International Symposium on Cancer・Aging Biology and Bioinformatics
-Toward Omics-Driven Prevention and Medicine for Aging and Cancer

	Program	Chair
14:00	**Opening Remarks: Nobuyuki Takakura**	
14:00-14:30	**Invited lecture 1 Cancer・Aging Biology** **Programming and Reprogramming of Aging** Guang-Hui Liu (Institute of Zoology, Chinese Academy of Sciences)	Tohru Ishitani
14:30-14:35	Break	
14:35-15:05	**Invited lecture 2 Bioinformatics** **Single-bacterium RNA-Seq reveals principles of genome regulation and antibiotic persisters** Itai Yanai (Department of Biochemistry and Molecular Pharmacology, Grossman School of Medicine, New York University)	Kenji Kamimoto
15:05-15:10	Break	
15:10-15:30	**Biken lecture 1 Cancer・Aging Biology** **Age-related disruption of the crosstalk between host and gut microbiota through B cell senescence** Shimpei Kawamoto (Department of Molecular Biology, Research Institute for Microbial Diseases, Osaka University)	Eiji Hara
15:30-15:50	**Biken lecture 2 Bioinformatics** **Decide, predict, and control biological systems and diseases through integrative modeling approaches.** Kenji Kamimoto (Laboratory of Systems Biology, Department of Biological Informatics, Bioinfomatics Center, Research Institute for Microbial Diseases, Osaka University)	Shotaro Yamasaki
15:50-16:05	Break	
16:05-16:35	**Invited lecture 3 Cancer・Aging Biology** **Multi-modal data analyses to understand cancer cachexia, enhancer-dependent gene regulation, and physiological responses to daily activities** Shinpei Kawaoka (Department of Integrative Bioanalytics, Institute of Development, Aging and Cancer, Tohoku University)	Masahito Ikawa
16:35-16:40	Break	
16:40-17:10	**Invited lecture 4 Bioinformatics** **Probabilities and Differentiation in RNA Sequence Design** Kiyoshi Asai (Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo)	Yoichiro Nakatani
17:10	**Closing Remarks: Sho Yamasaki**	

Each program includes a 5-minute discussion time.