

Current approaches based on electrochemical DNA nanobiosensors for genetic diagnosis or analysis of drug-DNA interactions

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Abstract

Since the first commercial biosensor was introduced to the market for blood glucose measurement in the seventies, many different types of biosensors have been developed up to now. Biosensor R&D studies are still popular around the world. In some global biosensor reports that include a large number of literature and industry-based data published recently, it is predicted that handheld/portable or wearable biosensors will be preferred in many areas of analysis such as food, medicine, agriculture, etc. in the very near future.

The new generation of biosensors developed with nanomaterials, which have been used in the field of biosensors for many years and still maintain their important place in the scientific world today, have played a key role in the development of many sensitive devices. Among these nanoparticles, carbon-containing species are considered to be particularly valuable in electrochemical biosensor designs due to their cost-effective analysis, good conductivity properties, and ease of use.

In this direction, information is provided about some current electrochemical nanobiosensors and biosensor-based diagnostic kits and their analysis performances designed in our laboratory for genetic disease or drug-DNA interaction analysis in recent years.

References

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