Genetic Regulation

1. Staffs and Students (in 2010)

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Associate Professor (Graduate School of Biomedical Science) Toshiaki NAKAJIMA
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2. Purpose of Education

Genetic factors, i.e. structural and/or functional diversity of human genome, are more or less involved in the etiology and pathogenesis of human diseases. Main objective of Genetic Regulation is to identify the gene mutations or polymorphisms and to decipher the molecular mechanisms involved in the etiology and pathogenesis of intractable diseases, in order to develop new strategies for diagnosis, treatment and/or prevention of the diseases. Current research is focused on the cardiovascular diseases (e.g. idiopathic cardiomyopathy, idiopathic arrhythmia, and coronary heart disease), autoimmune diseases (e.g. Burger disease, Behcet disease, rheumatoid arthritis, and chronic thromboembolic pulmonary hypertension) and infectious diseases (e.g. HIV/AIDS). In addition, genome diversity in immune-related genes is investigated from the view-point of primate evolution.

3. Research Subjects

1) Identification and functional analysis of disease-related genes for cardiovascular diseases
2) Identification and functional analysis of disease-related genes for autoimmune diseases
3) Identification and functional analysis of disease-related genes for infectious diseases
4) Structural, functional and evolutionary analyses of MHC and immune-related genes in vaccination

4. Publications

Original Article


**Review Article**


**Book Chapter**