Easing the pain of inflammation – Arthritis Vaccine

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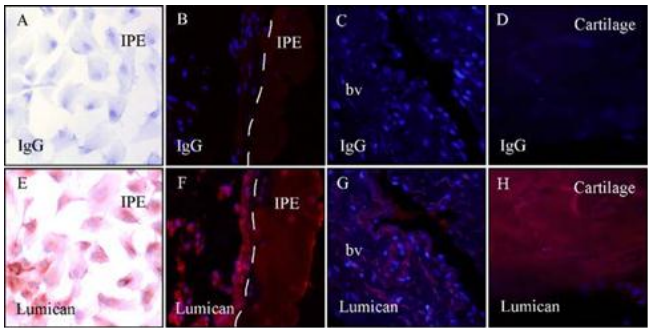
The Technology

Spondyloarthropathies (SpAs) are a family of inflammatory processes associated with HLA B27 polymorphism that develop into a number of conditions such as fusion of the spine or ankylosing spondylitis (AS), Reiter's syndrome (or reactive arthritis), psoriatic arthritis, Crohn's disease (a type of IBD) and uveitis.

Our researchers believe that they have **discovered the mechanism of action for SpAs**, based on shared homology of specific peptide sequences that occur in Chlamydia trachomatis and also in a protein called lumican which is preferentially and abundantly expressed in the locations where SpAs manifest. The shared peptide sequences have very high binding affinity to HLA B27, allowing the triggering of the immune response.



Lumican staining in human iris pigment epithelial cells (IPE), iris and synovial tissues. Human IPE cultures (A and E), iris tissues (B and F), synovial tissues (C-D, G-H) were labelled with anti-lumican or control rabbit IgG, followed by HRP or Alexa-fluor conjugated goat anti-rabbit IgG. Lumican staining (red) is present in IPE in vitro (E) and in vivo (F), in blood vessels (bv) (G) and in articular cartilage (H). Original magnification x100 (A, E) and x400 (B-D, F-H).

Researchers

Prof Denis Wakefield
An immunologist and leading authority in uveitis and HLA-B27 research -
School of Medical Science, UNSW

Helder Marcal
PhD Candidate who carried out the proteomic and scientific analysis which lead to the invention -
School of Medical Science, UNSW

Investment Opportunity

NewSouth Innovations is looking for a partner to exclusively license the technology and take on the clinical development of the diagnostic as well as the potential vaccine specifically for SpAs.

For more information contact:
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