

Theme: Current Trends and Challenges of Protein Dynamics

## Summary:

Protein engineering is the process of developing useful proteins with much research taking place into the understanding of protein folding and recognition for protein design principles. The main theme of the conference is Current Trends and Challenges of Protein Dynamics.

The Protein Engineering is now gained approval with a market size estimated at some \$33 billion in 2004 and reached \$70 billion by the end of the decade. In 2012, the market is \$56 billion and increased to 168 billion in 2017, at a Compound Annual Growth Rate (CAGR) of 10.9% from 2012 through 2017. On the basis of products, the protein crystallization market has segments such as reagents/consumables and instruments, which are accounted for 85% of the protein crystallization & crystallography product market. It is expected to grow at a high CAGR of 11% over the forecast period. The global market was valued at \$775 million in 2013 and is expected to reach \$1,253 million by 2018.

For more details please visit: <http://protein-engineering.conferenceseries.com/>

## Importance & Scope:

Protein engineering is the design of new enzymes or proteins with new or desirable functions. It is the process of developing useful proteins with much research taking place into the understanding of protein folding and recognition for protein design principles. Protein engineering has for decades been a powerful tool in biotechnology for generating vast numbers of useful enzymes for industrial applications.

There will be challenging topics related to the protein dynamics in the field of protein engineering. In recent years, great improvements have been made in all the parts of non-targeted mass spectrometry based proteomics including sample preparation, data acquisition, data processing and analysis.

## Why Chicago?

Chicago is the third most populous city in United States. The city is an international hub for finance, commerce, industry, technology, telecommunications, and transportation, with O'Hare International Airport being the busiest airport in the world. The city has numerous convention centers and venues for trade events, among them the Doubletree by Hilton Hotel is the place where we accommodate.

The study and research of the protein engineering is top in USA when compared to the Europe and Asia. Protein Engineering related companies and products are mostly found in Chicago. The well-developed technologies related to protein are used in universities in Chicago.

## Conference Highlights:

- Protein Engineering
- Proteins
- Protein Synthesis and Folding
- Protein Modification, Targeting and Degradation
- Mass Spectrometry in Proteome Research
- Proteomics & bioinformatics
- Genomics

Systems Biology

Applications of Proteins

Protein Dietary Supplements

Recombinant Protein Expression

Structure and Function of Proteins

Physiological Metabolic Pathways

Pharmacogenomics and Pharmacoproteomics

## Why to attend???

**Meet Your Target Market** with members from around the world focused on learning about Protein Engineering, this is your single best opportunity to reach the largest assemblage of eminent persons and participants from different countries. Conduct symposia, workshops and distribute information related to your field to meet with current and potential customers, make a splash with a new product line, and receive name recognition at this 3-day event. World-renowned speakers, the most recent techniques, products and the newest technologies in Protein Engineering fields are hallmarks of this conference.

A Unique Opportunity for Advertisers and Sponsors at this International event: <http://protein-engineering.conferenceseries.com/Sponsorship.pdf>

## Major Associations in Chicago

- Chicago Biomedical Consortium
- Academy of Nutrition and Dietetics
- Chicago Dietetic Association

## Major Associations in USA

- Federation of American Societies for Experimental Biology
- American Society for Microbiology
- American Society for Cell Biology (ASCB)

### Major Associations around the Globe

- The Antibody Society
- African Society for Bioinformatics and Computational Biology
- Biochemical Society
- Royal Society of Chemistry
- International Federation for Cell Biology

### Statistical Analysis of Associations

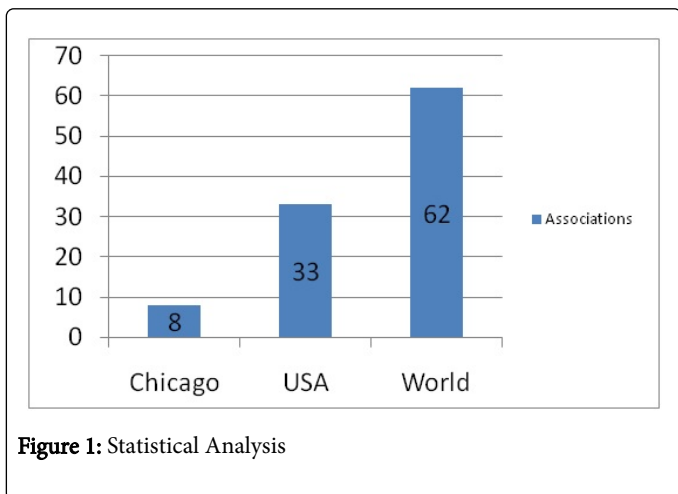


Figure 1: Statistical Analysis

### Target Audience:

World class Scientists, biologists, bioinformaticians, geneticist, researchers, academicians, principal investigators, CEO of companies, directors of laboratories and institutions

### Target Audience:

- Companies 40%
- Academia 60%

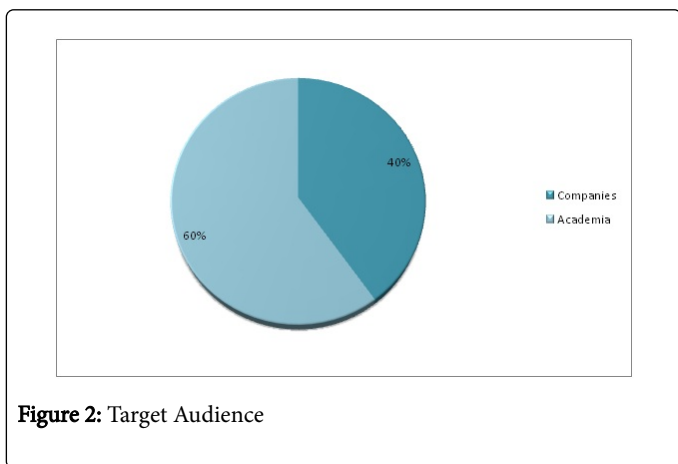


Figure 2: Target Audience

### Top Universities in Chicago:

- University of Chicago
- University of Illinois at Urbana-Champaign
- Northwestern University
- University of Illinois at Chicago
- Northern Illinois University

### Top Universities in USA:

- Princeton University
- Harvard University
- Yale University
- Columbia University
- Stanford University

### Top Universities in Globe:

- California Institute of Technology (Caltech)
- University of Oxford
- Stanford University
- Massachusetts Institute of Technology (MIT)
- Princeton University
- University of Cambridge
- University of California, Berkeley

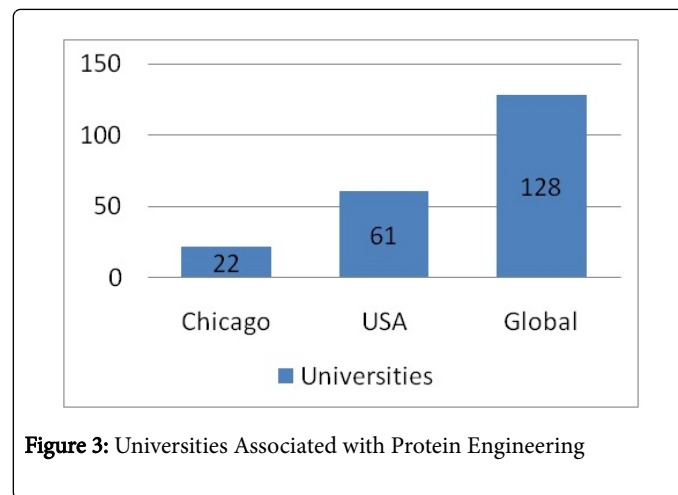


Figure 3: Universities Associated with Protein Engineering

### Market value on Protein Engineering

The global market was estimated at \$100.1 billion in 2012, growing at a CAGR of 10.94% from 2012 to 2017 and estimated to be worth \$168 billion by 2017(1). North America is the major market, accounting for 42% of the market; it is expected to grow at a CAGR of 10%. Asia, however, is the fastest growing region with estimated CAGR of 13.5%.

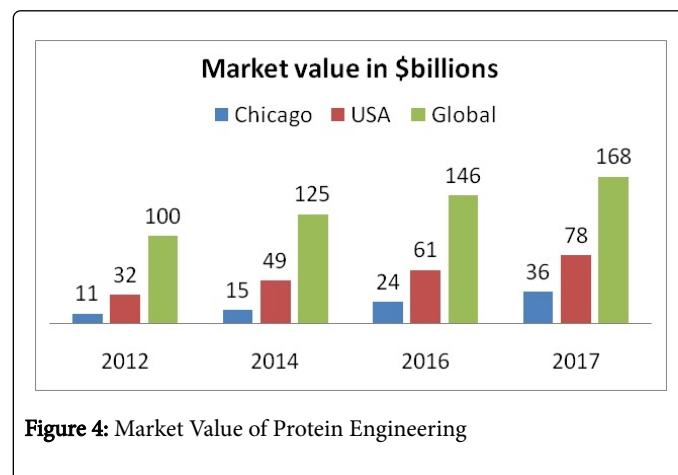
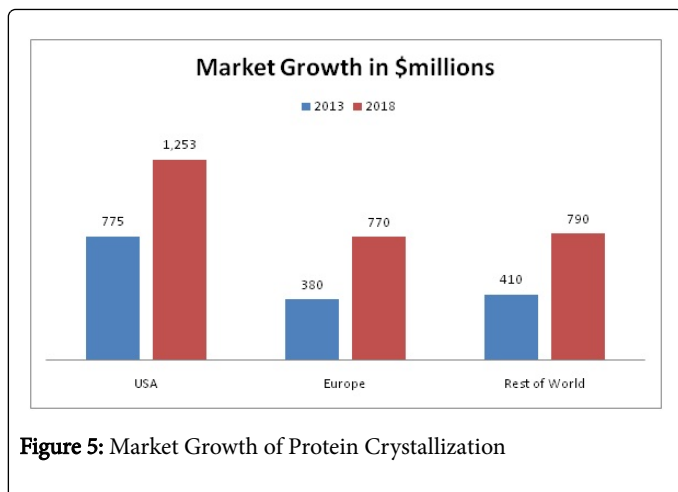


Figure 4: Market Value of Protein Engineering

Source: Reference1

## Market Growth of Protein Engineering from 2013-2018

Protein crystallization is the most crucial and the largest segment, and it accounted for 47% of the market in 2013. On the basis of products, the protein crystallization market has segments such as reagents/consumables and instruments. Reagents/consumables accounted for 85% of the protein crystallization & crystallography product market. It is expected to grow at a high CAGR of 11% over the forecast period. The global market was valued at \$775 million in 2013 and is expected to reach \$1,253 million by 2018.



## Products manufactured by the Companies in USA:

**Life Technologies**- Antibodies & Immunoassays, DNA & RNA - Purification, Quantitation & Detection, PCR, Sequencing, synthetic biology

**Bio-Rad Laboratories**- Amplification / PCR, Antibodies, Nucleic Acid Sample Preparation and purification, Protein Interaction Analysis

**Biomax Informatics**- BioXM Knowledge management Environment, BioRS Integration and Retrieval System, Pedant-Pro Sequence Analysis Suite

**Origene**- cDNA clones, ELISA kits, ELISA antibodies

**DNASTAR**- DNA sequence assembly and analysis, including Sanger and sequence assembly and gene expression analysis

## Products manufactured by the Companies in Globe:

**Genencor**- Enzymes biotechnology, Formulations, Industrial Biotechnology, Biochemistry, Molecular Biology, Protein Engineering

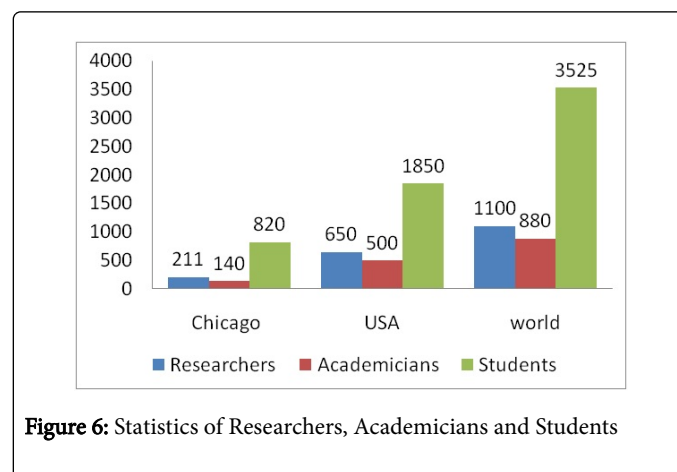
**AB SCIEX**- Mass spectrometry and liquid chromatography, Pharmaceutical, drug discovery, proteomics, lipidomics and metabolomics, Food safety & environmental analysis

**ProGenosis**- Protein engineering & expression, Epitope mapping, Antigen development, Protein interaction

**Genostar**- sequence assembly, mapping, annotation transfer and identification of protein domains, comparative genomics, structural searches, metabolic pathway analysis

**SimBioSys**- eHITS software for molecular docking (flexible ligand docking & fast pre-docking), pharmacophoremodelling, de novo design and retrosynthetic analysis software tools

## Statistics of Researchers, Academicians and Students working on Protein Engineering



## References:

- <http://www.marketsandmarkets.com/PressReleases/protein-antibody-engineering.asp>
- <http://www.marketsandmarkets.com/Market-Reports/protein-antibody-engineering-market-898.html?gclid=CPLe7aSHqsECFVIqjgodjawAjQ>
- <http://www.uv.es/uvweb/college/en/research-tech-transfer/uv-research/news-1285855271161.html>
- [http://www.marketsandmarkets.com/Market-Reports/protein-crystallization-market-147057058.html?gclid=ClIS\\_pyGqsECFVgnjgodp7sA4w](http://www.marketsandmarkets.com/Market-Reports/protein-crystallization-market-147057058.html?gclid=ClIS_pyGqsECFVgnjgodp7sA4w)