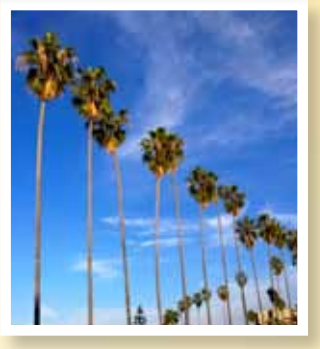
Advances & Challenges in Label-Free Technologies for Drug Discovery

November 2 - 3, 2009 • San Diego, CA, USA



Second and bottom photos © Joanne BiBona

Top: Group photo from the 2008 SBS Label-Free symposium
Second: Palm trees abound in San Diego
Third: Scientists networking at recent SBS symposium
Bottom: Historic San Diego, CA

The **label-free community** has grown significantly in the past year

and the label-free capabilities for drug discovery are expanding rapidly.

Join SBS for a **two-day symposium...**

that will explore the latest scientific and technological advances in label-free technologies, demonstrating their value in characterizing new therapeutic targets.

Plan to **participate...**

in the quality scientific sessions; meet fact-to-face with your peers and share best practices; and talk with technologies and service providers in the exhibit hall.

Come away **with...**

- a strong understanding of how label-free technologies can address your most challenging applications
- knowledge of how to make the best use of label-free in your every day work processes
- an expanded network of drug-discovery leaders
- a new perspective on the technologies available to enhance your research

Keep **connected...**

The SBS web site, ***www.sbsonline.org***, is your resource for more details.

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Access leading-edge research: attend the leading drug-discovery symposium dedicated to label-free technologies

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Session 1: Chemical Compounds & Therapeutic Targets

Label-free methodologies enable the testing of direct interactions between small molecular weight compounds and biological targets. In addition, functional assays based on the formation of complexes between biomolecular components or the phenotypical alterations triggered by receptor ligands in a cell are also amenable. Assay development is simplified and does not require reagent or cell engineering. As a consequence, the use of intact protein and native cells means the assay has greater biological relevance, since it distorts less the outcome of the response by a chemical compound. Speakers in this session will present their practical experiences in the discovery and characterization of novel compounds with therapeutic potential. Use of the label-free technology for biological target validation, pathway deconvolution, receptor panning, agonist trafficking, ligand-bias and orphan target assay development will also be illustrated.

Session 2: Antibodies, Cells, Biopharmaceuticals & Biomarkers

Antibody discovery has been one of the earliest fields for the application of label-free methodologies in life sciences due to the ability of the technology to quantify specific protein-peptide interactions even in complex media. Nowadays, biologicals have emerged as a growing business area even within the traditional drug-based pharmaceutical companies. Native proteins and cells to be used as either reagents or therapeutics can be easily characterized by label-free techniques. Talks in this session will address wide areas of prominent applications utilities for biotherapeutic discovery and development: quality control of reagents and biopharmaceuticals, quantitation of biomarkers to assess the outcome of therapeutic approaches and differentiating antibody actives from binders against peptides and whole cells.

Session 3: Systems Biology

Systems biology has been described as the overarching science of drug discovery focused on the interdependencies within a complex network. Native targets in their native environment are essential to study unperturbed outcomes of chemical stimuli. The drug discovery paradigm is shifting from the pursuit of magic bullets precisely hitting single targets to the exploitation of systems biology and the understanding of drug pharmacology in a native texture. Label-free methods for pathway queries and effects on biological systems offer approaches to unveil some of the most complex relationships between molecules of interest with high sensitivity. This session will highlight the utility of label-free in systems analyses, translational biology and chemigenomics.

Session 4: Technologies

Most scientists recognize that the presence of labels can be deleterious to artifact-free results. Label free to many scientists has become synonymous with SPR biosensors. SPR along with NMR, mass spectrometry and calorimetry, and now joined by optical and impedance-based measurements, have proven to be extremely useful label-free tools in the drug-discovery process. However, other technologies have been less exploited despite their potential. This section will present new approaches with these well established tools and other label-free technologies that are employed to specific advantages in specific application areas. Speakers will highlight the use of the multitude of label-free technologies and their application to drug discovery and development issues that are not approachable with other technologies.

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