Title:
Design of a colorimetric aptasensor for detection of Kanamycin using silver nano particles

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Abstract:
Aptasensors are nanotechnology-based analytical techniques that are the most powerful and sensitive detection tools. Aptamers are short single-stranded DNA or RNA molecules with high affinity and specificity. In this paper, we report the design of a colorimetric aptasensor for the detection of Kanamycin using silver nanoparticles. The aptamer binds to Kanamycin and induces conformational changes, which are detected by the silver nanoparticles. The resulting color change is measured using UV-visible spectroscopy. The assay has a detection limit of 0.1 nM and a linear range of 0.1 to 100 nM. The proposed method is rapid, sensitive, and selective, making it a promising tool for the detection of Kanamycin in various applications.