

(Theme: Emerging trends with new innovation in proteomics and bioinformatics)

## Summary:

Comparative proteomics is a powerful analytical method for learning about the responses of biological systems to changes in growth parameters. To make confident inferences about biological responses, proteomics approaches must incorporate appropriate statistical measures of quantitative data. In the present work we applied microarray-based normalization and statistical analysis (significance testing) methods to analyze quantitative proteomics data generated from the metabolic labeling of a marine bacterium. Quantitative data were generated for 1,172 proteins, representing 1,736 high confidence protein identifications (54% genome coverage). To test approaches for normalization, cells were grown at a single temperature, metabolically labeled with (14)N or (15)N, and combined in different ratios to give an artificially skewed data set. Inspection of ratio versus average (MA) plots determined that a fixed value median normalization was most suitable for the data.

Proteomics market analysis has its growth in case of Proteomics equipment's and technologies this has made enormous progress in past few years, and according to the Market Research, value of proteomics market was \$9.3 billion in 2012, and is expected to reach \$21.63 billion by 2018, at a Compound Annual Growth Rate of 15.1%. Europe accounts for the second-largest share in the global proteomics market, in which Spain is one of the leading contributing states. Valencia is considered to be a hot spot for various researches which are carried out in the field of Proteomics.

For more details please visit: <http://proteomicsconference.com/>

## Importance & Scope:

Proteomics is the study of all or part of the protein complement of genes in an organism, often involving the analysis of complex protein/peptide samples. It is a natural consequence of the huge advances in genome sequencing, bioinformatics and the development of robust, sensitive, reliable and reproducible analytical techniques.

Bioinformatics has recently emerged as a discipline straddling the established fields of biology and computer science. It is integral to modern biological research, and as a specialist pursuit. The conference will provide an international forum for discussing the latest developments in the field of Proteomics, Bioinformatics and related fields. These events aim to create a platform for participants to gain hands-on experience, and an opportunity to ask questions and discuss problems with experts in the respective fields. Proteomics and Bioinformatics covers complementary disciplines that hold great promise for the advancement of research and development in biological systems, software development, techniques, drug design, and so on.

## Why Valencia?

As current study results on Proteomics have been published. According to news reporting originating in Valencia, Spain, by News Rx journalists, research stated, "The majority of biological functions of any living being are related to Protein-Protein Interactions (PPI). PPI discoveries are reported in form of research publications whose volume grows day after day.

"The news reporters obtained a quote from the research from Valencia Polytechnic University, "Consequently, automatic PPI information extraction systems are a pressing need for biologists. They are mainly concerned with the named entity detection module of PPIES (the PPI information extraction system we are implementing) which recognizes twelve entity types relevant in PPI context, so by this we can say that Proteomics conference can be conducted in Valencia, Spain.

## Conference Highlights:

- Proteomics from Discovery to Function
- Mass Spectrometry in Proteome Research
- Analytical Genomics, Bioinformatics and Data Analysis
- Molecular Modeling and Drug Design
- Systems Biology
- Machine Learning in Bioinformatics
- Functional Genomics
- Recent Advancements in Proteomics
- Recent Advancements in Bioinformatics
- Molecular Evolution and Phylogeny
- Programming Languages and Software Tools for Analysis

## Why to attend???

Meet the eminent members from around the world focused on learning about Proteomics and Bioinformatics; this is the single best opportunity to reach the largest assemblage of participants from different research areas of Proteomics community. Conduct Workshops, Symposiums, distribute information, meet with current research trends, make a splash with new technologies, and receive name recognition at this 3-day event. World-renowned speakers, the most recent techniques, tactics, and the newest updates in Proteomics and Bioinformatics fields are hallmarks of this conference.

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

## Major Proteomics Societies and Associations around the Globe

- Human Proteome Organization
- International Society for Computational Biology
- Association for Mass Spectrometry Applications to the Clinical Lab (MSACL Inc.)
- Indian Society of Mass Spectrometry (ISMAS)

- Chinese Mass Spectrometry Society(CMSS)

**Major Proteomics Societies and Associations in Europe**

- European Proteomics Association
- Italian Proteomic Association
- Norwegian Proteomic Society
- Spanish Proteomics Society

**Statistical Analysis of Societies and Associations**

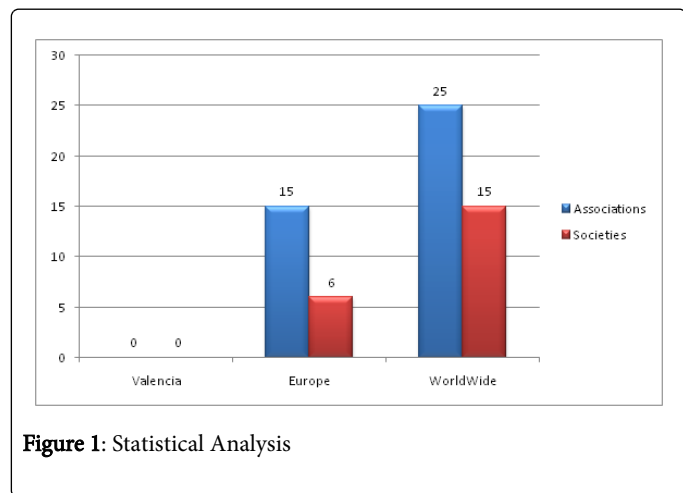


Figure 1: Statistical Analysis

Source: Reference1

**Target Audience:**

Proteomics technology providers, Proteomics equipment manufacturers and dealers, Proteomics laboratory service providers, Proteomics database and software providers, Biopharmaceutical (drug design and discovery) companies, Proteomics research companies and institutes, Proteomics associations.

**Target Audience:**

- Companies: 40%
- Academia: 60%

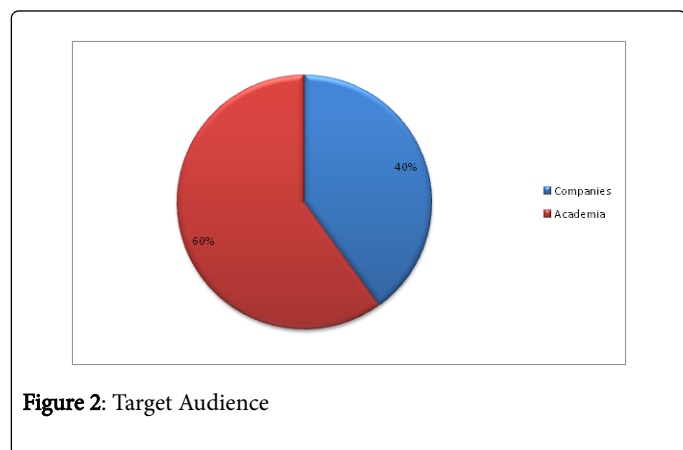


Figure 2: Target Audience

Source: Reference2

**Top Universities in Valencia:**

- University of Valencia
- Universidad Catolica de Valencia
- Valencian International University

**Top Universities in Spain:**

- University of Barcelona
- Universitat Pompeu Fabra
- Universidad Complutense de Madrid
- Universidad Autonoma de Madrid
- CEU Cardenal Herrera University

**Top Universities in Europe:**

- European university Switzerland
- Vilnius University
- Uppsala University

**Top Universities in Worldwide:**

- Harvard University
- University of Oxford
- Stanford University
- University of Cambridge

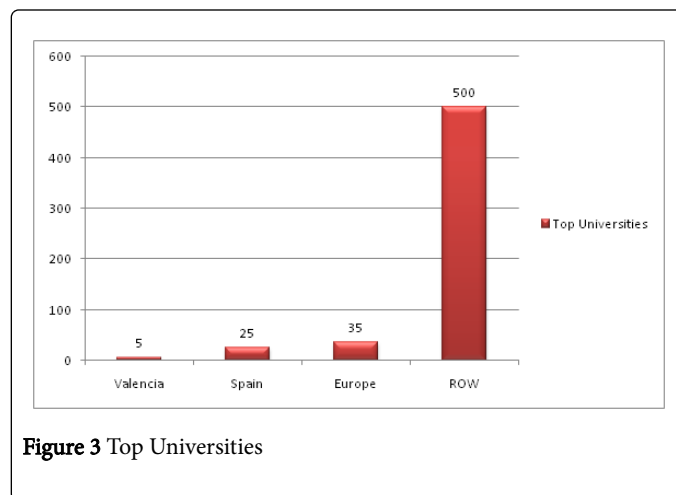


Figure 3 Top Universities

Source: Reference3

**Companies Associated with Proteomics and Bioinformatics**

- Cultek
- Integromics
- NuSep
- Promega
- AB SCIEX

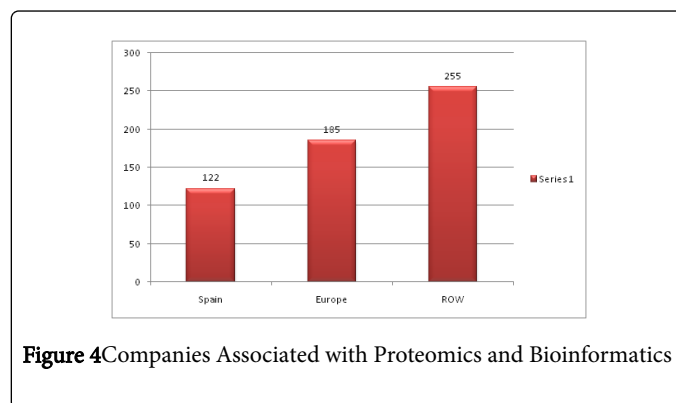


Figure 4 Companies Associated with Proteomics and Bioinformatics

## Glance at Market of Proteomics:

The global market for proteomics is expected to increase from \$6.7 billion in 2008 to an estimated \$7.9 billion in 2009 and \$19.4 billion in 2014, for a compound annual growth rate (CAGR) of 19.7%.

Proteomics equipment was valued at \$4.1 billion in 2008 and an estimated \$4.8 billion in 2009. This is expected to increase to \$13.0 billion in 2014, for a CAGR of 22%.

Proteomics technologies were worth \$1.3 billion in 2008 and an estimated \$1.5 billion in 2009. This segment is expected to increase at a CAGR of 13.9% to reach \$2.9 billion in 2014.

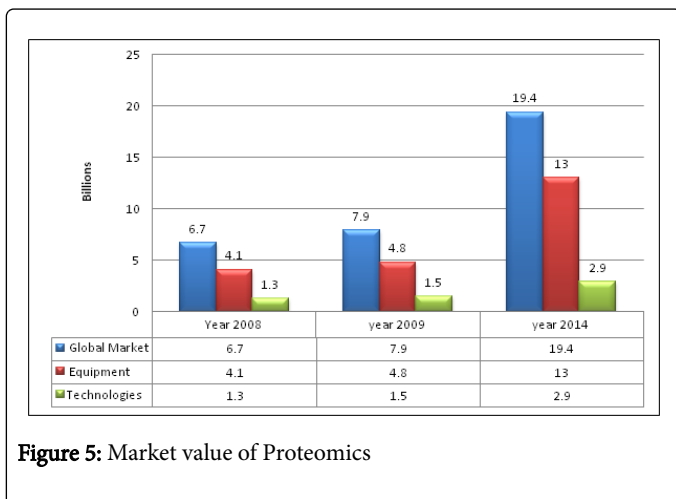


Figure 5: Market value of Proteomics

## Market growth of Proteomics:

The global proteomics market is driven by the increase in the number of diseases and the population suffering from these diseases. The value of the proteomics market was \$9.3 billion in 2012, and is expected to reach \$21.63 billion by 2018, at a CAGR of 15.1%.

The report analyses the market in terms of product type such as proteomics instrumentation technologies, proteomics reagents, and proteomics services. The market segments experienced a positive growth till 2012, owing to an increased awareness for sophisticated diagnostic techniques. The proteomics instrumentation technologies

segment accounted for the largest share of 40% in the overall market, followed by the reagents market. The proteomics services market is expected to grow at the fastest CAGR of 15.1%, during the forecast period.

In North America, the funds for innovative proteomics technologies from various organizations, increasing agreements and collaboration among large companies, and the increasing R&D investments are the major driving factors for the proteomics market.

Europe accounts for the second-largest share in the global proteomics market. The European governments are allocating thematic priorities to nurture the growth of the market. Numerous organizations are putting in efforts to promote the growth of the proteomics market. Huge capital investments are required for proteomics research.

## Statistics of Researchers, Academicians and Students working on Proteomics Research

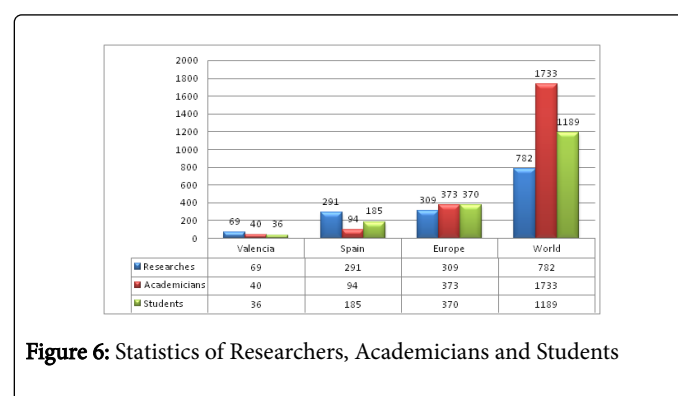


Figure 6: Statistics of Researchers, Academicians and Students

## References:

- <http://www.bionity.com/en/companies/countries/spain/>
- [https://www.linkedin.com/vsearch/c?type=companies&keywords=proteomics&orig=GLHD&rsid=&pageKey=nprofile\\_view\\_nonself&trkInfo=tarId%3A1410774665440&search=Search](https://www.linkedin.com/vsearch/c?type=companies&keywords=proteomics&orig=GLHD&rsid=&pageKey=nprofile_view_nonself&trkInfo=tarId%3A1410774665440&search=Search)
- <http://www.bccresearch.com/market-research/biotechnology/proteomics-technologies-markets-bio034b.html>