ICI 2016 – The Future of a More Effective HIV Vaccine?

Broadly neutralising antibodies (bnAbs) against HIV have been one of the the main focuses in the design an effective HIV vaccine. However, since the Thai RV144 HIV vaccine trial, attention has been drawn to antibody-dependent cell-mediated cytotoxicity (ADCC) as this was shown to be a correlate of protection in the trial. Little was known about whether individuals who develop bnAbs also develop antibodies with increased Fc effector polyfunctionality.

Researchers at the University of Witswatersrand presented their data at The International Congress of Immunology (ICI) 2016, comparing a number of antibody mediated effector functions in people who develop bnAbs and those that do not. They found that individuals with bnAbs have increased gp120 and gp140 antibody-dependent complement deposition, increased antibody-dependent cellular phagocytosis, greater natural killer cell degranulation and higher levels of IgG3 (the most cytophilic isotype).

The data collected shows that people with bnAbs have different effector functions as compared to individuals who do not produce these antibodies. This suggests that the focus on HIV immunogen design should not only be on bnAbs but also on Fc effector functions, as together they could lead to the development of an effective HIV vaccine.

More information on the conference – International Congress of Immunology 2016

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