Ghrelin in feeding: new insights into its role and the neurocircuits involved

“Bon appétit!” is what French people say to each other as they start eating a meal, translated as “have a good appetite”. But what is really meant by the term “appetite”? From an evolutionary perspective, appetite has been key for survival with especially the hedonic aspect of appetite driving us to over-eat to store energy for future famines. However, in our modern society where food is abundant, eating for pleasure can still drive over-consumption of food and has become a major cause of the obesity pandemic. Ghrelin, secreted by the stomach, is the only hormone known to stimulate feeding and is therefore of great interest for scientists in search for new pharmacotherapies against obesity. This thesis clarifies which valence signal ghrelin carries in the brain and identifies the hypothalamic supramammillary nucleus and the lateral parabrachial nucleus as novel targets for the feeding effects of ghrelin. The overarching goal of the work presented herein is to broaden our knowledge of the neuronal substrates recruited by ghrelin for its feeding effects to provide new targets for the treatment of obesity and other eating disorders.

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