

Report for JSPS Asian Science Seminar/Japan-India Forum for Advanced Study FY2017
<Summary>

Date March 31, 2018

1. Title of Seminar JSPS-DST Japan-India Forum for Advanced Study: Epigenetics and Human Disease

2. Purpose of Seminar

Indo-Japan Science Council is a joint advisory board set up jointly by Japan Society for the Promotion of Science, Japan, and Department of Science and Technology, India, and serves to promote collaboration between the two countries. This Asian Sciences Seminar was planned to promote interactions of scientists in the fields of epigenetics and microbiology at the levels of principal investigators, new faculty members, and graduate students of PhD courses. Main themes included host-pathogen interactions, microbiome of human bodies, biology of pathogenic bacteria, and epigenetic gene regulation in the context of human diseases. Not only infectious diseases but also cancer, metabolic disease and degenerative diseases were discussed. With these activities, we tried to promote future collaborations among participants.

3. Period

From 02/06/2018 through 02/10/2018 (5_days)

4. Venue

Bose Institute, Kolkata, India

5. Organization

(1) Cosponsors

| | |
|------------|--|
| Japan Side | Japan Society for the Promotion of Science |
| | Graduate School of Medicine, Tohoku University |
| India Side | Department of Science and Technology (DST) |
| | Bose Institute |

(2) Organizer

1) Japan side

Name in full Kazuhiko IGARASHI

Affiliation and Position Tohoku University, Professor

2) India side

Name in full Siddhartha ROY

Affiliation and Position Bose Institute, Professor

6. Program: Agenda, Topics, Related Activities (e.g., Reception, Excursion)

Described in abstract book

7. Lecturers and Participants

1) Number of Persons

| | Lecturers | Participants | Total |
|---|-----------|--------------|-------|
| Japan side | 10 | 4 | 14 |
| (Number who participated under program funding) | 8 | 4 | 12 |
| India side | 24 | 34 | 58 |
| (Number who participated under program funding) | 0 | 0 | 0 |
| Other persons | 0 | 0 | 0 |
| (Number who participated under program funding) | 34 | 38 | 72 |
| Total | 8 | 4 | 12 |
| (Number who participated under program funding) | 10 | 4 | 14 |

2) List

A: Lecturers

| Name in full | Position /Affiliation/ Institution(Country of Affiliated Institution) | Remarks |
|---------------------|---|---------|
| -Japan side | | |
| Akira Ishihama | Professor/ Micro-Nano Technology Research Center/Hosei University(Japan) | * |
| Atsushi Higashitani | Professor/ Graduate School of Life Sciences/Tohoku University(Japan) | * |
| Tomoko Yamamoto | Professor/ Medical Mycology Research Center/Chiba University(Japan) | * |
| Akio Abe | Professor/ Graduate School of Infection Control Sciences/Kitasato University(Japan) | * |
| Eizo Takahashi | Associate Professor/ Graduate School of Medicine, Dentistry and Pharmaceutical Sciences/Okayama University(Japan) | |
| Tatsuo Fukagawa | Professor/ Graduate School of Frontier Biosciences/Osaka University(Japan) | |
| Hitoshi Kurumizaka | Professor/ Graduate School of Advanced Science and Engineering/ Waseda University(Japan) | * |
| Yutaka Kondo | Professor/ Graduate School of Medicine/Nagoya University(Japan) | * |
| Ikuro Kawagishi | Professor/ Department of Frontier Bioscience/Hosei University(Japan) | * |
| Kazuhiko Igarashi | Professor/Graduate School of Medicine/Tohoku University(Japan) | * |
| -India side | | |
| Rao MRS | Professor/ Molecular Biology and Genetics Unit/Jawaharlal Nehru Center for Advanced Scientific Research(India) | |
| Kundu Tapas K. | Professor/ Molecular Biology and Genetics Unit/Jawaharlal Nehru Center for Advanced Scientific Research(India) | |
| Khosla Sanjeev | Senior Researcher/ Laboratory of Mammalian Genetics/ Centre for DNA Fingerprinting and Diagnostics(India) | |
| Basu Joyoti | Professor/ Department of Chemistry/ Bose Institute(India) | |
| Modak Rahul | Assistant Professor/School of Biotechnology/ Kalinga Institute of Industrial Technology(India) | |
| Chowdhury Rukhsana | Chief Scientist /CSIR/ Indian Institute of Chemical Biology(India) | |
| Paul Sandip | Professor/ CSIR / Indian Institute of Chemical Biology(India) | |
| Saha Nabanita | Senior Researcher/ CSIR / Bose Institute(India) | |

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|-----------------------------|--|--|
| Mishra Rakesh K. | Professor/Mishra Group/ Centre for Cellular & Molecular Biology (India) | |
| Bhattacharyya Suvendra Nath | Senior Researcher/ Molecular Genetics Division / Indian Institute of Chemical Biology(India) | |
| Sen Sabyasachi | Researcher/ Biophysics Division/ Saha Institute of Nuclear Physics (India) | |
| Sundaresan Ravi | Assistant Professor/Division of Biological Sciences/ Indian Institute of Science(India) | |
| Kolthur Ullas S. | Associate Professor/Department of Biological Sciences/ Tata Institute of Fundamental Research(India) | |
| Ghosh Koushik | Researcher/CSIR/ Indian Institute of Chemical Biology(India) | |
| Gupta Sanjay | Senior Researcher/ Epigenetics and Chromatin Biology laboratory / ACTREC(India) | |
| Das Chandrima | Associate Professor/ Biophysics and Structural Genomics Division/ Saha Institute of Nuclear Physics(India) | |
| Satyamoorthy K. | Professor/ School of Life Science/ Manipal University(India) | |
| Sa Gaurisankar | Professor/ Division of Molecular Medicine/ Bose Institute(India) | |
| Rao D.N. | Professor/Department of Biochemistry / Indian Institute of Science (India) | |
| Roy Siddhartha | Professor/ Department of Biophysics/ Bose Institute(India) | |
| Chattopadhyay Samit | Professor/ CSIR/ Indian Institute of Chemical Biology(India) | |
| Gupta Sujoy Kumar Das | Professor/ Department of Microbiology/ Bose Institute(India) | |
| Das Tanya | Professor/ Division of Molecular Medicine/ Bose Institute(India) | |
| Chattopadhyay Dhrubojyoti | Professor/Center for Nanoscience and Nanotechnology/ University of Calcutta(India) | |

Place a check [*] in the Remarks Column for those who participated using JSPS's seminar funding.

B: Participants

| Name in full | Position /Affiliation/ Institution(Country of Affiliated Institution) | Remarks |
|------------------------|---|---------|
| -Japan side | | |
| Yasukazu Daigaku | Assistant Professor/ Graduate School of Life Sciences / Tohoku University(Japan) | * |
| Wataru Kobayashi | Assistant Professor/ Graduate School of Advanced Science and Engineering /Waseda University(Japan) | * |
| Miho Suzuki | postdoctoral fellow/ Graduate School of Medicine / Nagoya University(Japan) | * |
| Yukari Miyake | Ph.D. student/ Department of Frontier Bioscience / Hosei University(Japan) | * |
| -India side | | |
| Kaype Stephanie | Ph.D. student/ Molecular Biology and Genetics Unit /Jawaharlal Nehru Center for Advanced Scientific Research(India) | |
| Shah Sanket | Ph.D. student/Cancer Research Institute/ ACTREC (India) | |
| Boila Liberalis Debraj | Ph.D. student/Cancer Biology and Inflammatory Disorder Division/ Indian Institute of Chemical Biology(India) | |
| Sharda Asmita | Ph.D. student/Epigenetics and Chromatin Biology Group/ Advanced Centre for Treatment, Research and Education in Cancer(India) | |
| Sikder Sweta | Ph.D. student/ Molecular Biology and Genetics Unit / Jawaharlal Nehru Center for Advanced Scientific Research(India) | |
| Sarkar Sibani | Ph.D. student/ Drug Development, Diagnostics and Biotechnology Division/ Indian Institute of Chemical Biology(India) | |
| Chattopadhyay Tandrika | Ph.D. student/Department of Biological Sciences / Tata Institute of Fundamental Research(India) | |

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|---------------------------|--|--|
| Patra Samir | Ph.D. student/Epigenetics and Cancer Research Laboratory/ National Institute of Technology Rourkela(India) | |
| Chatterjee Shankha Subhra | Ph.D. student/Cancer Biology and Inflammatory Disorder Division/ Indian Institute of Chemical Biology(India) | |
| Maniyadath Babukrishna | Ph.D. student/Department of Biological Sciences / Tata Institute of Fundamental Research(India) | |
| Roy Dia | Ph.D. student/Division of Molecular Medicine/ Bose Institute(India) | |
| Saha Parna | Ph.D. student/Mishra Group/ Centre for Cellular and Molecular Biology(India) | |
| Thamban Thushara | Ph.D. student/ Department of Mammalian Genetics/ The Centre for DNA Fingerprinting and Diagnostics(India) | |
| -Other Persons | | |
| Basu Subham | Ph.D. student/Molecular Genetics Division/ Indian Institute of Chemical Biology(India) | |
| Patra Sunanu | Ph.D. student/ Midnapore Homeopathic Medical College(India) | |
| Dey Suchismita | Ph.D. student/ Molecular Biology and Genetics Unit / Jawaharlal Nehru Center for Advanced Scientific Research(India) | |
| Yadav Dipika | Ph.D. student/ Molecular Genetics Division / Indian Institute of Chemical Biology(India) | |
| Verma Arpana | Ph.D. student/Bioinformatics Center/ Bose Institute(India) | |
| Sengupta Sourabh | Ph.D. student/Department of Biotechnology/ St. Xavier's College(India) | |
| Dash Aiswarya | Ph.D. student/School of Biotechnology/ Institute of Industrial Technology(India) | |
| Mishra Pragyan | Ph.D. student/ School of Biotechnology / Lalinga Institute of Industrial Technology(India) | |
| Sengupta Isha | Ph.D. student/Biophysics and Structural Genomics Division/ Saha Institute of Nuclear Physics(India) | |
| Biswas Mayukh | Ph.D. student/Translational Research Unit of Excellence/ Indian Institute of Chemical Biology(India) | |
| Kumari Nidhi | Ph.D. student/ Department of Biological Sciences & Bioengineering/ Indian Institute of Chemical Biology(India) | |
| Cahudhari Narendrakumar | Ph.D. student/Structural Biology and Bioinformatics Division/ Indian Institute of Chemical Biology(India) | |
| Dasgupta Pratiti | Ph.D. student/ Division of Plant Biology/ Bose Institute(India) | |
| Mallik Rwitie | Ph.D. student/ Department of Biochemistry/ Bose Institute(India) | |
| Ray Atrayee | Ph.D. student/ Department of Biochemistry / Bose Institute(India) | |
| Jana Ananya | Ph.D. student/ Department of Biochemistry / Bose Institute(India) | |
| Datta Shankari Prasad | Ph.D. student/ Department of Biochemistry / Bose Institute(India) | |
| Lahiri Abhishake | Ph.D. student// Indian Institute of Chemical Biology(India) | |
| Chakraborty Dwaipayan | Ph.D. student/ Structural Biology and Bioinformatics Division / Bose Institute(India) | |
| Mrutyunjay Suar | PhD student/ School of Biotechnology/Kalinga Institute of Industrial Technology (India) | |
| Depth Sudarshan | Ph.D. student/ Molecular Biology and Genetics Unit /Jawaharlal Nehru Center for Advanced Scientific Research(India) | |

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8. Please describe the achievements of the seminar.

We invited leading scientists and younger generation including junior faculties and PhD students in the areas of epigenetics and microbiology. Not only principal investigators but also junior members and PhD students gave excellent lectures on these issues. Most exciting parts of this seminar include topics on interactions of host and microbes that lead to modulation

of epigenetic states of host chromatin. Also interesting were talks on chromatin-like structure of microbes and many experts on mammalian epigenetics gave constructive suggestions on these issues. Several investigators in the field of metabolic diseases such as diabetes also participated in this meeting from India. Their presence in the seminar led to hot discussions on interactions between epigenetics and metabolism. As such, interdisciplinary flavor of this seminar was very successful and we are quite sure that this seminar will lead to further international collaborations. Prof. Akira Ishihama gave extremely stimulating talk in the Plenary Lecture session on how his group has been working to elucidate functions of all of the transcription factors encoded by E. coli genome.

This seminar was also very successful to stimulate and motivate next generation of scientists because of many exciting lectures and active interactions between lecturers and participants. After lectures, many PhD students from India tried to discuss lecturers to gain further insights and ideas. This very active attitude of Indian PhD students was a good surprise to Japanese participants. We need to encourage such an active way of participating in science among Japanese graduate students. We should have planned a longer time frame for the meeting to spare enough time for interaction and discussion among participants. Nonetheless, we are quite sure that this seminar will lead to active interactions and collaborations between India and Japan.

India is trying to expand programs/universities/research institutes. Many younger generation of scientists are coming back home after postdoctoral training in US or Europe. We found many excellent, high quality of research projects in India. It will be very important for Japan to further strengthen international collaboration and interaction with India.