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Aptamers: molecules of great potential

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Abstract

Aptamers emerged over 20 years ago as a class of nucleic acids able to recognize specific targets. Today, aptamer-related studies constitute a large and important field of biotechnology. Functional oligonucleotides have proved to be a versatile tool in biomedical research due to the ease of synthesis, a wide range of potentially recognized molecular targets and the simplicity of selection. Similarly to antibodies, aptamers can be used to detect or isolate specific molecules, as well as to act as targeting and therapeutic agents. In this review we present different approaches to aptamers application in nanobiotechnology, diagnostics and medicine.

Keywords

aptamer, oligonucleotide, SELEX, aptamers' application, nanobiotechnology, therapeutic applications, medical diagnostics

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