

## Meeting Report

iDarwin volume 4, pages 1-3

Published on February 9, AS0024 (2024 AD)

### **After Commemorative Symposium and Lecture for the 39th International Prize for Biology**

SATTA Yoko

Deputy Director and Professor,

The Research Center for Integrative Evolutionary Science (RCIES),

SOKENDAI, Hayama, Kanagawa 240-0193, Japan

Email: [satta@soken.ac.jp](mailto:satta@soken.ac.jp)

The Commemorative Symposium and Lectures for the 39<sup>th</sup> International Prize for Biology were held at Yokohama Landmark Tower (25F) on December 16 (Sat.) and 17 (Sun.) last year under the co-sponsorship of SOKENDAI, the Graduate University for Advanced Studies, Hayama and the Japan Society for the Promotion of Science.

This year's International Biology Prize in the field of "Genome Biology" was awarded to Dr. Richard Durbin, Al Kindy Professor of Genetics at the University of Cambridge. Dr. Durbin was recognized for his development of numerous fundamental and innovative technologies that support the data science of biology in the field of bioinformatics, a field that combines biology and informatics, and for his leadership of numerous international genome projects.

More than 150 people participated on both days, both on-site and online. On Saturday the 16<sup>th</sup>, we held an international symposium for researchers, inviting three researchers from overseas and three from Japan, with seven speakers including Dr. Durbin. All three Japanese researchers were in the field of bioinformatics, but the three from overseas spoke on a wide range of topics, including research on the population dynamics of human populations, natural selection using yeast, and solving problems

related to human genome sequencing, with "evolution" as the keyword. Dr. Durbin also gave a lecture. I was impressed by Dr. Durbin's lecture, in which he mentioned the importance of being able to share the results obtained through genome sequencing and other genome projects.

The lecture on Sunday the 17th was open to general public in Japanese. Dr. Durbin's lecture was given in English with simultaneous interpretation. It was impressive that he spoke of the state-of-the-arts in bioinformatics clearly to general public. We also invited seven Japanese researchers to speak, two in the bioinformatics field and the remaining five specializing in genome biology. The audience asked a lot of questions at these lectures.

Through these two days, I realized the excellence of Dr. Durbin's research, and at the same time, I strongly felt that the connection between genome biology/genome evolution and bioinformatics will be the foundation for the further development of biology as data science in the future.

The two-day programs are posted here.

December 16<sup>th</sup>, 2023 Symposium

Time	Speaker	Title of Lecture
9:30- 9:35	Arikawa Kentaro (SOKENDAI Executive Director)	Opening Remarks
9:35-10:20	Asai Kiyoshi (The University of Tokyo, Professor)	Genomic information deciphered by language models
10:25-11:10	Kawaguchi Risa (Kyoto University, Junior Associate Professor)	Deciphering epigenetic landscapes for variations in gene regulatory networks in mammals
11:15-12:00	Jianzhi "George" Zhang (University of Michigan, Marshall W. Nirenberg Collegiate Professor)	The loci of environmental adaptations in a model eukaryote
12:00-12:55	Lunch Break	
12:55-13:40	Heng Li (Dana-Farber Cancer Institute, Harvard Medical School, Associate Professor)	The assembly of a human pangenome
13:45-14:30	Rémi Tournebize (French National Centre for Scientific Research / University of Toulouse Paul Sabatier, Postdoctoral Researcher)	De-composing evolution: on population structure and human history
14:30-14:55	Break	
14:55-15:40	Iwasaki Wataru (The University of Tokyo, Professor)	Bioinformatics for revealing rules behind genome evolution
15:45-16:45	Richard Durbin (University of Cambridge, Professor)	Insights from high quality genome sequencing across the tree of life
16:45-16:50	Arikawa Kentaro (SOKENDAI Executive Director)	Closing Remarks
17:00-19:00	Reception	

December 17<sup>th</sup>, 2023 Public Lecture (in Japanese)

Time	Speaker	Title of Lecture
10:00-10:05	Arikawa Kentaro (SOKENDAI Executive Director)	Opening Remarks
10:05-10:55	Richard Durbin (University of Cambridge, Professor)	The genome sequencing revolution in biology (Lecture in English with simultaneous interpretation)
11:00-11:35	Iwasaki Wataru (The University of Tokyo, Professor)	Information technology leading the data science revolution in biology
11:40-12:15	Shigenobu Syuji (NIBB*/SOKEDAI, Professor)	Changing genomes, evolving symbiosis - Exploring the interdependence of organisms from DNA information
12:15-13:15	Lunch Break	
13:15-13:50	Shimizu Kana (Waseda University, Professor)	Privacy protection technology for secure use of human genome data
13:55-14:30	Oota Hiroki (The University of Tokyo, Professor)	Human evolution revealed by genome research
14:30-14:45	Break	
14:45-15:20	Fujiwara Haruhiko (The University of Tokyo, Professor)	Supergene regulates Batesian mimicry observed in only female swallowtails
15:25-16:00	Hirakawa Hideki (Kazusa DNA Research Institute, Senior Chief Researcher)	Deciphering the genome sequence of plants and its applications
16:05-16:40	Hasebe Mitsuyasu (NIBB*/SOKEDAI, Professor)	Evolution of a sensitive plant and insectivorous plants as revealed by genomics
16:40-16:45	Kotani Kazuhiro (Japan Society for the Promotion of Science, Director)	Closing Remarks

\*NIBB = National Institute of Basic Biology

Edited by SAITOU Naruya