

provide a better understanding of the mechanisms governing the systems on which they act. These types of bioregulators are beginning to be used clinically for replacement therapy and in some tests.

The numerous peptides that have been identified in the central nervous system exert gastrointestinal and behavioural effects as well as modify endocrine function. Most of these peptides have been isolated and characterized from discrete anatomical areas on the basis of well-defined biological activities. Thyrotropin-releasing factor (TRF), luteinizing-hormone-releasing factor (LRF), and somatostatin (SS) were characterized as being secreted from the hypothalamus on the basis of their ability to influence certain hormones. Immunofluorescent assay, immunoreactivity, and/or biological activity revealed TRF and SS to be distributed throughout the brain and the gastrointestinal tract. These biologically active peptides have emerged as a class of new extracellular messenger substances which may play an important role in the transmission of information and in the regulation of physiological mechanisms.

With the development of Merrifield's solid-phase approach to peptide synthesis, duplication of a given structure can usually be accomplished in a few days. New techniques of analysis and isolation, such as reverse-phase high pressure liquid chromatography (RPHPLC), allow precise evaluation of a peptide's