

ABSTRACT

Neuropeptide Y (NPY) is a 36-amino acid member of the NPY family. Its biosynthesis occurs in the hypothalamus and its expression is also in adipose tissue. NPY is a ubiquitous peptide that leads to the maintenance of homeostasis; NPY is also one of the most significantorexigenic hormones. NPY utilizes G-protein coupled receptors Y1, Y2 and Y5 for its food intake regulation; owing to serious side effects of currently used anti-obesity drugs, the ligands of these receptors (Y1R and Y5R antagonists and Y2R agonists) are considered as targeting molecules for a new therapeutic strategy for obesity treatment. This work is focused on the characteristics of NPY as anorexigenic agent and the possibility of using NPY-based drugs for obesity treatment.