

Outline of Selected Projects

Host institution	Kyoto University
Center name	Institute for Advanced Synthesis for Human Biology
Head of host institution	Juichi Yamagiwa
Prospective center director	Mitinori Saitou
<p><Project Summary></p> <p>Understanding the basic biology of human beings is a fundamental challenge in the field of life sciences, with a direct connection to medicine. The knowledge gleaned from model organisms has often been difficult to translate to human biology due to species differences in the regulation of key basic pathways.</p> <p>The Institute for Advanced Synthesis for Human Biology will elucidate the core principles of human traits, including disease states, using multidisciplinary integrative strategies, creating a basis for developing innovative therapeutic opportunities. Specifically, the Institute will explore humans and non-human primates as major research subjects, and 1) Promote the study of human biology, with particular focus on genome regulation, 2) Clarify core principles defining differences among the species, 3) Generate primate models for intractable human diseases, 4) Reconstitute key human cell lineages/tissues in vitro, and 5) Contribute to formalizing an international ethics standard for research on human biology.</p> <p>By thus clarifying the core principles of human traits and creating a basis for delineating disease etiologies and developing innovative therapies, the Institute will strive to promote health from birth to senescence.</p> <p><Remarks></p> <p>This is an ambitious project addressing a basic question “what it is to be human as a biological entity.”</p> <p>PIs of the center are impressive, gathered from top scientists in related fields with diverse backgrounds.</p>	