

## The Role of Neuroserpin in Rheumatoid Arthritis Patients

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**Abstract :** Neuroserpin (NSP) is a serine protease inhibitor and member of the serpin family. It is expressed in developing and adult nervous systems, and acts as an inhibitor of protease tissue plasminogen activator (tPA) and a regulator of neuronal growth and plasticity. Also NSP displays anti-inflammatory activity. But, its role in rheumatoid arthritis had never been studied before. So, the aim of the present study was to investigate the effect of neuroserpin in patients with RA. A total of 50 frozen (-20 °C) serum samples 40 of them belonged to patients with RA, and 10 sample belonged to healthy subjects, were enrolled prospectively. We used DAS-28 to evaluate disease activity. The following clinical data gathered from the original patients' charts. Serum neuroserpin levels were measured by enzyme-linked immunosorbent assay. Our preliminary study results demonstrate, for the first time, that NSP levels are significantly different in RA patients relative to healthy subjects ( $P = 0.014$ ). So, NSP contribute to pathological condition of RA. Thus, we believe that serum NSP levels can be as a marker in patients with RA. However other inflammatory diseases should be further investigated.

**Keywords :** neuroserpin, rheumatoid arthritis, tPA, tPA inhibitor

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