

Letter from the Invited Editor

This issue of the EPITHEORESE KLINIKES FARMAKOLOGIAS KAI FARMAKOKINETIKES, INTERNATIONAL EDITION includes updated articles presented at the 1st BIOMED meeting on Drug Discovery and Design held in Patras, Greece 14-16 October 1993. The purpose of the BIOMED 93 meeting was to initiate and establish collaboration in Medical Science and Technology with other well known European groups working on peptide hormones. Scientists or related disciplines got together in Patras to exchange their experiences in the field of aminoacids, peptides and proteins focusing on their biological and medical applications. Peptide research focusing on Drug Discovery and Design is an important field in the development of "peptide mimetics" with the potential to be used as a new generation of important drugs. Peptides control numerous body processes. As such, peptides potentially 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 reproduce biological actions of peptides and proteins in order to overcome ineffectiveness of peptides as drugs when taken orally. Small molecule mimetic drugs offer the potential to meet these demands, particularly as newer approaches emerge that simplify the development of such compounds. The use of small molecule combinatorial libraries is expected to have tremendous impact on development and optimization of new drug leads. Structure-based drug design is also a critical strategy for which significant advances are taking place. Topics discussed were Amino-acids, Peptides, Proteins and methods for Drug Design in particular for treating hypertension and other cardiovascular diseases. Many other interesting topics on Synthesis, Function, Structure-Activity Studies, Conformation and Molecular Dynamics were also discussed. Predominant areas of interest were namely Synthesis, Conformation and Biology and their impact on medicine.

Regarding this Technology, the vision is that one day it will be possible to represent the active sites of all peptides and proteins in the form of orally active small molecule mimetics which are inexpensive to manufacture and convenient to administer. At the present time this goal is still a long way off, although the first steps toward this achievement have clearly begun. For example, the number of scientific meetings in this area has increased dramatically the last year. In 1995, several conferences were held in 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-Purt Screening for Drug Development. The titles of these conferences are descriptive of the activity in this pharmaceutical field. The emphasis was largely based on exploiting molecular diversity, although computational chemistry and molecular modelling leading to structure-based drug design also gained prominence.

The workshop took place as part of the International BIOMED Research Program (1993-1995), sponsored by EC and organized by the Department of Chemistry, University of Patras, Greece, on Biological and Medical aspects of Aminoacids, Peptides and Proteins. EC provided funds to cover registration, travel and accommodation expenses for a limited number of special participants. Other young scientists for whom the Euroworkshop was unable to provide support attended the meeting as ordinary participants. The program was arranged to allow free time for informal discussion. The organizer of this meeting uses this foreword to express his gratitude to the participants and also those who assisted during its preparation and during the symposium itself. I also thank the Science Park of Patras for supporting this meeting and for major undertaking to bring together University Medical Findings with Pharmaceutical Industry. Special thanks are addressed to Dr Thomas Mavromoustakos, Dr Charalampos T. Plessas and Professor Stavros T. Plessas for their help to edit and publish the Proceedings of this workshop.

Last but mostly I would like to thank European Commission, Section of Life Sciences and Biomedical Technology, for supporting this Research and making this workshop possible.

Professor John Matsoukas

*Department of Chemistry, University of Patras,
265 00 Rion, Patra, Greece*