Japanese space  
food was served.

12:15  
Interview  
"Traditional Foods  
and Our Culture"



### Stream1: Food Innovation

13:45

1A. What are "New Crops"



14:45

1B. New Agri-tech and Agri-business



### Stream2: Health

13:45

2A. The Obesity Epidemic



14:45

2B. More Rules, Healthier Lives?



### Stream3: Sustainability

13:45

3A. Emerging Countries



14:45

3B. Water in the Future



16:05  
Panel Discussion  
"Beyond the Disaster"



16:25  
Nobel Laureates Discussion "The Flavor of Creativity"



## Reception

Attendance of Princess Takamado

After the event, JSPS held a joint reception for the participants in the Nobel Prize Dialogue and 10th HOPE Meeting in the presence of Her Imperial Highness Princess Takamado. She enjoyed talking with the guests including the Nobel Laureates and young scientists.



## About HOPE Meetings

HOPE Meetings give opportunities for excellent doctoral students and young researchers selected from countries/areas in the Asia-Pacific and Africa region to engage in interdisciplinary discussions with Nobel Laureates and other distinguished scientists. Their programs include dialogue with distinguished scientists pioneering the frontiers of knowledge; exchanges among the participants themselves, who live under the same roof for one week; and cultural lectures and activities. The title "HOPE" signifies the promise held for young scientists and optimism for a bright science and technology future in the region.

# Panellists



## Johann Deisenhofer

Nobel Laureate in Chemistry 1988  
Regental Professor, Department of Biophysics,  
University of Texas Southwestern Medical Center

He has worked in Structural Biology at the Max-Planck-Institute for Biochemistry and at the University of Texas Southwestern Medical Center. He shared the 1988 Nobel Prize in Chemistry for the determination of the three-dimensional structure of a photosynthetic reaction center.



## Mahmoud A. Abu-Zeid

President, the Arab Water Council  
Former Minister, Water Resources and Irrigation, EGYPT

He was the director of Water Distribution and Irrigation Systems Research Institute at Water Research Center(1975-79), a President of NWRC, in Egypt(1979-97), a President of IWRA(1991-1994), a President of WWC(1994-2003), and a Minister of Water Resources and Irrigation in Egypt(1997-2009). Today, he is a Hon. Vice-President of ICID, a President of AWC, a member of UNSGAB, Water and Sanitation, and a Hon. President of WWC for life.



## Tim Hunt

Nobel Laureate in Physiology or Medicine 2001  
Visiting Researcher, Okinawa Institute of Science  
and Technology Graduate University

He was, until his retirement in 2010, a principal scientist at Cancer Research UK, Clare Hall Laboratories. In July 1982, he discovered cyclins, which turned out to be components of "Key Regulator(s) of the Cell Cycle". This led to a share of the Nobel Prize in Physiology or Medicine in 2001.



## Akinwumi A. Adesina

President, African Development Bank

He has been the President of African Development Bank since 2015, and was previously Minister of Agriculture in Nigeria. He has received numerous global awards for his leadership and work as a distinguished development economist and agricultural development expert. In 2017, he was awarded the World Food Prize.



## Finn E. Kydland

Laureate in Economic Sciences 2004  
Jeffrey Henley Professor of Economics,  
University of California, Santa Barbara

He received his B.A. from the Norwegian School of Economics and his Ph.D. from Carnegie Mellon University. After previous appointments at Norwegian School of Economics, CMU, and the University of Texas at Austin, he joined the UCSB faculty in 2004, where he is also the director of the Laboratory for Aggregate Economics and Finance. Also he is a Research Associate for the Federal Reserve Bank of Dallas.



## Yuichiro Anzai

President, Japan Society for the Promotion of Science  
Chairman, The Promotion Committee for the 150th  
anniversary of the establishment of diplomatic  
relations between Japan and Sweden

President of the JSPS, Japan's representative government-supported research funding agency. He has been engaged in research on human and machine learning in cognitive and computer sciences. He is also contributing to deepen the relationship between Sweden and Japan as the chair of promotion committee.



## Ada Yonath

Nobel Laureate in Chemistry 2009  
Professor, Weizmann Institute of Science

She is focusing on protein biosynthesis, on the antibiotics hampering this process and on origin of life. In the seventies she established the first structural-biology laboratory in Israel. In parallel, during 1986-2004 she headed Max-Planck-Research-Unit for Ribosome Structure in Hamburg, Germany.



## Howarth E. Bouis

Founding Director, HarvestPlus, International  
Food Policy Research Institute

As director of HarvestPlus (2003-2016), he coordinated an inter-disciplinary, multi-institutional program to develop, test, and disseminate micronutrient-rich staple food crops to reduce mineral and vitamin deficiencies in developing countries. His economics research has focused on food demand and nutrition outcomes.



## Yoshinori Ohsumi

Nobel Laureate in Physiology or Medicine 2016  
Special Appointed Professor (Honorary  
Professor), Institute of Innovative Research,  
Tokyo Institute of Technology

He is a professor specializing in Autophagy at Tokyo Institute of Technology. He received the 2016 Nobel Prize in Physiology or Medicine and the 2017 Breakthrough Prize in Life Sciences for his discoveries of mechanisms for autophagy.



## Kent J. Bradford

Distinguished Professor and Director of the  
World Food Center, University of California,  
Davis

He has been a professor at UC Davis since 1982. He specializes in seed biology and crop improvement and is currently director of the UC Davis World Food Center and of the UC Davis Seed Biotechnology Center.

# Panellists



## Suzanne Devkota

Assistant Professor of Medicine and Director of Microbiome Research, Cedars-Sinai Medical Center, Los Angeles

She completed her Ph.D. at the University of Chicago and post-doctoral training at Harvard Medical School where she was a Branco-Weiss fellow. The focus of her current research is on the role of nutrition on the gut microbiome in health and disease.



## Mariko Hasegawa

President, The Graduate University for Advanced Studies

She received her Ph.D. in 1986 from the Graduate School of Physical Anthropology, the University of Tokyo. She was previously at Yale University, Waseda University, etc., and she has worked at the Graduate University for the Advanced Studies since 2006.



## Claude Fischler

Emeritus Senior Researcher, The National Center for Scientific Research (CNRS)

He is a Emeritus Senior Researcher with CNRS and a former Director of IJAC (Institute of Contemporary Anthropology) at the School of Advanced Studies in the Social Sciences (EHESS) in Paris. As a sociologist and anthropologist, he uses a cross-disciplinary and cross-cultural approach to food habits and how social interactions and cultural norms shape or affect eating behaviour and nutrition.



## Kenichiro Itami

Director, Institute of Transformative Bio-Molecules (ITbM), Nagoya University

He completed his Ph.D. at Kyoto University, became an Assistant Professor at same university (1998), Associate Professor in Nagoya University (2005), Full Professor (2008), and Director of the Institute of Transformative Bio-Molecules (ITbM) in Nagoya University since 2012.



## Yuko Fujigaki

Professor, College and Graduate School of Arts and Sciences, The University of Tokyo

She received Ph.D. at the University of Tokyo in 1990. She worked as an assistant professor in Univ. of Tokyo (1990-1996), a Vice Director in Research, National Institute of Science and Technology Policy (1996-2000), an associate professor at the Univ. of Tokyo (2000-2009) and a professor (2010-).



## Masa Iwanaga

President, Japan International Research Center for Agricultural Sciences (JIRCAS)

He has shown great concern for social and technological issues influencing international agricultural research and development for food and nutrition security. He was a member of Steering Committee, High-Level of Panel of Experts of United Nations' Global Food Security Committee.



## Marion Guillou

President, the Board of Directors, Agreenium, the French Agricultural, Veterinary and Forestry Institute

She has been CEO (2000-2004) then CEO and chairperson (2004-2012) of the French National Institute for Agronomic Research (INRA) where she prioritized transversal research programs on agriculture, food and environment. She is presently chairperson of AGREENIUM and member of several national and international Boards and of the French Academy of Technology.



## Keitaro Kato

Professor, Aquaculture Research Institute, Kindai University

After graduating from the graduate school of agriculture, Kindai University in 1992, assistant professor of the Aquaculture Research Institute, Kindai University since 1993, lecturer since 2002, associate professor since 2006 and current professor position since 2014.



## Yuko Harayama

Former Executive Member of the Council for Science, Technology and Innovation

She is former Executive Member of the Council for Science, Technology and Innovation (CSTI) at the Cabinet Office. Prior to joining the CSTI, she spent two years at the OECD and ten years at the Tohoku University.



## Yuriko Kato

President, M2 Labo. Inc.

She graduated from the University of Tokyo in 1998, awarded MSc in the U.K. in 1999, and joined the NASA's project. In 2002, she worked as an precision machinery engineer in Japan. Then she started M2 Labo in 2009.



### Chiaki Mukai

Astronaut  
Vice President, Tokyo University of Science

She is Japan's first female astronaut, and currently a vice president of the Tokyo University of Science. As the first female astronaut from Asia, she flew space in 1994 and 1998, and conducted various space life science experiments.



### Adam Smith

Chief Scientific Officer, Nobel Media AB

Following Fellowships at Oxford, Harvard and the University of Heidelberg he pursued research in developmental neuroscience at Oxford University, before moving into science publishing, working as a Chief Editor and Publisher with Elsevier and Nature Publishing Group. He joined Nobelprize.org, now Nobel Media, in 2006.



### Virginia Murray

Public Health Consultant in Global Disaster Risk Reduction, Public Health England  
Integrated Research on Disaster Risk (IRDR) Scientific Committee Member

As a public health doctor, she has focused on emergency and disaster response for many years, but by providing scientific support for the negotiations for the Sendai Framework for Disaster Risk Reduction 2015-2030 she is now involved in disaster risk reduction implementation.



### Yoshiaki Tsuji

Chairman and Head of the Board of Directors, Tsuji Culinary Institute  
President, Tsuji Culinary Institute Group

Educated in the UK and USA, he has been current role since 1993. He supervised the banquet for the heads of the states at the G8 Kyushu/Okinawa Summit in 2000 and worked as a member of the Examination Committee for the inscription of "Washoku" on UNESCO Heritage list in 2014.



### Marion Nestle

Professor emerita, New York University

She holds a Ph.D. (Molecular Biology) and MPH (public health nutrition) from University of California Berkeley. She held faculty positions at Brandeis University and UCSF before joining NYU in 1988. She teaches and writes about food policy and politics.



### Stanley Ulijaszek

Director, Unit for Biocultural Variation and Obesity, School of Anthropology, University of Oxford

After graduating in biochemistry and nutrition, he has worked at the University of Cambridge and now at the University of Oxford on the political ecology of nutrition and obesity globally, and on nutrition in evolution and evolutionary medicine.



### Taikan Oki

Senior Vice-Rector, United Nations University Professor, Institute of Industrial Science, The University of Tokyo

He received his Ph.D. in Civil Engineering at the University of Tokyo in 1993. His research interests are the fields of global hydrology and world water resources including the virtual water trade and water footprint.



### Naoe Yakiya

Director, Japan Relations Office, United Nations World Food Programme

She is the Director of the United Nations World Food Programme Japan Relations Office. She has served with WFP for over 16 years, including postings in Myanmar, Sierra Leone, etc. She holds a Master Degree in International Relations.



### Simon Pearson

Professor, Agri-Food Technology, University of Lincoln

He completed his Ph.D. at the University of Reading in 1992, and now is a professor of Agri-Food Technology at the University of Lincoln. The focus of his current research is on a diverse range of agri technology applications including robotic systems, automation, energy control and management, food safety systems, and novel crop development.



### Nobuo Yoshiike

Dean, Graduate School of Health Sciences, Aomori University of Health and Welfare

He graduated from Tokyo Medical and Dental University in 1987. After which, he was a researcher at NIHN (1991), and served as the director of Division of Health and Nutrition Monitoring (2001). In 2008, he became a Professor of Nutrition at Aomori University of Health and Welfare. Since 2012, he has been the dean of the University's Graduate School of Health Sciences.

\*Affiliation and title are as of Nobel Prize Dialogue Tokyo 2018.

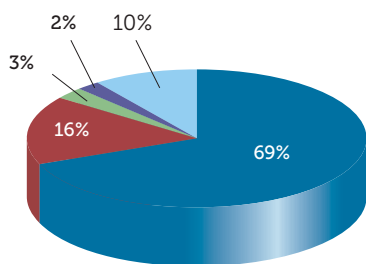
# Participants

As an international event, this year's Nobel Prize Dialogue Tokyo was attended by some 1,105 people hailing from countries around the world. Numerous other people also viewed the Dialogue via live streaming on the event's official website and over social media. For perusal at any time, all of the lectures and panel discussions are archived on the following webpage:

<https://www.youtube.com/nobeldialogue>

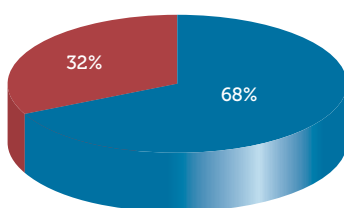
Regarding the participants at the venue, 68% of them were Japanese and 32% were from other countries. About 50% of the participants were students and university researchers, who were seen to take an active part in the Q&A discussions.

**Number of participants: 1,105**



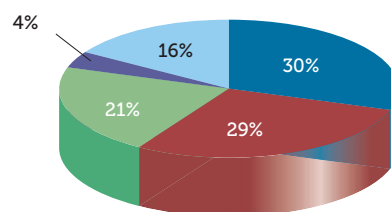
|                      |     |
|----------------------|-----|
| General Participants | 764 |
| Guests               | 176 |
| Panellists           | 33  |
| Press                | 26  |
| HOPE Meeting*        | 106 |

**Percentage of overseas participants**



|          |     |
|----------|-----|
| Japan    | 753 |
| Overseas | 352 |

**Category of general participants**



|                                 |     |
|---------------------------------|-----|
| Company employees / executives  | 226 |
| Students                        | 221 |
| University researchers / staffs | 164 |
| Public officials                | 28  |
| Others                          | 125 |

\*JSPS hold HOPE Meetings for excellent young researchers specially selected from countries and areas of the Asia-Pacific and African regions. HOPE Meetings provide an opportunity for the young participants to interact with Nobel Laureates.

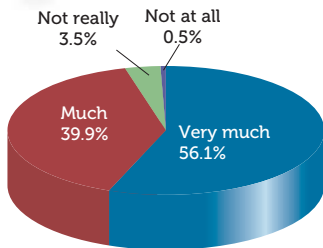
**Number of participants per country/area**

|            |    |           |     |             |   |              |   |               |    |
|------------|----|-----------|-----|-------------|---|--------------|---|---------------|----|
| Australia  | 8  | Germany   | 5   | Korea       | 8 | Philippines  | 8 | Sweden        | 4  |
| Bangladesh | 6  | Hungary   | 1   | Malaysia    | 8 | Poland       | 2 | Taiwan        | 9  |
| Belgium    | 1  | India     | 21  | Mexico      | 1 | Portugal     | 1 | Thailand      | 6  |
| Bolivia    | 1  | Indonesia | 71  | Mongolia    | 4 | Romania      | 1 | Turkey        | 1  |
| Brazil     | 1  | Iran      | 3   | Morocco     | 1 | Russia       | 3 | UK            | 1  |
| Cameroon   | 1  | Israel    | 6   | Myanmar     | 2 | Singapore    | 7 | Ukraine       | 2  |
| Canada     | 1  | Italy     | 1   | Nepal       | 5 | South Africa | 4 | USA           | 7  |
| China      | 29 | Japan     | 753 | Netherlands | 1 | Spain        | 4 | Venezuela     | 1  |
| Egypt      | 5  | Jordan    | 1   | New Zealand | 5 | Sri Lanka    | 4 | Zimbabwe      | 1  |
| France     | 1  | Kenya     | 4   | Pakistan    | 1 | Swaziland    | 1 | Foreign guest | 82 |

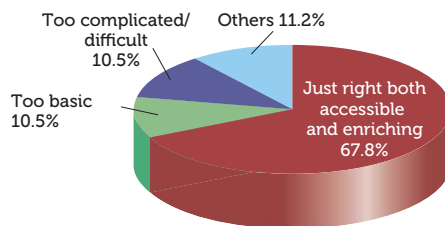
\* Alphabetical order

# Survey Results and Comments

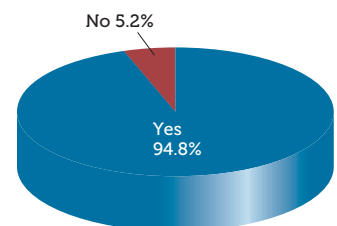
Did you enjoy the Nobel Prize Dialogue Tokyo 2018?



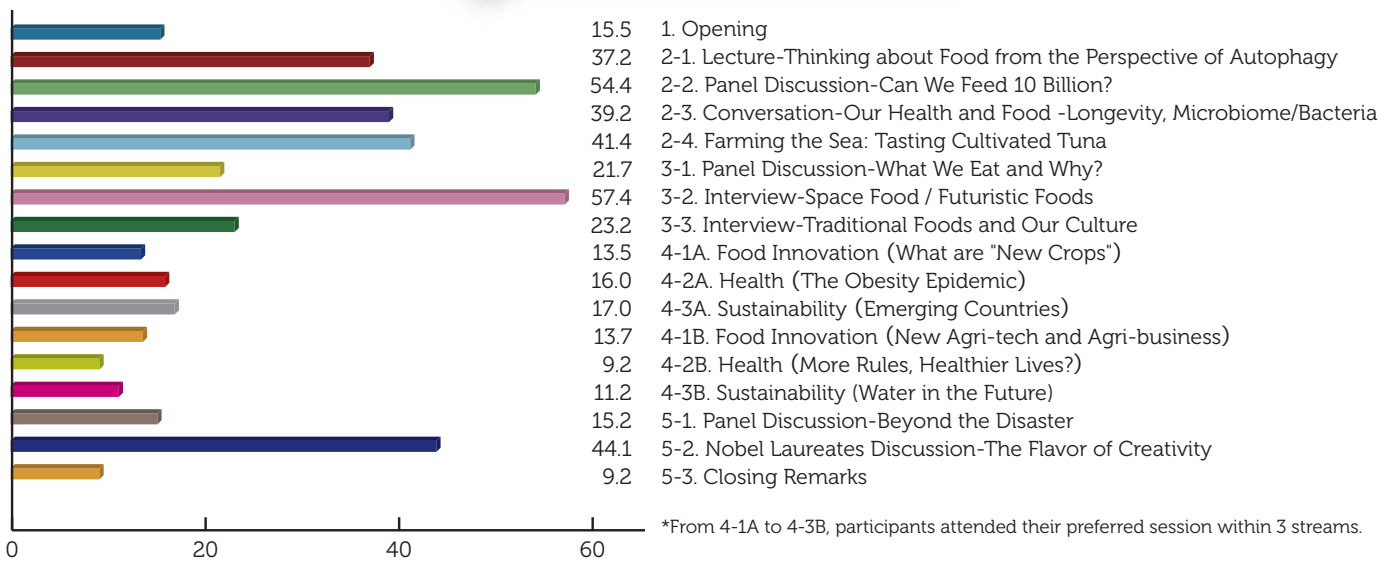
Did you find the overall content of key note presentations and panel discussion to be:



Would you attend another Nobel Prize Dialogue Tokyo?



What was your favorite element of the day's program?



## Comments and Suggestions regarding the Day's Programme

- I want to change my view related to food, which is not only focus on the way how to grow it.
- Nothing much, maybe more time for question during panel discussions.
- Each lecture/panel is too short to cover the essential message of the panelist.

## Japan Society for the Promotion of Science



The Japan Society for the Promotion of Science (JSPS), or Gakushin for short, is an independent administrative institution, established by way of a national law for the purpose of contributing to the advancement of science in all fields of the natural and social sciences and the humanities. JSPS plays a pivotal role in the administration of a wide spectrum of Japan's scientific and academic programs. While working within the broad framework of government policies established to promote scientific advancement, JSPS carries out its programs in a manner flexible to the needs of the participating scientists.

JSPS was founded in 1932 as a non-profit foundation through an endowment granted by Emperor Showa. JSPS became a quasi-governmental organization in 1967 under the auspices of the Ministry of Education, Science, Sports and Culture (Monbusho), and since 2001 under the Ministry of Education, Culture, Sports, Science and Technology (Monbukagakusho). Over this 70-year period, JSPS has worked continuously to develop and implement a far-reaching array of domestic and international scientific programs. On October 1, 2003, JSPS entered a new phase with its conversion to an independent administrative institution, as which it will strive to optimize the effectiveness and efficiency of its management so as to improve the quality of the services it offers to individual researchers, universities, and research institutes.

Link: [www.jsps.go.jp/english](http://www.jsps.go.jp/english)

## Nobel Media



Nobel Media spreads knowledge about Nobel Prize-awarded achievements and stimulates interest in science, literature and peace in line with Alfred Nobel's vision and legacy. The company reaches a global audience of millions through its high quality productions: The official digital channels of the Nobel Prize, the Nobel Prize Concert, as well as a series of intercontinental, inspirational lecture events featuring Nobel Laureates. The company also manages a portfolio of publishing licenses, footage sales, and live broadcast rights to the Nobel Prize Award Ceremonies.

Please visit: [www.nobelprize.org](http://www.nobelprize.org)

Twitter: @NobelPrize

Facebook: [www.facebook.com/nobelprize](http://www.facebook.com/nobelprize)

YouTube: [www.youtube.com/nobelprize](http://www.youtube.com/nobelprize)

## The Nobel Foundation

The Nobel Foundation is a private institution established in 1900 based on the will of Alfred Nobel. The main tasks are to manage the assets made available through the will, and the intellectual property related to the Nobel Prize that has developed over the years.



# Organizing Committee

## Nobel Prize Dialogue Tokyo 2018 Organizing Committee Members

### Chair

Yuichiro Anzai  
President, Japan Society for the Promotion of Science  
Chairman, The Promotion Committee for the 150th anniversary  
of the establishment of diplomatic relations between Japan and Sweden

### Member

Masa Iwanaga  
President, Japan International Research Center for Agricultural  
Sciences (JIRCAS)

Shinichi Shogenji  
Professor, Fukushima University

Yukari Takemi  
Dean of Graduate School of Nutrition and Health Sciences,  
Kagawa Education Institute of Nutrition

Ryozo Nagai  
President, Jichi Medical University

Hiroo Fukuda  
Executive Vice President & Professor of School of Science,  
The University of Tokyo

\*Affiliation and title are as of Nobel Prize Dialogue Tokyo 2018.



# Partners of Nobel Prize Dialogue Tokyo 2018

## Nobel International Partners



3M will collaborate with Nobel Media over several years to bring light to important global issues, like the future of scientific education and sustainability. The partnership gives us the opportunity to jointly focus on educating, inspiring and engaging a broader audience on big issues that impact people's lives around the world.



Ericsson is the world's leading provider of communications technology and services. We are enabling the Networked Society with efficient real-time solutions that allow us all to study, work and live our lives more freely, in sustainable societies around the world. Today more than 40 percent of the world's mobile traffic goes through Ericsson networks and we support customers' networks servicing more than 2.5 billion subscribers.



Scania has a strong focus on research and development and is at the forefront in developing efficient and smart transport solutions and innovations. More than 3,500 researchers are working in the very forefront when it comes to future key areas as alternative fuels, connectivity, automation and electrification. The aim is to maintain and continue to develop a broad competence, ensuring that Scania retains its leading position within the automotive industry.



Volvo Cars, the premium car maker, is investing heavily in developing new technologies in the areas of autonomous driving, active safety and electrification. Our 6,000 colleagues dedicated to Research and Development are spread across three continents. We strengthen the automotive cluster in Western Sweden and establish an emerging hub for automotive software engineering.

## Event Partners



Japan LOTTE Group has provided new values related to food and health actively since its establishment in 1948.

We conduct business activities for the realization of a society that people can keep their good health both physically and mentally with food in the future, by keeping quality, living together with a natural environment and a community, and involving with various stakeholders such as customers properly.



Since its founding, Yakult, motivated by its passion to deliver good health to as many people as possible, has been pursuing the great hidden potential of small nature life forms invisible to the eye. As a result of that pursuit, we have created Yakult and a wide range of food, cosmetic and pharmaceutical products. Today, customers around the world use our products that contribute to the health and happiness of people.

## Supporting Organizations



Since its establishment over 100 years ago, Taisho Pharmaceutical's mission is to contribute to consumers' health and wellbeing. To this end, we have answered a diverse array of people's needs by providing a broad range of products in fields ranging from disease prevention to treatment.

Looking ahead, we will strive to energize and expand the market as a leading OTC drug company in Japan. Meanwhile, the Prescription Pharmaceutical Operation Group will enhance its business in fields that make full use of our strengths, and work to bring proprietary original drugs to market.



### Special Thanks to

Ministry of Education, Culture, Sports, Science and Technology (MEXT), Ministry of Foreign Affairs (MOFA), Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan Aerospace Exploration Agency (JAXA), City of Yokohama, Embassy of Sweden

### Supported by

Yokohama Convention & Visitors Bureau

### Domination

NISSIN FOODS HOLDINGS, CHUGAI PHARMACEUTICAL CO., LTD., Calbee, Inc., The Canon Foundation

# Promotional Activities

Number of promotional activities of Nobel Prize Dialogue Tokyo 2018  
 Press release 4, JSPS Monthly 9, JSPS Quarterly 2, JSPS SNS 4, Newspaper etc. 4

## Press release

- 7 Dec, 2017 Official website for "Nobel Prize Dialogue Tokyo 2018" is opened.
- 24 Jan, 2018 "Registration" was updated and it started.
- 19 Feb, 2018 Press Registration started.
- 2 Mar, 2018 Princess Takamado's attendance at the dinner reception.

## JSPS MONTHLY



### "Donation for Nobel Prize Dialogue Tokyo 2018"

- JSPS Monthly August 2017
- JSPS Monthly September 2017
- JSPS Monthly October 2017
- JSPS Monthly November 2017
- JSPS Monthly December 2017

### "Upcoming Nobel Prize Dialogue Tokyo 2018"

- JSPS Monthly January 2018
- JSPS Monthly February 2018
- JSPS Monthly March 2018

### "Nobel Prize Dialogue Tokyo 2018"

- JSPS Monthly April 2018

## JSPS Facebook

### JSPS Facebook

- 7 Dec, 2017 Upcoming Nobel Prize Dialogue Tokyo 2018
- 24 Jan, 2018 "Registration" started
- 11 Mar, 2018 Held Nobel Prize Dialogue Tokyo 2018 (Japanese)
- 11 Mar, 2018 Held Nobel Prize Dialogue Tokyo 2018 (English)



## JSPS QUARTERLY

No.62 2017 Winter  
 Nobel Prize Dialogue Tokyo 2018 Scheduled for March



No.64 2018 Summer  
 Nobel Prize Dialogue Tokyo 2018



Advertorials

The Nikkei – morning issue (12 December, 2017)

NIKKEI SCIENCE (February 2018)

Townnews (25 January, 2018)

Kanagawa Shimbun (25 January, 2018)

YOKOHAMA VISITORS' GUIDE

Sweden – Japan 150 years -Web

# Materials

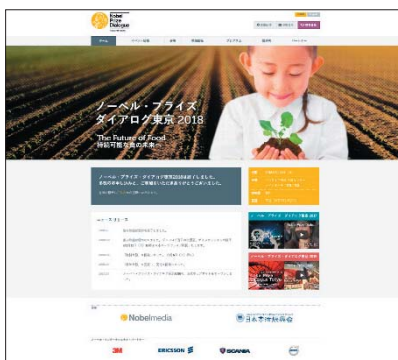
Poster (A2) (JPN/ENG)



Flyer (A4) (JPN/ENG)



Official Website (JPN/ENG)



JSPS Website (JPN/ENG)

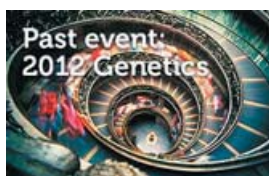


Programme book (A5) (JPN/ENG) 16 pages



# Nobel Week Dialogue and Nobel Prize Dialogue Tokyo

Nobel Week Dialogue is a free of charge, full-day symposium and part of the official Nobel Week programme. The event is held yearly on the day before the Nobel Prize Award Ceremony. JSPS and Nobel Media organized the first Nobel Prize Dialogue outside Sweden in March 2015.



## **Nobel Week Dialogue 2012:**

### **The Genetic Revolution and its Impact on Society**

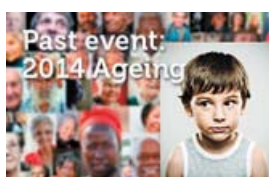
The inaugural Nobel Week Dialogue brought together 35 panellists and 1100 participants in Stockholm, Sweden. The events were dedicated to reviewing the past half century of progress in genetics and genomics, assessing the implications for today's society and looking towards future trends.



## **Nobel Week Dialogue 2013:**

### **Exploring the Future of Energy**

Nobel Week Dialogue 2013, visiting Gothenburg for the first time, provided an opportunity for discussions that cross the traditional boundaries between science and society, introducing the theme of energy.



## **Nobel Week Dialogue 2014:**

### **The Age to Come**

The third Nobel Week Dialogue was held in Stockholm and explored new scientific and cultural perspectives on ageing. While increasing average life expectancies is undoubtedly one of humanity's greatest achievements, a steadily ageing global population brings with it a range of new challenges and opportunities.



## **Nobel Week Dialogue 2015:**

### **The Future of Intelligence**

The Future of Intelligence was the theme for the 2015 edition of Nobel Week Dialogue held in Gothenburg. Speakers considered the question 'what is intelligence', highlighting both its diversity and its complexity as well as the exponential growth in the technological development.



## **Nobel Week Dialogue 2016:**

### **Your Plate - Our Planet : The Future of Food**

The fifth Nobel Week Dialogue event was held in Stockholm, where visitors and experts joined in a discussion about Food. Issues such as global sustainability, poverty, malnutrition and food waste were explored during the day.



## **Nobel Week Dialogue 2017:**

### **The Future of Truth**

The Future of Truth was the topic of the sixth Nobel Week Dialogue held in Gothenburg. Discussions on stage ranged from trust in media and the causes of terrorism to the value of the scientific method and these continued in the breaks to create an atmosphere of excitement.

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