



Growth Factors of the Peripheral Nervous System and Neurotrophin Family

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Message from the Guest Editor

The growth factors included in the family of neurotrophins (NGF, BDNF, NT3, NT4/5 and NT6—the latter only present in fish) constitute the paradigm of bioactive molecules with neurotrophic and neurotropic activities, especially in the peripheral nervous system. Almost 75 years have passed since the first member of the family (NGF) was discovered, and more than 30 years since the discovery of the high-affinity receptors that signal its biological functions. It was originally established that NGF was related to nociceptive primary sensory neurons and peripheral sympathetic neurons, BDNF to touch mechanoreceptive primary sensory neurons, NT3 to proprioceptive primary sensory neurons and to the enteric nervous system. But it was found that the relationships of the growth factors of this family with the peripheral nervous system are much more complex. Likewise, it is of the utmost interest to compile the therapeutic potential of this family of growth factors in the treatment of peripheral neuropathies and pathologies of the peripheral nervous system due to mutations in neurotrophins or their receptors, such as insensitivity to pain with anhidrosis.





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