## Thyroid stimulating hormone

Thyroid-stimulating hormone (also known as thyrotropin, TSH, or hTSH for human TSH) is a pituitary hormone that stimulates the thyroid gland to produce thyroxine (T4), and then triiodothyronine (T3) which stimulates the metabolism of almost every tissue in the body.

It is a glycoprotein hormone synthesized and secreted by thyrotrope cells in the anterior pituitary gland, which regulates the endocrine function of the thyroid.

In a study it aimed to present the potential role of thyroid hormones (TH) in the pathogenesis of glioblastoma multiforme (Glioblastoma). In first part of this presentation the effect of general homeostasis of TH on Glioblastoma formation and course was shown. Then the evidence concerning present state of the knowledge about active transport of TH to the brain, the role of iodothyronine deiodinase type 2 and 3 in the setting concentration of T3 in the brain and Glioblastoma cells, and finally knowledge about the role of genomic (TH nuclear receptors THRA and THRB) and non-genomic modes (membrane integrin receptor  $\alpha\nu\beta$ 3) of action of TH and its importance for Glioblastoma was outlined. The last part of this presentation was devoted to generally approved signalling pathways leading to the formation and the clinical course of Glioblastoma, showing at the same time evidence that each of the pathways is affected by particular TH actions. In conclusion it is suggested that TH is one of the pathogenetic factors for Glioblastoma and as such can have practical implications for the formation and course and treatment of this tumour <sup>1)</sup>.

1)

Nauman P. Thyroid hormones in the central nervous system (CNS) and their effect on neoplasm formation, particularly on the development and course of glioblastoma multiforme - research hypothesis. Endokrynol Pol. 2015;66(5):444-459. doi: 10.5603/EP.2015.0055. PubMed PMID: 26457500.

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