

Stellingen

behorende bij het proefschrift

Metabolic actions of the ghrelin system

1. The combined administration of acylated and unacylated ghrelin strongly improves insulin sensitivity. (this thesis)
2. Acylated and unacylated ghrelin should be considered as separate hormones able to (independently) modify hepatic glucose output. (this thesis)
3. There is indirect but strong evidence for the existence of a receptor that selectively binds unacylated ghrelin. (this thesis)
4. Liver clearance plays a role in the regulation of acylated ghrelin levels (released to the systemic circulation). (this thesis)
5. Unacylated ghrelin potently enhances the glucose-induced insulin secretion in the portal vein. (this thesis)
6. A heterotrimeric GTP-binding protein (G protein)-coupled receptor (GPC-R) of the pituitary and hypothalamus was cloned and was shown to be the target for Growth Hormone Secretagogues (GHSs). The molecular characterization of this GPC-R provides evidence for the presence of an endocrine pathway distinct from that described for GHRH and somatostatin that contributes to the control of GH release and supports the notion that the GHSs mimic an undiscovered hormone. (Howard A *et al.* Science 1996, 273:974-977)
7. Direct Growth Hormone Secretagogue Receptor-mediated effects are involved in the induction of the metabolic alterations as well as subsequent changes in body composition, which are characteristic of the insulin resistance syndrome. (Muller AF *et al.* J Clin Endocrinol Metab 2001, 86:590-593)
8. "Strange stories are related in the papers of a wonderful preparation by administering which a patient is affected just long enough and just powerfully enough to undergo a surgical operation without pain" (Boston Medical and Surgical Journal, October 21, 1846). The greatest gift of medical science to humanity was called *anesthesia*. (Kavanagh MF. California and Western Medicine 1928, XXIX: 10-12)

9. The reverse pharmacology approach for drug discovery is a unique example of “bench to bedside”. (Smith R *et al.* Endocrine Reviews 2005, 26:346-360)
10. Although great advances have been made in computer modeling and cell cultures, animal research remains essential to medical progress: seven of the last ten Nobel Prizes in medicine have relied at least in part on animal research. (Foundation for Biomedical Research)
11. The fear for science is mostly due to ignorance about what science is. Regrettably, scientists do a little to explain it, and often faintly. It's not people who must be interested in science, it's science that should become interesting for people. (Luca Cavalli-Sforza)

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