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# PNA Versus DNA Aptamers – A Case Study of Cardiac Troponin I Sensing

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DNA-based aptamers have become essential bioreceptors in diagnostic platforms, selective enough to ensure specific analyses in biological fluids such as blood, serum, and urine. Generally, it is believed that their performance as receptors for biosensing applications on pH and ionic strength of the analyte solutions owing to the negative charge due to pending phosphate functions, might limit the advantages in designing DNA-based field-effect transistors. Significant benefits might come from the use of DNA mimics such as peptide nucleic acids (PNAs). In this work, we outline the new perspectives offered by a PNA-based bioreceptor coupled to a graphene-based field effect transistor (gFET) as transducer with specific emphasis on the sensing of cardiac troponin I (cTnI).

## References

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