

# **A review on immobilised aptamers for high throughput biomolecular detection and screening**

## **Abstract**

The discovery of Systematic Evolution of Ligands by Exponential Enrichment (SELEX) assay has led to the generation of aptamers from libraries of nucleic acids. Concomitantly, aptamer-target recognition and its potential biomedical applications have become a major research endeavour. Aptamers possess unique properties that make them superior biological receptors to antibodies with a plethora of target molecules. Some specific areas of opportunities explored for aptamer-target interactions include biochemical analysis, cell signalling and targeting, biomolecular purification processes, pathogen detection and, clinical diagnosis and therapy. Most of these potential applications rely on the effective immobilisation of aptamers on support systems to probe target species. Hence, recent research focus is geared towards immobilising aptamers as oligosorbents for biodetection and bioscreening. This article seeks to review advances in immobilised aptameric binding with associated successful milestones and respective limitations. A proposal for high throughput bioscreening using continuous polymeric adsorbents is also presented.