

F808Genotypes of Alcohol-Metabolizing enzymes
and the risk for alcoholics in KoreanKyung-Sook Park*, Hye-Won Seol, and Jee-Won Mok
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Alcohol dehydrogenase 2 (ADH2) and mitochondrial aldehyde dehydrogenase 2 (ALDH2) are the major enzymes involved in oxidative degradation of ethanol, and they catalyze the conversion of ethanol to acetaldehyde and further into acetic acid. The frequencies of *ADH2*2* and *ALDH2*2* varied across ethnic groups and the distortion frequencies were shown in alcoholics. We examined the exon 3 of the *ADH2* and exon 12 of the *ALDH2* genotypes by PCR-RFLP from 53 alcoholics and 232 controls in Korean. The *ADH2*1/ADH2*1* homozygote was significantly predominant in alcoholic patients (45.3%) compared to control subjects (6.0%) ($p < 0.001$), whereas there was inverse relation in *ADH2*2/ADH2*2* ($p < 0.001$). The *ALDH2*1/ALDH2*1* homozygote was 94.3% for alcoholics compared with 75.9% of controls ($p < 0.001$). All alcoholics had *ALDH2*1* allele in our study. The high relative risks for alcoholics were found in *ADH2*1* and *ALDH2*1* and their relative risks (R.R.) are 2.9 and 8.1, respectively. On the other hands, the allele frequencies of *ADH2*2* and *ALDH2*2* for alcoholics were lower than those of controls. These data suggest that *ADH2* and *ALDH2* gene polymorphisms may be associated with the development of alcoholics in Korean. Same genetic predisposition to alcoholics was shown in other Orientals (Japanese and Chinese) but not in Caucasians.

F809DNA Polymorphism Analysis of BoLA DRB3 Gene between Hanwoo and
Holstein in KoreaMoon Ju Oh^{1*}, Young Suk Park¹, Kyung Ok Lee¹ and Byung Hong Ahn²
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The bovine leukocyte antigen (BoLA) system is the major histocompatibility complex (MHC) of cattle. MHC genes encode highly polymorphic cell-surface molecules which present antigenic peptides to T-cell, thereby playing an essential role in immune response to foreign agents and the differentiation among the species. The BoLA-DR region contains at least three DRB genes but only the DRB3 gene is expressed at a high level in peripheral blood lymphocytes. In this study, we analyzed the genetic polymorphism of the BoLA DRB3 exon2 gene from 20 Hanwoo (Korean native cattle) and 21 Holstein by polymerase chain reaction combined with restriction fragment length polymorphism (PCR-RFLP) with *RsaI*, *BstYI* and *HaeIII*. In the 42 alleles of Holstein, DRB3*0101 (21.4%) and *1501 (11.9%) were major genotypes, whereas DRB3*1401 (20%) and *2001 (10%) were major genotypes in 40 alleles of Hanwoo. We are found two new allele types of Hanwoo, which were named with DRB3kor1 (GenBank accession number AF008234) and DRB3kor2 (AF008235), using DNA sequence analysis.