

The relative potency of bombesinlike peptides was reported using different biological systems. Short-chain analogues are significantly more potent than bombesin.

3.10 Endorphins and Enkephalins

A group of peptides possessing part of the structure of beta-lipotropin (beta-LPH, which is a 91-amino acid protein) have morphine-like properties.

The active endorphins and enkephalins are:

- (a) the C-fragment (beta-endorphin, residues 61-91 of beta-LPH) isolated from the pituitary and also present in the brain;
- (b) the C-fragment [beta-LPH 61-87] present in the pituitary;
- (c) gamma-endorphin [beta-LPH 61-77];
- (d) alpha-endorphin [beta-LPH 61-76] extracted from hypothalamic and pituitary tissues;
- (e) Met-enkephalin [beta-LPH 61-65]; and
- (f) Leu-enkephalin, which is localized in the intermediate and anterior pituitary lobes only.

These peptides specifically displace bound naloxone from brain opiate receptors. Beta-endorphin is more potent than the short peptides. Additionally, the peptides elicit a number of morphine-