

NEWS Letter

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The 6th JAFE Seminar

The 6th JAFE Seminar was held on May 12, 2016 where we were honoured to welcome Professor Shinya Yamanaka, the Director of the Center for iPS Cell Research and Application at Kyoto University as our guest speaker, and were privileged to hear Professor Yamanaka talk about “a new medical window opened up by iPS cells”. Our members were fascinated by Professor Yamanaka’s speech on the history of iPS cell development, its potential value in regenerative medicine and drug discovery, and efforts to realize these visions, and moreover, his witty episodes regaled the venue with laughter.



Summary of the speech given by Professor Shinya Yamanaka, Director of the Center for iPS Cell Research and Application, Kyoto University

The winding road to medicine, and the mentors on the road of basic medical research

My father, who ran a small factory, developed osteomyelitis through a sewing machine needle which got stuck in his shin, and then contracted hepatitis C from a blood transfusion during surgery. Even though I became a doctor at my father’s behest, I wasn’t able to cure him since there was no established medical treatment for this disease at the time. It was from profound remorse that I was unable to save my father that I felt compelled to find the cause of this disease and to develop medical treatment for it, and therefore, I embarked on a journey to conduct basic medical research, which led to me studying abroad as a postdoctoral fellow at the Gladstone Institute affiliated with the University of California when I was 31 years old. This is where I adopted a maxim for my work as a scientist in basic medical research from Dr. Robert Mahley, the President of the Institute. This maxim was the initials “V” and “W”. The “V” stood for “vision” and the “W” was for hard work. When asked what my own vision was by Dr. Mahley, I recalled



the aspirations that I had forgotten – as a researcher, to save patients, like my father, who were suffering from a disease. This vision became my compass.

The road to iPS cell discovery

At the Gladstone Institute, I had one more important encounter. This was with ES (embryonic stem) cells. In 1981, Professor Martin Evans and his colleagues at the University of Cambridge were successful in culturing ES cells from the fertilized egg of a mouse. ES cells can become any type of cell, and can proliferate almost indefinitely. I felt that this had great potential in clinical medicine and decided to conduct research in this field. In 1996, we returned to Japan timed with our daughters entering school here, and I continued with my research at Osaka City University Medical School. At times, I felt like I was constantly fumbling around in the dark, experienced despair almost on a daily basis and, on occasion, came close to feeling defeated. In 1998, the technology for human ES cell generation was developed leading to even greater potential in the field of regenerative medicine, but we were faced with ethical obstacles.

In the following year of 1999, I got a position at the Nara Institute of Science and Technology (NAIST), and I came to organize my own laboratory in a perfect research environment. At the age of 37, I became an independent researcher. Here I drew up a vision of resetting (reprogramming) other cells without using fertilized eggs and of establishing cells which showed the same mechanism as ES cells, and I carried out this research with the help of a number of young graduate students and technicians. I prepared myself for the reality that my vision might not come true for 20 or 30 years, or even during my lifetime, but with the collective efforts of the laboratory, we were able to establish cells which were very similar to ES cells. These were the iPS cells, leading to me receiving

the Nobel Prize in Physiology or Medicine in 2012.

Why run a marathon?

What flummoxed me when writing a paper on these new pluripotent stem cells was what name I should give to these cells, but fortunately, I was able to come up with a name which seemingly gained global acceptance. Actually, to tell the truth, I was inspired by the iPod, which was such a huge hit at the time.

Although research in iPS cells has progressed dramatically, we are still only halfway down the road in terms of actual applications in medicine. My current vision is to see iPS cell technology used for medical application at the earliest possible date. Obviously this means application in regenerative medicine, but I also want the cells to make a large contribution to developing medicine. To promote this vision, the Center for iPS Cell Research and Application (CiRA) was established at Kyoto University. Today, I am pushing forward towards a common vision together with 400 of my fellow colleagues.

Which is why I am passionate about running a marathon. In actual fact, CiRA research requires a large amount of funds to continue with the operations. We do receive funds from the government, but the current situation means that it isn’t possible to provide stable employment for talented scientists. In order to overcome these challenges, CiRA has established the iPS Cell Research Fund. I personally run around explaining the Fund and asking for donations. If you are interested in our work, we do hope you will give us your warm support.

www.give2asia.org/ku-ips

*Through Give2Asia, U.S. and Hong Kong residents are now eligible for tax deductions when donating to the Center for iPS Cell Research and Application, Kyoto University, Japan. Or alternatively, please search on the Internet for “iPS Funds”.



Introduction of Members

◇JAFE Special Seminar, April 4

Sakie Tachibana-Fukushima

President & Representative Director G&S Global Advisors Inc.



Ms. Fukushima was formerly the President of Japan operations of a U.S. human resources consulting company, and served on its global board of directors for 12 years. Ms. Fukushima has also served since 2001 as an external director on the boards of nine Japanese companies including Kao, Sony, Benesse, Mitsubishi Corporation, Ajinomoto, J. Front Retailing, and Bridgestone. Former Vice Chair of the Japan Association of Corporate Executives.

Hiroko Kawamoto

Senior Vice President, Inflight Services
All Nippon Airways Co., Ltd.



Ms. Kawamoto was appointed Director of ANA's In-flight Services Center in 2009, and was appointed Senior Vice President and Director of Women's Empowerment Promotion in 2014. In the following year, Ms. Kawamoto served as Managing Director of ANA's In-flight Services and is currently serving as Director for the Promotion of ANA Group Diversity as well as Promotion Officer for the Tokyo Olympic and Paralympic Games.

◇The 6th JAFE Seminar, May 12

Yumi Yamaguchi

JAFE Honorary Member
Managing Officer, Mitsui & Co., Ltd.
President & CEO, Mitsui Global Strategic Studies Institute



Ms. Yamaguchi served as Vice Governor of Okayama Prefecture and Minister's Secretariat Counsellor of the Ministry of Land, Infrastructure, Transport and Tourism, and also contributed to international communications as Vice Commissioner of the Japan Tourism Agency, Ministry of Land, Infrastructure and Transport until July 2014. Ms. Yamaguchi has served in her current position since 2015, and is responsible for an in-house think tank, which researches methods to connect theoretical knowledge with practical knowledge.

Atsuko Hirooka

JAFE Corporate Member
Sumitomo Chemical Co., Ltd. Executive Officer
Animal Nutrition Division Environmental Health Division



Ten years ago, Ms. Hirooka made a career transition from a German company to Sumitomo Chemical Co., Ltd., and has since been leading the division conducting business primarily in "Olyset Net", insecticide-treated mosquito nets to prevent malaria. Ms. Hirooka plans in the future to expand the division's business to include infectious diseases other than malaria. As well as environmental health, Ms. Hirooka is also responsible for animal nutrition.

Report

JAFE Special Seminar

The guest speaker for the special seminar held on April 4, 2016, was Mrs. Akie Abe, the wife of the Japanese Prime Minister. Mrs. Abe talked about life as First Lady.

Summary of the speech given by Mrs. Akie Abe (wife of the Japanese Prime Minister)

Demeanour of a First Lady

When my husband first became a politician, I was caught up in what I thought an ideal politician's wife should be. Now 20 years on, I believe that I should accomplish the mission ascribed to me.

Shimonoseki in Yamaguchi prefecture is my husband's constituency, and as an excellent example of local creation, I am planning to build a comfortable guest house called UZU HOUSE which will be for backpackers and other tourists. I am hoping that this will become a friendly place for cultural communication where a variety of people from all walks of life such as tourists visiting from abroad and local elderly people will be able to gather and communicate with each another. I hope those of you who are interested will pay us a visit.



Individual activities

This upcoming August 22, I plan to hold a forum on the marine environment in Hawaii. Rather than on a government level, this is an event which was born from personal links. I would like to convey the importance of protecting the sea as a part of the bigger picture of environmental issues.

In addition, following the Great East Japan Earthquake, high seawalls are being built in many places without careful consideration being given to the impact on the environment, and this construction can't be stopped after approval has been given for construction despite concerns being raised by stakeholders. I am striving to change this situation.

I would also like to engage in activities so that women, the disabled and other minorities are able to take center stage and support each other. In the past, during wartime, women silently sent their loved ones onto the battlefield and could only pray for their safety. I think that from now on women must raise their voices to be heard so that no more loved ones are sent to war. I would like to engage in activities, in a form which differs from that of my husband, to contribute to peace. If all of the JAFE members join with each other, our combined power will increase many times over. Let us all work together to form a wonderful society.



Advance announcement: 3rd summer camp to be held in Tateshina.

www.jafe.jp

Date and time: To start at 13:00 on Saturday, July 23, 2016 and end at 13:00 on Sunday, July 24.

Location: Poppins Tateshina Training Center

Capacity: 12 members

Participation fee: 30,000 yen (excluding transportation expenses, four meals for one night inclusive of consumption tax, Additional charge of 5,000 yen for individual use of a single room)

For more information, please refer to the following link. <http://www.jafe.jp/seminar/160723.html>



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