

Special Issue

Diagnostic Aptamers in Present and Future Tense

Message from the Guest Editor

In the last decade, literally thousands of papers have attested that the selectivity and affinity of aptamers are comparable or even superior to those of antibodies. Furthermore, due to their straightforward production and ideal chemical properties, aptamers could be the method of choice for the development of diagnostic devices. In spite of their advantageous characteristics and panel of proof-of-principle studies demonstrating their sensor capability, aptamers have barely taken position in the routine diagnostics. This Special Edition aims at providing insight into the present status and the prospects of aptamers in medical, environmental, and food analysis. Some of the papers discuss the pitfalls of selection of aptamers for diagnostic purposes and the issues to be considered for increasing the success rate of generation of practically applicable aptamers. Another set of papers highlights the unique challenges of the development of aptamer-based analytical devices describing that this task is not equal to simply replacing antibodies with aptamers. Finally, we show examples of commercialized kits and systems that could indicate a prosperous future for aptamers in diagnostics.

Guest Editor

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