# 특강2 Genomics of Disease Resistance in Plants: Generation of EST DB of Hot Pepper for Pathogen-Defense Genome Research

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We are pursuing to isolate all of the hot pepper genes that are differentially expressed during plant-pathogen interaction. Using DDRT-PCR technique 300 differentially expressed cDNAs were isolated from hot pepper leaves showing non-host resistance against bacterial plant pathogens (*Xanthomonas campestris* pv. *glycines*, *Pseudomonas syringae pv syringae*). Reverse Northern and Northern blot analyses revealed that 50% of those genes were differentially expressed in pepper leaves during non-host resistance response. Among 300 isolated cDNAs 245 which present as independent gene without redundancy were microarrayed as DNA chip for further analysis. Transcription profiles of these genes following inoculation with pathogen and treatment with various stresses will be analyzed. We are also generating random EST sequence database from a cDNA library constructed from pepper tissues showing non-host hypersensitive response against bean pustule pathogen. As a primary stage we sequenced 10,000 cDNA clones. Analysis of the EST sequence data, construction of EST database, expression studies of some selected cDNA clones, and functional characterization of some novel pathogen-inducible genes will be presented.

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Keywords: