

# Genetics of Immunoglobulin A Nephropathy

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## Abstract

**Introduction:** Immunoglobulin (Ig) A nephropathy is the most common primary glomerulonephritis in the world and about 20% to 50% of patients with it develop progressive renal failure. There is considerable evidence to show that IgA nephropathy is influenced by genetic factors. The purpose of this review is to provide useful information concerning genetics of IgA nephropathy. **Methods and Results:** Epidemiological, familial clustering, human leukocyte antigen and IgA immune system (immunoglobulin class switch gene,  $I\alpha_1$ , germ-line transcript regulatory region gene) studies have led to the hypothesis of genetic susceptibility to IgA nephropathy. Moreover, research on renin angiotensin system, platelet activating factor acetylhydrolase, neuropeptide Y Y1 receptor and others genes has demonstrated that genetic factors influence the pathological severity and natural course of IgA nephropathy. **Conclusions:** The evidence presented in this review strongly supports the role of genetic factors in IgA nephropathy. Detection of genetic risk factors for IgA nephropathy will allow us to study further the pathogenesis of IgA nephropathy and devise effective therapy.

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**Key words:** Genetic factor, IgA immune system, Platelet activating factor acetylhydrolase, Renin angiotensin system

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