

Abstract of Presentation

Note: This paper should be typed in “Times New Roman” of 12pt.

“BioBank Japan” project toward the personalized medicine

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Abstract :

The “Biobank Japan” project started in June 2003 by the support of the Japanese government. The aims of this project are 1) discovery of genes susceptible to diseases, or those related to effectiveness or adverse reactions of various drugs, 2) identification of molecular targets for evidence-based development of drugs or diagnostic tools, 3) identification of the important genetic information that can be applied for establishment of “Personalized Medicine” and 4) studies on gene-environment interaction for prevention of diseases. To achieve these goals, we planned to collect of DNAs, sera and clinical information from 300,000 patients who have either of 47 common diseases. As the research resource bank, we constructed “BioBank Japan” that consisted of facilities that are able to store DNAs (the maximum capacity of 1,000,000 tubes) and sera (the maximum capacity of 3,000,000 tubes in liquid nitrogen). So far, we have obtained a written informed consent from more than 200,000 patients (a total number of disease cases is nearly 300,000) from 66 hospitals participating in this project. We have been performing the genome-wide association studies using 550,000 SNPs, which can cover most of our genome, to identify genes of medical importance, particularly those associated with severe adverse reactions caused by various drugs. In addition, we have developed a fully-automated SNP typing machine that enables us to make genotyping of multiple SNPs within a very short period and to provide a chance to have the “point-of-care” treatment to patients. Accumulative data and the new tool should provide us the basis to identify genes associated with common diseases and to establish the personalized treatment.