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Letter from the Invited Editor

This issue of the EPITHEORESE KLINIKES FARMAKOLOGIAS AND FARMAKOKINETIKES, INTERNATIONAL EDITION includes a selection of articles presented at the BIOMED meetings on Drug Discovery and Design held in Patras, Greece between 1993-1995. The purpose of the three BIOMED meetings was to initiate and establish collaboration in Medical Science and Technology with well known European groups working on peptide hormones. Scientists of related disciplines from Greece, UK, Portugal, Latvia, Estonia, Czech Republic, Slovenia, Romania, Bulgaria and Canada have created an International European network dealing with amino acids, peptides, proteins and methods for drug design, particularly for treating hypertension and other cardiovascular diseases. While the main emphasis on the meetings was medical applications of the peptide hormones, research activities covered their synthesis, function, structure-activity relationships, conformational analysis, molecular modeling and biology.

Peptide research on drug discovery and design is an important field in the development of peptide mimetics, with the potential to generate important new drugs. Peptides control numerous body processes, and, as such, represent an untapped wellspring of new drugs for treating a variety of diseases. Therefore, the challenge of this decade is to produce small molecules which mimic peptides and proteins, in order to overcome the ineffectiveness of peptides as drugs when administered orally. The use of small molecule combinatorial libraries is expected to have a tremendous impact on drug discovery for both development and optimization of new leads.

The target of this research is to achieve the representation of the active sites of peptides and proteins in the form of orally active small-molecule mimetics that are inexpensive to manufacture and convenient to administer. In this regard, the number of related scientific meetings held annually towards this achievement has increased dramatically the last few years. The titles of such conferences are descriptive of the activity and the great interest generated in the pharmaceutical industry and cover the following subject areas: Artificial Antibodies and Enzymes, Epitope Identification and Mimetics, Computer Aided Pattern Recognition for Drug Development, Rational Drug Design through Structure-Based Design and Development, Chemical and Biomolecular Diversity through

Combinatorial Libraries, Small-Molecule Libraries for Drug Discovery and High Through-put Screening for Drug Development.

The three workshops took place as part of the International BIOMED Research Program on Biological and Medical Aspects of Amino Acids, Proteins and Peptides (1993-1995), sponsored by the European Community and organized by the Department of Chemistry, University of Patras, Greece. The European Community provided funds to cover registration, travel and accommodation expenses for a number of special participants. The organizer of the meetings uses this Editorial to express his gratitude to the participants and also to those who assisted in their preparation. We thank the Science Park of Patras for supporting this research and for its major undertaking of bringing together university-based research and the pharmaceutical industry. Special thanks are addressed to Mrs Loukiani Golfinopoulou for typing work, to Dr Thomas Mavromoustakos for his help in editing the manuscripts, to Kostas Alexopoulos, Theodoros Tselios, Panagiota Roumelioti for their significant contribution in the publication of this edition and to Elizabeth Matsoukas for continuously being a driving force in this drug design endeavour.

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