The Realisation of Research

Maxwell: Compliment Factor H Related 5 protein (CFHR5) and kidney disease

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60-080

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Category(s):
Diagnostic/Prognostic

Description:

A new biologic treatment and diagnostic for kidney disease

Available for: Partnering, collaborative research ad licensing

Summary

We have demonstrated that an abnormality of the protein Complement Factor H Related 5 (CFHR5) leads to a disposition of complement C3 and kidney failure. we have invented an efficient test for this genetic abnormality and have used it to screen a population. We have also invented an ELISA assay to measure the circulating CFHR5 protein levels in humans. We believe this will be useful in diagnosis and assessment of patients with a variety of diseases including SLE, immune complex glomerulonephritis and perhaps age-related macular degeneration. We have also proposed a role for CFHR5 protein (or agents mimicking its action) in the treatment of these diseases and are currently testing this experimentally.

The Technology and its Advantages

Recently other therapies targeting the terminal complement pathway (e.g. Eculizumab) have entered clinical practice, but there is no currently available therapeutic agent which targets C3 (the central component of the complement pathway). Since C3 catalyzes both its own activation and activation of the terminal complement pathway at the site of injury (e.g. in the kidney) and thereby amplifying the immune response, it constitutes an attractive target for drug therapy. CFHR5 augmentation would be predicted to achieve this by preventing C3 accumulation at these sites. See Lancelot 2010 publication for further details.

Market Opportunity

CFHR5 augmentation therapy could provide a completely new drug treatment lupus nephritis, immune complex glomerulonephritis, haemolytic uraemic syndrome, renal allograft rejection and age related macular degeneration.

Intellectual Property Status

UK priority patent filed October 2009

Further Information

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