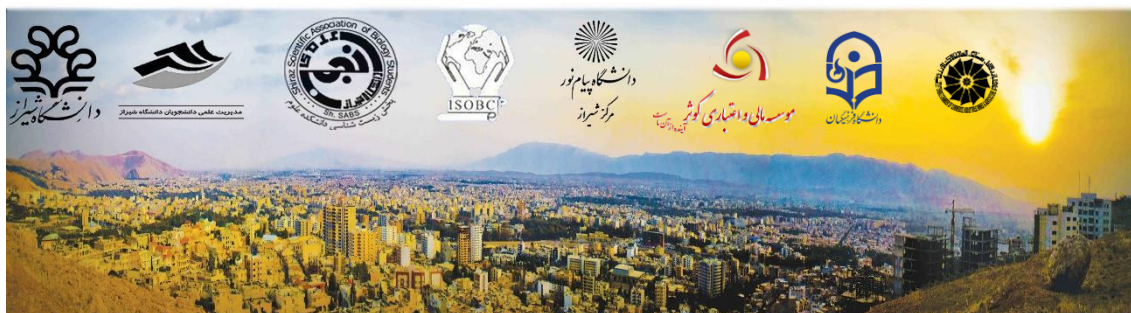


Conference Topics:

- Application of Enzymes in Medicine and Industry
- Quantitative and Analytical Proteomics
- Enzyme Engineering
- Protein Chemistry
- Protein Folding and Dynamics
- Bioactive Peptides and their Applications
- Proteins and Metabolic Diseases
- Drug Proteins and Protein Biomarkers
- Advanced Technologies in the Field of Protein Research and Development
- Application of Proteins in Nanotechnology
- Protein-Drug and Protein-Protein Interactions
- Innovation in Protein Purification and Quantification
- Bioinformatics
- Plant Proteins and Associated Diseases





Protein and Peptide Therapeutics; Current and Future

Proteins and peptides play significant roles in a variety of physiological and pathological processes and modulate a number of cellular functions. Recently, protein and peptide drugs have been successfully applied in treating various human illnesses including diabetes, myocardial infarction, cerebral apoplexy, congestive heart failure, multiple sclerosis, neutropenia, dwarfism, rheumatoid arthritis, thrombocytopenia, anemia, hepatitis, asthma, Crohn's disease and different cancers [1-3]. Accordingly, the protein and peptide based therapeutics offer a multi-billion dollar market. Currently, there are about 60-70 approved peptide drugs on the global market, with 100-200 more in clinical trials, 400-600 in pre-clinical studies and possibly hundreds if not thousands in the stage of laboratory assessments[4]. Also, the number of peptide based therapeutics is increasing significantly with an annual growth rate between 7.5% and 10%. On the other hand, approximately 130 protein drugs have been entered into the global clinical market so far, and nearly 400 types of protein drugs are in the process of development. Moreover, the current continuous annual growth rate of protein drugs has been indicated to be 13% [4, 5]. Overall, at the present time at least 170 protein and peptide drugs are in use and research continues to uncover novel proteins and peptides with potential applications in the prevention of different human disorders [6]. Although the market of protein and peptide therapeutics is still in its infancy, scientists believe that it will make up the largest growth segment of the pharmaceutical industry in the future. In fact, the increased acceptance by physicians, pharmaceutical corporations and patients will help this market to possess a long and secure future.

During 2010, about 60 peptide drugs generated annual sales of around 13 billion USD [4]. Also, during this year, the annual sales of all approved protein/peptide based therapeutics reached about 100 billion USD which approximately covered 15.3 % share of the global pharmaceutical market with a size of 650 billion USD [2]. In fact, the sale of protein/peptide drugs in 2010 was about 1.4 times higher than the total sales of oil and oil products by our country [7]. Also, the global market for only protein based drugs is estimated to reach 158.2 USD by 2015 which is yet higher than the economic value of all current exports of Iran [8]. With the significant rise in the number of researchers during the past decades in our universities, doing jobs in the field of protein and peptide research and development, Iran has the opportunity to significantly contribute to the global market of protein and peptide drugs in the near future. If we plan to receive only 2% of the current market in the field, it offers a significant portion of new jobs to our educated youths and can be considered an important progress in our long national desire for shaping an oil independent economy.



The conference on protein and peptide sciences (PPS) is a national event that brings together the researchers in the field to discuss the latest scientific findings. In fact, the conference is intended to provide a format for exchanging ideas and information in related to current studies on protein and peptides.

This conference includes both lecture and poster presentation sessions, covering the latest findings across many topics in protein and peptide sciences including: Application of Enzymes in Medicine and Industry - Quantitative and Analytical Proteomics - Enzyme Engineering - Protein Chemistry - Protein Folding and Dynamics - Bioactive Peptides and Their Applications - Proteins and Metabolic Diseases - Drug Proteins and Protein Biomarkers - Advanced Technologies in the Field of Protein Research and Development - Application of Proteins in Nanotechnology - Protein-Drug and Protein-Protein Interactions - Innovation in Protein Purification and Quantification - Bioinformatics - Plant Proteins and Associated Diseases.

Also four scientific workshops in the related fields will go on in parallel to the main event. We hope that this PPS conference can create a forum for useful dialogues between Iranian researchers committed to protein and peptide sciences.

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