Biomarkers for Diseases Involving Chronic Low Back Pain

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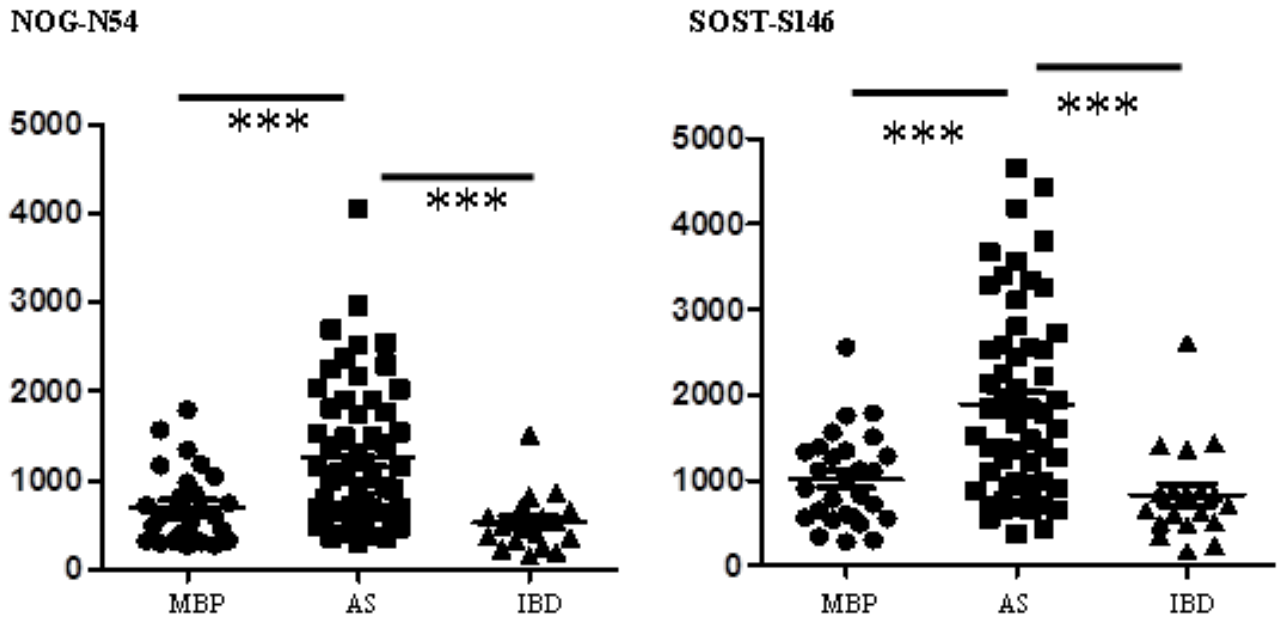
Technology description

Elevated level auto-antibodies against noggin (NOG-N54) and sclerostin (SOST-S146) immune complexes in Ankylosing Spondylitis patient sera
With up to 1% of the general population affected, Ankylosing Spondylitis (AS) is an under-recognized and debilitating chronic disease which affects predominantly young men in their 20’ s. The chronic inflammation in AS causes excessive bony formation that can lead to irreversible loss of spinal mobility and long term disability. Chronic lower back pain can be due to joint inflammation or mechanical injury and thus it is extremely important to distinguish and treat those two conditions accordingly at early disease stages.

The global market for AS therapeutics will grow from US$1.1 to 1.6 billion by 2019, with a compound annual growth rate of 5.1% (GlobalData).

Current diagnostics includes physical examination, detection of C-reactive protein (CRP) and human leukocyte antigen (HLA)-B27. Each of the methods has certain limitations causing the delay in AS detection by 8-11 years. Although biomarkers as diagnostic tools are a high priority for scientific community, they are still under development.



Clinical data demonstrates that elevated levels of NOG/SOST IgG-ICs in AS is disease specific (MBP – mechanical back pain, IBD – inflammatory bowel disease).

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