pituitary neuroendocrine tumor pathogenesis

Although the pathogenesis of pituitary neuroendocrine tumors is largely unknown, considerable evidence indicates that the pituitary tumorigenesis is a complex process involving multiple factors, including genetic and epigenetic changes.

Molecular Pathogenesis

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3871038/#:~:text=Although%20the%20pathogenesis%20of%20pituitary,including%20genetic%20and%20epigenetic%20changes.

The microenvironment of pituitary neuroendocrine tumors (PAs) includes a range of non-tumoral cells, such as immune and stromal cells, as well as cell signaling molecules such as cytokines, chemokines, and growth factors, which surround pituitary tumor cells and may modulate tumor initiation, progression, invasion, angiogenesis, and other tumorigenic processes. The microenvironment of PAs has been actively investigated over the last years, with several immune and stromal cell populations, as well as different cytokines, chemokines, and growth factors being recently characterized in PAs. Moreover, key microenvironment-related genes, as well as immune-related molecules and pathways, have been investigated, with immune checkpoint regulators emerging as promising targets for immunotherapy. Understanding the microenvironment of PAs will contribute to a deeper knowledge of the complex biology of PAs, as well as will provide developments in terms of diagnosis, clinical management, and ultimately treatment of patients with aggressive and/or refractory PAs [1)]

USP8 in pituitary neuroendocrine tumor

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Marques P, Silva AL, López-Presa D, Faria C, Bugalho MJ. The microenvironment of pituitary neuroendocrine tumors: biological, clinical and therapeutical implications. Pituitary. 2022 Feb 22. doi: 10.1007/s11102-022-01211-5. Epub ahead of print. PMID: 35194709.