# NEW ELISA TEST TO DETECT ANTIBODIES AGAINST CITRULLINATED PEPTIDES FOR RHEUMATOID ARTHRITIS DIAGNOSIS AND PROGNOSIS

***The present invention relates to a new ELISA test that uses citrullinated peptides derived from α-chain of human fibrin and filaggrin. The use of these peptides may improve sensitivity of this new ELISA test for rheumatoid arthritis diagnosis and may have important prognostic value, identifying patients with aggressive disease.***

## BACKGROUND

Rheumatoid arthritis (RA) is a chronic, systemic inflammatory disorder that may affect many tissues and organs, but principally attacks the joints producing a inflammatory synovitis that often progresses to destruction of the articular cartilage and ankylosis of the joints.
RA is the most common form of chronic arthritis in adults, with a significant prevalence in the general population (0.5-1%). Its early diagnosis is mandatory in order to improve prognosis. Up to now, no absolute specific diagnostic tests are available.

It has been studied the presence of antibodies against citrullinated peptides (ACPA) in sera of patients suffering RA, but their sensitivity as serological markers is still limited (60-70%).

Several diagnostic tests using ELISA for ACPA have been developed in the last years, but their sensitivity and specificity for diagnosis and prognosis of RA need to be improved.

## TECHNOLOGY DESCRIPTION

The research group has developed a new ELISA test that consists of:

- A new quimeric citrullinated peptides, derived from fibrin and filaggrin.
- A method for the detection of specific antibodies for RA using a biological sample.
- A kit containing the reagents and buffer solutions necessary to perform the diagnosis and prognosis test.

## ADVANTAGES

- The antigenic substrate that uses peptides derived from human fibrin may represent the "in vivo" target for ACPA in humans.
- Sensitivity of this new ELISA may improve sensitivity for early stages of RA.
- These new ELISA tests may have important prognostic value, identifying patients with aggressive disease.

## CURRENT STAGE OF DEVELOPMENT

Test has been scientifically validated with more than 900 patients.

## GOAL

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

## PATENT

Patent application number: ES200701167
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National applications filed in Europe, USA and Canada.
Applicants: Consejo Superior de Investigaciones Científicas (CSIC) and Hospital Clínic i Provincial de Barcelona

## CONTACT

Teresa Lloret
Fundació Clínic
Tel. + 34 (93) 2275400 (ext. 4001)
mtlloret@clinic.ub.es