عنوان مقاله:

Early Diagnosis Of Diseases Using Multiplexed Microbead Array Technology

محل انتشار:

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خلاصه مقاله:

Early diagnosis of incurable and late-emerging diseases is essential to avoid disease progression and reduce mortality rate. With the advent of novel technologies in clinical diagnosis, microbead-based arrays have validated as an efficient approach and demonstrated useful advantages over traditional methods to manage many diseases. Multiplexed microbead assays provide a robust, rapid, specific and cost-effective analysis for high-throughput and simultaneous screening of multiple disease-related biomarkers. Biomolecule interactions occur after applying a biological sample such as blood plasma, saliva, cerebrospinal fluid etc. containing the considered target analyte to the planar or suspension microbeads. To measure biological or pathological alteration processes, the ligand-receptor binding activity is tracked by receiving optical signal by means of flow cytometry or image processing devices. In this review article we discussed early prognosis of various sorts of cancer, neurological and infectious disease by using optically encoded microbead-based assays as a reliable tool for the monitoring and discovery of numerous analytes.

کلمات کلیدی:

"disease detection " "biomarker "multiplexing " "microbead array early diagnosis