

JOURNAL OF BIOMEDICAL AND CLINICAL RESEARCH

[Main Page](#)
[About Journal](#)
[Title Page](#)
[Issues](#)
[Instructions](#)
[Contacts](#)



Web Design Aleksey Hristov Todorov

Title:

Nerve Growth Factor (NGF) immunoreactivity modulation of mast cells in the thymus of subjects with Myasthenia gravis

Authors:

Tsvetana Ts. Marinova, Lyubomir D. Spassov¹, Maya D. Markova², Veselin I. Vlassov³, Ralitsa S. Dzhupanova, Lyudmila T. Belenska, Luigi Aloe⁴

Affiliations:

Department of Biology, Medical Genetics and Microbiology, ¹Department of Surgery,

²Department of Biology, Medical Faculty, Medical University of Sofia,

³Department of Pathology, Medical Faculty, Sofia University "St. Kliment Ohridski",

⁴Institute of Neurobiology and Molecular Medicine, CNR, Rome, Italy

Corresponding author:

Tsvetana Ts. Marinova

Department of Biology, Medical Genetics and Microbiology, Medical Faculty,

Sofia University "St. Kliment Ohridski", 1 Kozjak Street,

BG-1407 Sofia, Bulgaria

E-mail: tsmarinova@yahoo.com

Acknowledgements

The investigation is supported by Project No 109/15. 04. 2011 of Sofia University "St. Kliment Ohridski".

Summary

Recent evidence indicates that some thymic cells produce NGF and express its receptors under both normal and pathological conditions, including autoimmune diseases. We have previously reported that the thymus of patients affected by Myasthenia gravis is characterized by elevated level of NGF, an endogenous polypeptide important in the cell biology of nervous and immune system. To evaluate the molecular mechanisms implicated in NGF action in human myasthenic thymus, it is necessary to identify the thymus structural organization and cellular expression of NGF and its receptors. Mast cells are actively involved not only in the physiological but also in the pathological events in the thymus. Here we investigated at light microscopic level the cellular distribution of NGF immunopositive and Annexin V reactive mast cells in the thymus of patients with Myasthenia gravis. Increased density of Tryptase immunopositive and NGF immunopositive mast cells, as well as double NGF/Tryptase and Annexin V/Tryptase positive mast cells were detected in pathological thymus. Our data provide original structural and immunocytochemical evidence for NGF immunoreactivity modulation of mast cells and raise the question about the role of NGF in the local auto- and/or paracrine regulatory processes during myasthenic transformation.

Keywords: thymic mast cells, NGF, Myasthenia gravis