



## Molecular Genetics of Human Leucocyte Antigen in Diseases

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### Message from the Guest Editor

Dear Colleagues,

Classical HLA (Human Leukocyte Antigen) is the Major Histocompatibility Complex (MHC) present in humans. The association between HLA genes and diseases has been studied since 1967, and no definite pathogenic mechanisms have been established yet. The study of HLA-G immune modulation gene (and also of -E and -F) has begun in the same arduous way, where statistics and allele association are the trending subjects, with the same few results being obtained by HLA classical genes. Thus, we believe that it is necessary to follow different research methodologies: (1) to approach this problem based on how evolution has maintained together a cluster of immune-related genes (the MHC) in a relatively short chromosome area from the evolution of amniotes to humans, i.e., immune-regulatory genes (MHC-G, -E and -F), adaptive immune classical class I and II genes, non-adaptive immune genes like C2, C4 and Bf, and (2) to propose the allelism of complement factors for studying MHC complement genes, complotypes, and extended MHC haplotypes, which may be more informative than single MHC marker studies.





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