Is it Chemistry or Biology – or is it Both?

Sarah Thomas, Editor
Chemical Communications
Molecular BioSystems
“...many of chemistry’s most urgent questions are ones that address aspects of biology”

“A real understanding of biological processes always comes down to understanding the chemistry”

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Systems Biology

...seeks to study how biological systems function
Omics...

- **Genomics** – the study of a whole set of genes (genome) in a biological system
- **Proteomics** – the study of the entire collection of proteins (proteome) in a system
- **Transcriptomics** – the study of the set of messenger RNA (transcriptome) in a system
- **Metabolomics** – the study of metabolites (metabolome) taking part in a biological process
Applications
Applications
Applications
Applications
Chemistry meets Biology

• Organizations and Institutes:
  – The International Society for Systems Biology
  – Institute for Systems Biology (US)
  – Ottawa Institute for Systems Biology (Canada)
  – Institute for Systems Biology (Japan)
  – SystemsX (Switzerland)
  – Biosystems Informatics Institute (UK)
  – Harvard Department of Systems Biology (US)
Chemistry meets Biology

• Conferences
  – International Symposium on Systems Biology
  – Keystone Symposia:
    • Systems Biology: integrating biology, technology and computation
    • Structural Genomics / Frontiers in Structural Biology
  – Cambridge Healthtech Institute (CHI) conferences
  – Genomes to Systems
  – BSPR/EPI Proteomics Conference
  – EMBL Biennial Symposium: from functional genomics to systems biology
  – Human Proteome Organisation Annual World Congress
Chemistry meets Biology

• ACS meetings
  – Analytical Division
    • Development and applications of metabolomic methods of analysis
  – Division of Biochemical Technology
    • Emerging technologies: systems biology
    • Emerging technologies: proteomics and genomics
  – Division of Computers in Chemistry
    • Drug discovery, data extraction, analysis, classification
Chemistry meets Biology

RSC Publishing
Molecular BioSystems - MBS
Molecular BioSystems

- A new high quality journal with a particular focus on the interface between chemistry, the –omic sciences and systems biology
Molecular BioSystems

- Mix of primary and review material
- International Editorial Board
- Included in MEDLINE
- Free colour
- Fast publication times
- High visibility
Conferences
Thank you