

PEPTIDE CONCEPTS WITH EMPHASIS ON THE BLOOD-BRAIN BARRIER

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All the principles we have introduced into the field of biologically active peptides are considered so obvious now that it is difficult to imagine the long time it took for their general acceptance. These include the following: (1) hypothalamic peptides can act up as well as down; (2) peptides in the periphery can act on the brain, (3) one peptide can exert more than one action, (4) peptide actions can persist longer than their half-lives in blood, (4) increased peptide doses can result in decreased effects, (5) the brain contains antiopiate peptides, (6) perinatally administered peptides exert long-lasting effects, (7) there is a specific mu-opiate receptor peptide ligand, (9) a peptide's name does not restrict its actions, and (10) peptides can cross the blood-brain barrier (BBB). Our most recent studies concern the mechanism by which a peptide crosses the microvascular endothelial cells composing the BBB without being degraded.