

**Abstract Submission No.: A-0175**

## **The Association of HLA Alleles with IgA Nephropathy in a Taiwanese Population**

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**Objectives :** IgA nephropathy (IgAN) has been reported to be associated with certain human leukocyte antigen (HLA) alleles, but the results in the literature varied greatly among different countries or ethics. We investigated the association of biopsy-proven IgAN and HLA alleles in a Taiwanese population.

**Methods :** We analyzed the data from Taiwan Precision Medicine Initiative retrospectively as a case-control study. We identified 157 patients with biopsy-proved IgAN between January 2011 and August 2022 in Taichung Veterans General Hospital. The data were analyzed by comparing variables to 1570 non-IgAN individuals.

**Results :** The alleles frequencies of HLA-C\*08:01, DQA1\*01:05, DQA1\*03:01, DQA1\*03:03, DQB1\*03:02, DQB1\*04:01, DRB1\*04:03, DRB1\*04:05, and DRB1\*10:01 were significantly higher among IgAN patients than non-IgAN individuals. On the other hand, HLA- B\*58:01, DQA1\*05:01, DQB1\*02:01, and DRB1\*03:01 were significantly lower among IgAN patients. We also reviewed the single nucleotide polymorphisms (SNPs) reported in the literatures, and we found that most of the significant SNPs were also located in the HLA region of chromosome 6.

**Conclusions :** Some of the HLA alleles we found in this study have been reported in other populations/ethics, but C\*08:01, DQA1\*01:05, DQA1\*03:01, DQA1\*03:03, DRB1\*10:01 were found to be associated with IgAN for the first time; B\*58:01 and DQA1\*05:01 have not been reported to be protective in previous reports. Further studies of HLA alleles associated with IgAN are necessary to understand the disease pathogenesis of IgAN.