

# Newly engineered protein has potential for new anti-inflammatory treatment

March 10 2011

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Researchers from across multiple disciplines at NYU Langone Medical Center created a new protein molecule derived from the growth factor progranulin may provide the basis for new therapies in inflammatory diseases, such as rheumatoid arthritis, according to a study published in the March 10, 2011 issue of *Science*.

"The development of this protein extends our understanding of the molecular mechanisms that drive the growth factors and cytokines control of cartilage development and arthritis," said Chuan-ju Liu, PhD, the lead researcher and associate professor, Departments of Orthopaedic Surgery and Cell Biology, NYU Langone Medical Center. "Whether the protein accounts for all of the anti-inflammatory effects we observed in the study needs to be replicated, but we are very encouraged by these initial results."

Over the last 20 years research in rheumatology has focused on identifying cytokines (cell-signaling [protein molecules](#) secreted by the glial cells of the nervous system and other cells in the immune system responsible for intercellular communication), leading to the inflammatory and degenerative processes in [rheumatoid arthritis](#). The molecule created and used in this study, called ATSTTRIN (antagonist of TNF/TNFR signaling via targeting to TNF receptors), is a peptide constructed from segments of proteins that originate within a cell, which has a high affinity and specificity for binding to tumor necrosis factor receptors (TNFR).

The researchers suggest that this progranulin-derived [protein](#) could result in alternative treatments to those suffering from chronic [autoimmune diseases](#) such as rheumatoid arthritis, Crohn's diseases, ulcerative colitis, ankylosing spondylitis, plaque psoriasis and psoriatic arthritis.

Provided by New York University School of Medicine

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