

CDB Symposium: Towards Understanding Human Development, Heredity, and Evolution

April 13, 2017—The RIKEN Center for Developmental Biology held its fifteenth annual symposium entitled, “Towards Understanding Human Development, Heredity, and Evolution,” from March 27 to 29. Approximately 170 students and scientists from around the world convened at the CDB to take part in scientific exchanges on a wide range of topics related to human development, human genetics as well as evolution. This year’s symposium was co-organized by CDB’s Mototsugu Eiraku (Laboratory for in vitro Histogenesis), Tomoya Kitajima (Laboratory for Chromosome Segregation), Fumio Matsuzaki (Laboratory for Cell Asymmetry), and Takashi Tsuji (Laboratory for Organ Regeneration), as well as Yoshiya Kawaguchi of CiRA, Kyoto University (Japan), Mitinori Saitou of Kyoto University and JST/ERATO (Japan), and Edith Heard of Institut Curie (France).



Scientists have long been trying to unveil the processes involved in human development, and the larger question of how humans evolved. While extensive research using a variety of model organisms has revealed much about universal developmental processes common to all species, there remains a gap in our understanding of processes specific to human lineage including close primate relatives, due to experimental and ethical limitations. However, recent advances in technologies and experimental approaches, such as live-imaging, next-generation sequencing, genome editing, and stem cell culturing, have both facilitated and spurred research in human development and genetics. This year’s symposium brought together leading scientists working at the forefront in these fields to try and piece together our current knowledge as well as unearth potential new avenues of research. A total of 30 talks and 56 posters were presented at the three-day meeting on a broad spectrum of topics including germline and early embryonic development, epigenetics, organogenesis from human pluripotent stem cells and other stem cells and their applications for disease modeling, and human genetics and evolution.

The CDB Symposium series was launched in 2003 as a forum to encourage the timely exchange and discussion of recent findings, progress and trends in developmental biology, regeneration and related fields, and is generally held every year in March.