Complement factor B (BF), complement component 2 (C2)

Complement factor B (BF) is involved in the activation of the complement alternative pathway and complement component 2 (C2) is involved in the activation of the classical pathway of the complement and both have adjacent genes located 500 base pair apart on chromosome 6p21.3 within the major histocompatibility complex class III region[(21)].

Haplotypes in BF and C2 have been linked to AMD. In particular, the L9H in BF and the E318D in C2 and also the R32Q in BF and a variant in intron 10 of C2 have been showed to be protective for AMD by Gold et al.[(21)].

They hypothesized that the significance of the haplotypes is due largely to the BF variants, which are in strong linkage disequilibrium with C2.

BF is a complement activating factor and studies have demonstrated that at least one of the two variants associated with AMD (R32Q BF) leads to an impairment in the complement activation function of BF.

This means that the absence of these variants C2/BF can predispose patients to AMD[(21)].

Thus, much like impaired CFH-mediated complement inhibition confers AMD risk, decreased complement activation by BF might serve to protect against AMD risk.

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