

# NEW ELISA TEST TO DETECT ANTIBODIES AGAINST CHIMERIC VIMENTIN PEPTIDES FOR THE EARLY DIAGNOSIS OF RHEUMATOID ARTHRITIS

***The present invention relates to a new ELISA test that uses chimeric citrullinated peptides derived from vimentin/fibrin or vimentin/filaggrin chains for early diagnosis of rheumatoid arthritis. The test has shown 91% specificity in studies performed with sera from 100 patients, being able to detect the disease when other tests failed.***

## BACKGROUND

Rheumatoid arthritis (RA) is a systemic autoimmune disease affecting 1% of the world population producing chronic joint inflammation, usually resulting in its destruction. Early diagnosis is mandatory to impair the disease progression by drugs, physiotherapy and, eventually, surgery.

## TECHNOLOGY DESCRIPTION

The research group has developed a new ELISA test that consists of new quimeric citrullinated peptides, containing a sequence with homology to some aminoacids of vimentin and another sequence with homology to some aminoacids of the  $\alpha$ -fibrin or the filaggrin (alternatively), covalently bonded.

## ADVANTAGES

- The chimeric peptides based in citrullinated fibrin/filaggrin-vimentine peptides show high sensitivity and specificity to detect rheumatoid arthritis.
- This test is able to diagnose positive RA in sera of patients not detected by other commercial and non-commercial developed tests.
- Improved prognostic: patients containing antibodies to these peptides show higher rate of erosive disease and less remission of the disease.
- Very useful in combination with other peptides to increase the sensitivity in the identification of particular subsets of RA patients.

## CURRENT STAGE OF DEVELOPMENT

Test has been performed in serum of 100 RA patients. These peptides have shown a 91% specificity and 77% sensitivity.

## GOAL

We are searching companies interested in the acquisition of the license, the further co-development of the kit and the commercialization of the product.

## PATENT

Spanish patent application filed in July 2011 by CSIC and Hospital Clínic de Barcelona.

## CONTACT

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