

Propositions Belonging to the thesis

Novel Molecular Mechanisms of Resistance to Somatostatin Analog Treatment in Pituitary Adenomas

- 1) The evaluation of somatostatin receptor type 2 (sst₂) by a standard immunohistochemistry technique using the novel UMB-1 monoclonal antibody, represents a useful tool to identify acromegalic patients likely to be good responders to adjuvant therapy with “classical” somatostatin analogs (SSA). (*this thesis*)
- 2) In clinical practice we face patients harbouring GH-secreting adenomas, which are resistant to SSA treatment despite a positive staining for sst₂. (*this thesis*)
- 3) The heterogeneous co-expression of different somatostatin receptor subtypes in pituitary adenomas, affects the responsiveness to SSA treatment in the different adenoma histotypes. (*this thesis*)
- 4) β-arrestins are critical effectors in the regulation of SSTR desensitization/trafficking processes, are heterogeneously expressed in pituitary adenomas, and their variable expression may affect responsiveness to treatment with “classical” SSA in acromegalic patients. (*this thesis*)
- 5) Exposure to a high level of glucocorticoids results in the down-regulation of sst₂ expression in corticotroph adenomas, as well as in the modulation of β-arrestin expression. (*this thesis*)
- 6) G-protein coupled receptors (GPCRs), also known as seven transmembrane receptors, regulate virtually all known physiological action in humans. In terms of clinical medicine, they are extraordinarily important because more than half of all drugs used in the clinics are drugs that target these receptors either directly or indirectly. (*Robert J. Lefkowitz - Nobel Prize Lecture 2012*)
- 7) Whenever a theory appears to you as the only possible one, take this as a sign that you have neither understood the theory nor the problem which it was intended to solve. (*Karl Popper*)
- 8) Classic oncogene mutations are not encountered in pituitary tumors. (*Melmed S. 2015*)
- 9) Science is the captain, and practice the soldiers. (*Leonardo da Vinci*)
- 10) A book can never be anything more than the impression of its author’s thoughts. The value of these thoughts lies either in the matter about which he has thought, or in the form in which he develops his matter -that is to say, what he has thought about it. (*Arthur Schopenhauer*)
- 11) Like great works, deep feelings always mean more than they are conscious of saying. (*Albert Camus*)