ANNA HENRIETTA TÓTH

National Academy of Scientist Education, 4th year

University of Debrecen,
Faculty of Medicine,
Molecular Biology MSc 1st year

YEAR OF BIRTH

2002

FORMER SZENT-GYÖRGYI PUPIL

no

RESEARCH UNIT

University of Debrecen

SZENT-GYÖRGYI MENTOR

Tamás Juhász

JUNIOR MENTOR

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SPECIALIZATION

Cartilage development, signaling pathways

SECONDARY SCHOOL

Karcag Nagykun Reformed Secondary School

NAME OF TEACHER

Tünde Bíróné Varga

LANGUAGES

English/intermadiate

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

Osteoarthritis (OA), the most common joint disease, involves the gradual wear and tear of articular cartilage. As it progresses, the cartilage thins, causing pain and restricted movement.
Since its isolation, PACAP has been described in numerous peripheral tissues. It's known to positively influence chondrogenesis and osteogenesis. In in vitro cartilage cultures, its protective effects against oxidative stress and excessive mechanical stimuli have been documented.
Our hypothesis suggests that PACAP neuropeptides may significantly influence physiological articular cartilage formation. Information is lacking on whether PACAP signaling pathway elements are present in mature articular cartilage, the answer to which would be a unique clinical finding. Based on prior research, we hypothesize that this neurohormone may have a chondroprotective effect during inflammatory joint diseases. Our experiments investigate the effect of administering PACAP 1-38 and hyaluronic acid on the morphology and extracellular matrix structure of knee joint cartilage in rats with artificially induced OA.

AMBITIONS AND CAREER GOALS

I believe it is important for a person to continually develop and always learn. Therefore, following my Master's studies, I intend to pursue a doctoral program and engage in scientific work. My main goal is to work in an academic career as a university researcher and to actively participate in teaching duties.

HONORS AND PRIZES

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PUBLICATIONS

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