

Association of Major Histocompatibility Complex with Cell Mediated Immunity

Authors : Atefeh Esmailnejad, Gholamreza Nikbakht Brujeni

Abstract : Major histocompatibility complex (MHC) is one of the best characterized genetic regions associated with immune responses and controlling disease resistance in chicken. Association of the MHC with a wide range of immune responses makes it a valuable predictive factor for the disease pathogenesis and outcome. In this study, the association of MHC with cell-mediated immune responses was analyzed in commercial broiler chicken. The tandem repeat LEI0258 was applied to investigate the MHC polymorphism. Cell-mediated immune response was evaluated by peripheral blood lymphocyte proliferation assay using MTT method. Association study revealed a significant influence of MHC alleles on cellular immune responses in this population. Alleles 385 and 448 bp were associated with elevated cell-mediated immunity. Haplotypes associated with improved immune responses could be considered as candidate markers for disease resistance and applied to breeding strategies.

Keywords : MHC, cell-mediated immunity, broiler, chicken

Conference Title : ICCAMP 2018 : International Conference on Companion Animal Medicine and Pathophysiology

Conference Location : Dublin, Ireland

Conference Dates : August 16-17, 2018