【Abstract of 2009 Grant – in – Aid for Scientific Research on Innovative Areas
(Research in a proposed research area)】

Title of project	Computational Anatomy for Computer-Aided Diagnosis and Therapy: Frontiers of Medical Image Sciences
Head Investigator Name	KOBATAKE Hidefumi, Tokyo University of Agriculture and Technology, Administration Bureau, President
Abstract of Research Project Term of Project: 2009–2013	This project aims to establish a new discipline "Computational Anatomy", which provides a mathematical framework to deal with human anatomy. The challenges consist of (1) development of theories for representation of anatomical models that cover inter-individual variability in shape and topology and its construction through statistical analysis of population data, (2) investigation of methodologies for precise and robust retrieval of anatomical information from medical images, virtually equivalent to real human body dissection, and (3) development of innovative technologies assisting medical diagnosis and interventions based on computational anatomy. The outcomes are expected to contribute to advanced medicine, basic biomedical research, medical education, and information science.