

Prognostic marker for the response to anti-TNF α in rheumatoid arthritis

A new prognostic biomarker that allows the segmentation of rheumatoid arthritis patients into responders and non-responders to treatment with TNF α inhibitors has been found. The *in vitro* method to measure the presence of this biomarker has also been developed and tested in a significant number of patients. Partners to establish licensing or co-development agreements are sought.

The Need

Rheumatoid arthritis (RA) is an autoimmune systemic disease that produces chronic inflammation, mainly in the joints, and affects around 1% of the whole world population. TNF α inhibitors (anti-TNF α) are used to treat this disease, but 20-40% of RA patients are non-responders, so other drugs with a different mechanism of action need to be administered. Therefore, early diagnosis of non-responders to TNF α would avoid the use of this therapy when it is not effective.

The Solution

A highly robust and reliable biomarker has been identified to predict which RA patients will be responders or not to TNF α inhibitors. Furthermore, the *in vitro* method to predict the response of RA patients to anti-TNF α has been also developed. This allows the early segmentation of patients into responders and non-responders, avoiding undesirable secondary effects and the high expenses that the use of TNF α inhibitors imply.

Innovative Aspects

- ✓ In contrast with other biomarkers that were described with the same aim, this new one is reliable and robust enough to be used for clinical purposes.
- ✓ In addition to the prognostic biomarker found, the *in vitro* method to predict the response of RA patients to anti-TNF α has been also developed.
- ✓ Early prognostic of response to anti-TNF α allows to treat non-responder patients with other drugs avoiding the secondary effects of an ineffective therapy.
- ✓ Taking in consideration that anti-TNF α treatments are very expensive, segmentation of patients into responders and non-responders to this treatment is also very beneficial from an economic point of view.

Stage of Development

High statistically significant results were obtained when measuring this biomarker in 315 RA patients from the Immune-Mediated Inflammatory Disease Consortium (IMIDC) that were treated with TNF α inhibitors. Besides, the specific *in vitro* method to predict the response of the patients to this treatment has also been developed.

Target Market

Diagnostic companies.



X-ray of hands from a RA patient



Joints that can be affected by RA



TNF α inhibitors

IP rights

Priority application

Portfolio of technologies

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We are looking for...

Partners to establish co-development or licensing agreements in order to commercialize this technology.

Contact details

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