Label-free technologies for drug discovery

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Abstrak

Over the past two decades the benefits of label-free biosensor analysis have begun to make an impact in the market, and systems are beginning to be used as mainstream research tools in many drug discovery laboratories. Label-free technologies for drug discovery summarises the latest and emerging developments in label-free detection systems, their underlying technology principles and end-user case studies that reveal the power and limitations of label-free in all areas of drug discovery.

Label-free technologies discussed include SPR, NMR, high-throughput mass spectrometry, resonant waveguide plate-based screening, transmitted-light imaging, isothermal titration calorimetry, optical and impedance cell-based assays and other biophysical methods. The technologies are discussed in relation to their use as screening technologies, high-content technologies, hit finding and hit validation strategies, mode of action and ADME/T, access to difficult target classes, cell-based receptor/ligand interactions particularly orphan receptors, and antibody and small molecule affinity and kinetic analysis. Label-Free Technologies For Drug Discovery is an essential guide to this emerging class of tools for researchers in drug discovery and development, particularly high-throughput screening and compound profiling teams, medicinal chemists, structural biologists, assay developers, ADME/T specialists, and others interested in biomolecular interaction analysis.