



Original Article

A report of the 18th congress of the Japanese Society for Regenerative Medicine

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ABSTRACT

The 18th Congress of the Japanese Society for Regenerative Medicine was held from March 21–23, 2019, at Kobe International Conference Center (Hyogo Prefecture) with 3,576 participants. The theme of this congress was “Message from the Birthplace of Regenerative Medicine” with expectation of disseminating the message of ‘saving patients with regenerative medicine’ for the future. With this theme, this congress aimed to provide opportunity for accelerating the development of this field through exchanging information among people from all participants (including individuals from academia, various industries, and regulatory authorities). Numerous topics were covered in the one presidential lecture, one congress president’s lecture, one keynote lecture, one invited lecture, three special lectures, three educational lectures, four special programs including two joint symposia with overseas society (13 topics), one award lecture program (four lectures), symposia (46 sessions, 460 topics), oral presentations (38 sessions, 219 topics), poster presentations (77 sessions, 417 topics), 32 co-organized seminars (39 talks), and the state-of-the-art technology showcase (178 organizations). Additionally, two sessions for junior high school and high school students (basic course and advanced course) were held during the conference.

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1. Objectives

The theme of the Congress was “Message from the Birthplace of Regenerative Medicine.” This theme was derived from the story of the “White Hare of Inaba” recorded in “Kojiki” (The Records of Ancient Matters), in which Okuninushi-no-mikoto (the Great Land Master) treated and regenerated the injured skin of a white rabbit. Our hope of disseminating the message of “saving patients with regenerative medicine” for the future was conveyed in this theme. With this theme, this congress aimed to provide opportunity for accelerating the development of regenerative medicine through exchanging information among all participants through the various programs which were featured on mainly three topics.

As the first topic, a program by individual organs or a multi-disciplinary program, focusing on “treatment,” was planned in line with the theme “Message from the Birthplace of Regenerative Medicine.” The second topic was planned regarding the efforts toward the practical use of regenerative medicine in the academic, industrial, administrative, and economic fields to enhance the cooperation among the fields for achieving the best practical use of regenerative medicine. As the third topic, to promote partnerships between the Japanese and overseas regenerative medicine fields, an international session was planned and simultaneous interpretation at the main hall during the congress was provided.

2. Participants

There were 3,576 participants in total. The congress had 3,429 participants in the scientific sessions. The breakdown of the participants are as follows: 1,564 general members, 264 graduate student members, 1,408 non-members (1,196 general, 117 graduate students, and 95 university students), 122 corporate members (109 regular members and 13 associate members), and 71 invitees. In addition, 147 junior-high-school, high-school, and teachers joined the sessions for junior-high-school and high school students (basic

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course, 80 students; advanced course, 37 students). In addition to participants with backgrounds in basic medicine, dentistry, clinical medicine, physicians, and dentists, participants also comprised industrial researchers and those with administrative positions.

3. Lectures

The conference provided one presidential lecture, one congress president's lecture, one keynote lecture, one invited lecture, three special lectures, and three educational lectures. As the president of the Japanese Society for Regenerative Medicine (JSRM), Dr. Yoshiaki Sawa (Osaka University) delivered the presidential lecture entitled 'Activities of JSRM in 2018' (chairperson: Dr. Goshi Shiota, Tottori University). Dr. Sawa introduced that the JSRM stated the slogan of 'Orchestrating wisdom to innovate, universalize for the happiness and future of all the human beings' in 2019, and he mentioned an importance of universalizing regenerative medicine. To make it realized, Dr. Sawa also introduced the efforts and the outcomes of the on-going project entitled 'Formulation of regenerative medicine national consortium which renders nation-wide assistance to clinical researches' commissioned by the Japan Academy for Medical Research and Development (AMED). From the start of this project, construction of platform for universalizing regenerative medicine has been proceeded to facilitate the practical application of regenerative medicine based on the following three basic programs: (1) support for regenerative medicine clinical researches, (2) human resource developments for regenerative medicine, and (3) the management and operation of regenerative medicine clinical research data systems.

The Congress Chair Dr. Goshi Shiota delivered Congress President Lecture on the topic of 'Messages from the birthplace of regenerative medicine' (chairperson: Dr. Yoshiaki Sawa). In the former part of the lecture, Dr. Shiota introduced the overview of this congress and the progress in regenerative medicine therapy in line with the congress theme 'Message from the Birthplace of Regenerative Medicine.' Dr. Shiota also presented 'Cell sheets therapy for liver disease' in the latter part of the lecture. The cell sheets are developed by treating bone marrow-derived mesenchymal stem cells with their original Wnt/ β -catenin signaling inhibitor, manufactured on thermo-responsive polymer-coated culture dish. The cell sheets prepared in the above way potently reverse the established liver fibrosis by transplantation on the surface of the liver. Dr. Shiota finally concluded that cell sheets therapy would be a promising and powerful therapeutic option for severe liver disease.

The keynote lecture was delivered by Dr. Tsutomu Tomioka, a member of the House of Representatives (chairperson: Dr. Yoshiaki Sawa). Dr. Tomioka's lecture entitled 'What policy can promote regenerative medicine: a proposal from the members of the National Diet' summarized the agendas of the members of the National Diet who promote regenerative medicine as follows: establishment of a system for continuous generation of products from regenerative medicine, improvement in the techniques for cell preparation, acceleration of the approval examination, and the health economical approach to establish a basic and comprehensive system accelerating the research in regenerative medicine.

Three special lectures were performed by Dr. Kunio Ito (Hitotsubashi University), Dr. Shinya Yamanaka (Kyoto University), and Dr. Atsushi Miyajima (The University of Tokyo), respectively. Dr. Kunio Ito delivered a lecture entitled 'Dialogue with investors and institutional reform for the growth of bio-ventures' (chairperson: Dr. Goshi Shiota). His lecture basically depended on "Ito Report 2.0, a report of the study group for encouraging dialogue between biotech venture businesses and investors, biomedical edition" published in April 2018. He proposed a new system and criteria to

put money to bio-ventures from the view point of special nature of biotechnology businesses.

Dr. Shinya Yamanaka (Kyoto University) delivered a lecture entitled 'Recent progress in iPSC cell research and application' (chairperson: Dr. Goshi Shiota). To promote regenerative medicine using iPSCs (iPSCs), it requires to develop iPSC bank which covers many Japanese people with different types of human leukocyte antigen (HLA). The project is ongoing in Center for iPSC Cell Research and Application (CiRA). Since it takes a lot of time and money to build up the iPSC bank which covers many Japanese people, Dr. Yamanaka introduced new trials to establish HLA homozygous iPSCs, which are expected to resolve these issues.

Dr. Atsushi Miyajima (The University of Tokyo) delivered a lecture entitled 'Cellular basis of liver regeneration and construction of liver tissue using iPSCs' (chairperson: Dr. Goshi Shiota). Dr. Miyajima summarized the mechanisms of liver regeneration, especially focused on liver progenitor cells (LPC)-driven regeneration. In addition, he presented the development of iPSCs-derived liver progenitor cells and hepatic non-parenchymal cells (e.g., hepatic stellate cells).

The invited lecture was delivered by Dr. Gene P. Siegal (University of Alabama at Birmingham, USA). The chairperson was Dr. Akihiro Umezawa (National Center for Child Health and Development). Dr. Siegal's lecture, entitled 'Five secrets from a journal editorial office' presented five advices based on his experience as author, reviewer, and editor.

Three educational lectures included the following. Dr. Junya Toguchida (Kyoto University) delivered a lecture entitled 'Application of disease-specific iPSCs for disease modeling and drug development' (chairperson: Dr. Tatsutoshi Nakahata, Kyoto University). Dr. Toguchida and his colleagues established disease-specific iPSCs with Fibrodysplasia Ossificans Progressiva (FOP). He found that activin A is a therapeutic target for FOP, and that sirolimus is a candidate therapeutic agent for FOP. Dr. Toguchida is advancing clinical trials for FOP patients.

Dr. Hideyuki Okano (Keio University) delivered a lecture entitled 'iPSCs-based regenerative medicine and drug development' (chairperson: Dr. Tsuyoshi Takato, JR Tokyo General Hospital). He summarized the development of regenerative medicine for spinal cord injury using iPSC-derived neural progenitor cells (iPS-NPCs) in the former part of the lecture, and presented drug discovery research using iPSCs in the latter part of the lecture.

Dr. Tatsuya Shimizu (Tokyo Women's Medical University) delivered a lecture entitled 'Recent advances and future views of tissue engineering' (chairperson: Dr. Masayuki Yamato, Tokyo Women's Medical University). His lecture overviewed the tissue engineering from view of basic to future application. 3D tissue can already be produced by bioprinting technology using 3D printers or cell sheets technology, however, it is necessary to provide vascular network to improve tissue function.

Four special programs included CSSCR-JSRM-KSSCR Joint Symposium chaired by Dr. Hideyuki Okano, ISCT-JSRM Joint Symposium chaired by Dr. Hideyuki Okano, On the Market 2.0 chaired by Kunihiko Suzuki (MEDINET Co., Ltd./Forum for Innovative Regenerative Medicine) and Fusako Nishigaki (Astellas Pharma Inc./Forum for Innovative Regenerative Medicine), and AMED's support for regenerative medicine research moderated by Shogo Sano (Division of Regenerative Medicine Research, Japan Agency for Medical Research and Development). CSSCR-JSRM-KSSCR Joint Symposium provided the following three topics: 'Primate gene editing and stem cells' from Dr. Weizhi Ji (Kunming University of Science and Technology, China), 'Asian Cooperation on Stem Cells and Regenerative Medicine' from Dr. Yoshiaki Sawa, and 'Patient-derived iPSC Cells: Disease Modeling and Genome Editing' from Dr. Dong-Wook Kim (Yonsei University College of Medicine, Seoul,

Korea). ISCT-JSRM Joint Symposium provided the following three topics: 'From Boutique to Global: Chimeric Antigen Receptor T Cells as a Model for Clinical Development and Commercialization' from Dr. Bruce Levine (University of Pennsylvania Perelman School of Medicine, USA), 'Developing a scaled, cGMP compliant process for manufacturing stem cell derived pancreatic islets' from Dr. David DiGiusto (Semma Therapeutics, USA), and 'Enhancing T Cell Receptor Stability in Rejuvenated iPSC-Derived T Cells Improves Their Use in Cancer Immunotherapy' from Dr. Shin Kaneko (Kyoto University). On the Market 2.0 provided the following four topics: 'Building the world's most complete advanced therapies ecosystem' from Dr. John Brown (Cell and Gene Therapy Catapult, UK), 'Scalable, Sustainable and Impact-driven Translation of Advanced Therapies' from Dr. Michael H. May (Center for Commercialization of Regeneration Medicine, Canada), 'Fraunhofer IZI - Regenerative Medicine Strategies & Projects' from Dr. Thomas Tradler (Fraunhofer Institute for Cell Therapy and Immunology IZI, Germany), and 'The Challenges for the Commercialization of Regenerative Medicine and METI's Policy for it' from Dr. Masahiro Uemura (Ministry of Economy, Trade and Industry). AMED's support for regenerative medicine research provided the following three topics: 'Japan Regenerative Medicine Project at AMED' from Yuka Suzuki (Japan Agency for Medical Research and Development), 'The ongoing project: "Development of Models for the Stable Supply of Domestic Allogenic Human Somatic Stem Cell Materials"' from Koji Takakura (Japan Agency for Medical Research and Development), and 'The funding opportunity: "Projects for Technological Development"' from Noriko Santo (Japan Agency for Medical Research and Development).

4. The award lectures

The winners of the two JSRM Research Awards (clinical field and basic field), the JSRM Achievement Award, and the JSRM Johnson & Johnson Innovation Award gave short lectures about their Achievements (chairperson: Dr. Masaya Nakamura). The JSRM Research Awards (basic field) were conferred to Dr. Hiroo Ueno (Kansai Medical University) entitled 'Identification of taste stem cells, analysis of mechanisms of taste sensing, and development of methods for taste regeneration.' The JSRM Research Awards (clinical field) were presented to Dr. Noriko Koizumi (Doshisha University) whose research was 'Cell-injection therapy of cultivated corneal endothelial cells with Rho-kinase inhibitor.' The JSRM Achievement Award was conferred to Dr. Shigeru Miyagawa (Osaka University) entitled 'Research Development and Practical Approach of New Regenerative Therapy in Cardiovascular Medicine.' The JSRM Johnson & Johnson Innovation Award was presented to Dr. Kiyoshi Okada (Osaka University) whose research was 'Establishment of National Consortium for Supporting Regenerative Medical Research.'

5. The symposia

The Congress offered 46 concurrent symposia (233 talks in total). The session titles and organizers are listed in [Table 1](#). To promote partnerships between the Japanese and overseas regenerative medicine participants, an international session was held entitled 'International Symposium: Top story of regenerative medicine and stem cell research' as novel attempt at the congress. Besides this, several sessions were based on therapy for focusing on each organ in line with the theme 'Message from the birthplace of regenerative medicine.' Moreover, multidisciplinary sessions such as framework for promotion of regenerative medicine, national consortium, regenerative medicine and rehabilitation, efforts aiming the industrialization of regenerative medicine of industries,

government and academic organizations, study on tumorigenicity assessment of cell therapy products, recent progress in RNA technologies and stem cell biology, etc. covered a broad spectrum of topics related to regenerative medicine.

The Technoauction between academic and industrial fields was held in two parts. In the former part, six speakers from academic field presented (chairpersons: Dr. Ken-ichiro Hata, Japan Tissue Engineering Co., Ltd. and Dr. Yasuhiko Tabata, Kyoto University). In the latter part, six persons also presented (chairpersons: Dr. Ken-ichiro and Dr. Atsuhiko Saito, Osaka University).

6. The regular presentations (oral presentations and poster presentations)

The regular presentations included 219 oral presentations and 417 poster presentations. The regular presentations were peer reviewed by the peer review committee and selected by the organizers, based on reviewer's evaluation of the submitted abstracts. The oral presentations were classified into 38 sessions, each of which had five to seven presentations, depending on their topics as follows: pluripotent stem cells, somatic stem cell, tissue engineering, nervous system, regeneration of locomotorium, osteoblast differentiation, visual sense/auditory sense/olfactory sense, oral cavity and its surrounding tissues, respiratory system, heart, blood vessel, liver, pancreas, digestive system, urinary system, skin/appendicular, engineering technology, basic technology and others, preservation technology/transportation technology, and others. Two young Japanese investigators and two young Korean investigators from KSSCR were selected and were presented a chance to talk their papers in Young investigators session. The poster presentations were delivered in 77 sessions concerning the following topics: pluripotent stem cells, disease model/drug discovery, differentiation, culture, preservation, quality evaluation, safety test/quality evaluation, exosomes, somatic stem cells, cancer stem cells, tissue engineering, biomaterials, nervous system, locomotorium, regeneration of locomotorium, visual sense/auditory sense/olfactory sense, oral cavity, respiratory system, heart/Blood vessel, blood/immune system, liver, pancreas, digestive system, urinary system, skin/appendicular, culture process/preservation technology/transportation technology, safety tests/quality evaluations, cell processing facility, regulatory science. Among poster presentations, 28 young investigators whose abstracts are excellent briefly spoke their papers in Poster teasers sessions at the main hall.

7. Co-organized seminars

The Congress provided 30 co-organized luncheon seminars and two morning seminar (39 talks in total). The seminars also covered a broad spectrum of topics related to regenerative medicine and its peripheral technology. In addition, there were some unique co-organized seminars including the efforts of KOBE Biomedical Innovation Center 20th Anniversary and the presentation of editorial board members of JSRM official English journal 'Regenerative Therapy.'

8. Sessions for junior high school and high school students

Two courses, basic and advanced, were held. In the basic course, 80 students toured the state of the art technology showcase to learn about the latest technology. Seven groups made poster presentations obtained in their biological research activities at schools. Dr. Yuichi Tei (The University of Tokyo) and Dr. Eiji Kobayashi (Keio University) delivered a special lecture to the students. In the advanced course, students gave oral presentations on the given theme concerned "stem cells/regenerative medicine

Table 1
Symposia held in the 18th JSRM.

No.	Title	Organizer #1	Organizer #2
1	Framework for Promotion of Regenerative Medicine and National Consortium	Yoshiki Sawa (Osaka University)	Kiyoshi Okada (Osaka University)
2	Stem Cell Research and Regenerative Medicine for Eye Diseases	Kohji Nishida (Osaka University)	Masayo Takahashi (RIKEN Center)
3	International standardization as synthesis of strength in industrial, academic, administrative and economic fields – impact on regenerative medicine	Yutaka Yanagita (Astellas Pharma Inc.)	Tatsuo Heki (FUJIFILM Corporation)
4	Fostering Cell processing operators in JSRM, Research institutes, and Companies	Toshihiro Osuka (Japan Tissue Engineering Co., Ltd.)	Taro Takami (Yamaguchi University)
5	Regenerative medicine based on tissue stem cells: from bench to bed	Mari Dezawa (Tohoku University)	Katsuto Tamai (Osaka University)
6	Regenerative medicine for the brain and spinal cord	Jun Takahashi (Kyoto University)	Masaya Nakamura (Keio University)
7	New horizon in stem cell research in the field of hematology and immunology	Tomohiro Morio (Tokyo Medical and Dental University)	Hiroshi Kawamoto (Kyoto University)
8	Evaluation of drug efficacy and elucidation of pathogenesis utilizing in vitro culture systems reconstituting the living tissue and its function	Keiichi Hishikawa (Keio University)	Atsuhiko Hikita (The University of Tokyo)
9	Current status and future prospect of regenerative medicine in the cardiovascular field	Shigeru Miyagawa (Osaka University)	Keiichi Fukuda (Keio University)
10	Regenerative therapy for GI tract	Susumu Eguchi (Nagasaki University)	Masayuki Yamato (Tokyo Women's Medical University)
11	COI and ethics in regenerative medicine	Jun Takahashi (Kyoto University)	Shuji Terai (Niigata University)
12	International Symposium: Top Story of Regenerative Medicine and Stem Cell Research	Hideyuki Okano (Keio University)	Masaki Ieda (University of Tsukuba)
13	Philosophy and Composition of Regenerative Medicine and Rehabilitation	Louis Yuge (Hiroshima University)	Masayo Takahashi (RIKEN Center)
14	State-of-the-art embryonic stem cell-based therapy	Akihiro Umezawa (National Center for Child Health and Development)	Hirofumi Suemori (Kyoto University)
15	Asking the white hare of Inaba: do humans and animals suffer similar diseases? -Contribution of animal regenerative medicine to human remedies, and vice versa -	Toshio Inaba (Osaka Prefecture University)	Norihiko Ito (Tottori University)
16	Regenerative medicine in the field of Orthopedic Surgery - recent status and perspective -	Masaya Nakamura (Keio University)	Shigeyuki Wakitani (Koryokai Hospital)
17	Current status and perspective of regenerative medicine with cell sheet technology	Susumu Eguchi (Nagasaki University)	Hajime Isomoto (Tottori University)
18	Reconstitution of functional liver tissue ex vivo	Naoki Tanimizu (Sapporo Medical University)	Taketomo Kido (The University of Tokyo)
19	Engineering Technology Necessary to Promote Regenerative Medicine	Yasuhiko Tabata (Kyoto University)	Masahiro Kino-oka (Osaka University)
20	Front line of clinical application of adipose tissue derived regenerative cells without culturing	Ichiro Hisatome (Tottori University)	Hideki Iwaguro (Sobajima Clinic/Kanazawa Medical University)
21	Efforts aimed at improving the quality of the certificated regenerative medical committee	Morikuni Tobita (Juntendo University)	Shimon Tashiro (National Cancer Center)
22	Progress of bioreactor technology for cell processing	Tatsuya Shimizu (Tokyo Women's Medical University)	Masahiro Kino-oka (Osaka University)
23	The cutting edge of gene and cell therapy at 30 years after the first clinical application	Yasufumi Kaneda (Osaka University)	Kohnosuke Mitani (Saitama Medical University)
24	Current situation and challenges of clinical studies and investigator-initiated clinical trials in academia	Hiroshi Mizuno (Juntendo University)	Masato Sato (Tokai University)
25	Cooperation between academic societies in the development of education systems	Tomohiro Morio (Tokyo Medical and Dental University)	Sachiko Ezo (Osaka University)
26	How to make risk framework and communications for regenerative medicine	Yoshimi Yashiro (Kanagawa University of Human Services)	Masayo Takahashi (RIKEN Center)
27	The integrated efforts among industries, government and academic organizations aiming the industrialization of regenerative medicine	Sachiko Ezo (Osaka University)	Motohiro Asonuma (Juntendo University)
28	Present and Perspective of Liver Regenerative Medicine	Hirohito Tsubouchi (Kagoshima City Hospital)	Noriko Itaba (Tottori University)
29	Current topics on the quality and safety evaluation of advanced/regenerative medical products	Yoji Sato (National Institute of Health Sciences)	Yuji Haishima (National Institute of Health Sciences)
30	Preservation method for cellular and tissue-based products	Ichiro Sekiya (Tokyo Medical and Dental University)	Eiji Kobayashi (Keio University)
31	Reverse translational research for regenerative medicine	Kohji Nishida (Osaka University)	Ken-ichiro Hata (Japan Tissue Engineering Co., Ltd.)
32	Progress of regenerative medicine based on construction of 3-dimensional organs	Yuichi Tei/Ung-il Chung (The University of Tokyo)	Atsuhiko Hikita (The University of Tokyo)
33	AI meets stem cell research	Hiroo Ueno (Kansai Medical University)	Akira Funahashi (Keio University)
34	Study of Cellular Network Regulating Skeletal Muscle Regeneration and Application for Cell Therapy for Muscle Diseases	Yuko Miyagoe-Suzuki (National Center of Neurology and Psychiatry)	Atsushi Asakura (University of Minnesota)
35	Developing Evidence-based Medicine for "Out-of-Pocket" Regenerative Medicine and Fostering Social Understanding	Yoshiki Sawa (Osaka University)	Shinya Murakami (Osaka University)
36	Application of Regenerative Medicine Technologies for Creating Organs-on-a-chip - Tissue Organization, Analytical Methods, and Standardization -	Michiya Matsusaki (Osaka University)	Masaya Yamamoto (Tohoku University)
37	Recent advancement of regenerative medicine for intractable diseases	Junya Toguchida (Kyoto University)	Akifumi Matsuyama (Fujita Health University)
38	MEASURE: A Multisite Collaborative Study on Tumorigenicity Assessment of Cell Therapy Products —Interim Report—	Yoji Sato (National Institute of Health Sciences)	Hiroto Bando (FUJIFILM Corporation)
39	Development of Regenerative Medicine Toward Regulatory Approval by "Early-Middle-Career" Developers and its Challenges	Kazuhiro Takekita (Osaka University)	Yoshiaki Maruyama (Pharmaceuticals and Medical Devices Agency (PMDA))
40	Perspective on regenerative medicine based on the novel system for organismal homeostasis	Hayato Kaneda (Shiga University)	Yo Mabuchi (Tokyo Medical and Dental University)
41	Recent Progress in RNA Technologies and Stem Cell Biology	Hideyuki Okano (Keio University)	Hirohide Saito (Kyoto University)

Table 1 (continued)

No. Title	Organizer #1	Organizer #2
42 All-Japan human resource development ~ from the standpoint of industry, academia and government ~	Ken-ichiro Hata (Japan Tissue Engineering Co., Ltd.)	Masahiro Kino-oka (Osaka University)
43 Advances in Regenerative Medicine in the field of Plastic and Aesthetic Surgery	Hiroshi Mizuno (Juntendo University)	Hiroko Yanaga (Yanaga Clinic)
44 Barriers to Standardized Application of iPSC to Regenerative Medicine	Toshihiro Akaike (Foundation for Advancement of International Science)	Miho Furue (NIKON Corporation)
45 Symposium held by Networking Conference for Promoting Regenerative Medicine in Dentistry: Present situation and future prospect of regenerative medicine in dentistry	Hayato Ohshima (Niigata University)	Masaki Honda (Aichi Gakuin University)
46 Problems and challenges in supply and circulation of cell resources	Akihiro Umezawa (National Center for Child Health and Development)	Sachiko Ezoie (Osaka University)

research + xxxx = realization of yyyy.' The students were allowed to create anything 'yyyy' that their group wants to realize for a new idea in the future by adding 'xxxx' to the current stem cells and/or regenerative medicine research. The oral presentations were evaluated by executive board members of the JSRM. In the essay contest, their essays on the theme "After reading white hare of Inaba recorded in Kojiki, describe your thoughts on the future of medical care" were evaluated. The students listened to the presidential lecture by Dr. Sawa, the Congress presidential lecture by Dr. Shiota, and the special lecture by Dr. Yamanaka. The Sessions for junior high school and high school students was planned and executed by Dr. Kenji Ishihara (Ibaraki University), Dr. Masahiro Kawakami (Nara Institute of Science and Technology), and Dr. Kazufumi Suzuki (Ibaraki University). These sessions were supported by the Japan Science and Technology Agency, Hyogo Prefectural Board Education, Kobe City Board of Education, Tottori Prefectural Board of Education, Ibaraki Prefectural Board of Education, and Gamagori City.

9. The state-of-the-art technology showcase

One hundred and seventy-eight organizations showcased their available products and technologies related to regenerative medicine at the State-of-the-Art Technology Showcase. They include laboratory equipment, chemicals, reagents, and systems used in clinical settings and research for regenerative medicine.

10. The public program

The public programs were held on March 24th, 2019 at Kobe International Conference Center (Hyogo Prefecture) and on April 14th at Yonago Convention Center (Tottori Prefecture). At Kobe, four lectures were delivered by Dr. Masayo Takahashi (RIKEN Center), Dr. Shin Kawamada (Kobe Biomedical Innovation Center), Dr. Takashi Aoi (Kobe University), and Dr. Yoshimi Yashiro (Kanagawa University of Human Services). At Yonago, four lectures were delivered by Dr. Junya Toguchida (Kyoto University), Dr. Ichiro Hisatome (Tottori University), Mr. Naruya Matsuda (UES Partners), and Dr. Goshi Shiota.

11. The organizers, the executive committee, and the peer review committee

Prof. Goshi Shiota served as the Congress Chair. Assistant Prof. Noriko Itaba served as the secretary general. The members of the executive committee were as follows (titles dispensed): Motohiro

Asonuma (Juntendo University), Hajime Isomoto (Tottori University), Akihiro Umezawa (National Center for Child Health and Development), Hayato Ohshima (Niigata University), Hideyuki Okano (Keio University), Masahiro Kino-oka (Osaka University), Yoji Sato (National Institute of Health Sciences), Tatsuya Shimizu (Tokyo Women's Medical University), Jun Takahashi (Kyoto University), Masayo Takahashi (RIKEN Center), Yasuhiko Tabata (Kyoto University), Yuichi Tei (The University of Tokyo), Junya Toguchida (Kyoto University), Kohji Nishida (Osaka University), Ken-ichiro Hata (Japan Tissue Engineering Co., Ltd.), Ichiro Hisatome (Tottori University), Akifumi Matsuyama (Fujita Health University), Hiroshi Mizuno (Juntendo University), Tomohiro Morio (Tokyo Medical and Dental University), and Shigeyuki Wakitani (Koryokai Hospital). The members of the peer review committee were as follows (titles dispensed): Goshi Shiota, Hidenori Akutsu (National Center for Child Health and Development), Nobuo Adachi (Hiroshima University), Masaki Ieda (University of Tsukuba), Hayato Ohshima (Niigata University), Makoto Otsu (The University of Tokyo), Yohei Okada (Aichi Medical University), Keisuke Okita (Kyoto University), Akihide Kamiya (Tokai University), Yasuyuki Sakai (The University of Tokyo), Kazunobu Sawamoto (Nagoya City University), Yasuaki Shirayoshi (Tottori University), Yoshiko Suyama (Tottori University), Norimasa Nakamura (Osaka Health Science University), Michiko Mandai (RIKEN Center), Masaya Yamamoto (Tohoku University).

12. Concluding remarks

The 18th Congress of the Japanese Society for Regenerative Medicine had 3,576 participants, and offered diverse and cutting-edge topics regarding the present state and future prospects of regenerative medicine. We hope that it provided an opportunity for accelerating the development of regenerative medicine research for the future through exchanging information among participants in this congress. We are grateful to the participants, supporting organizations, members of the executive committee, and members of the peer review committee for their involvement in this event.

Declaration of interest

The authors declare that they have no competing interests.

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