



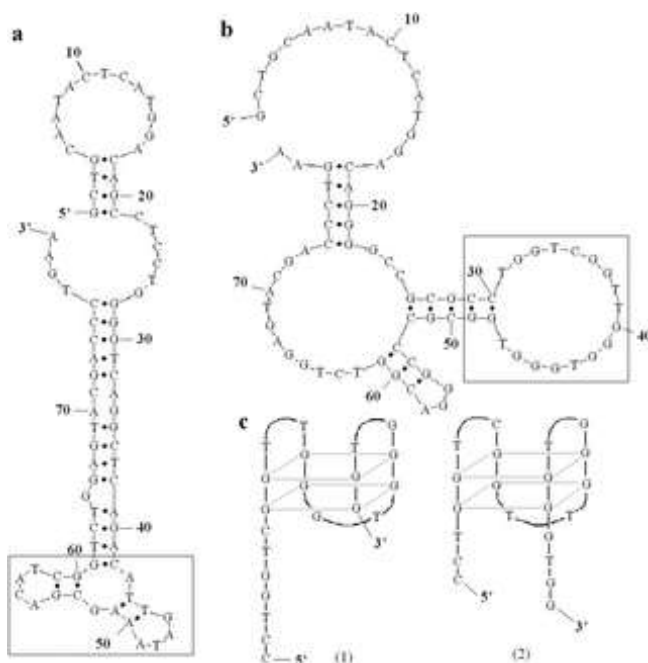
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Two DNA Aptamers against Avian Influenza H9N2 Virus Prevent Viral Infection in Cells

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Abstrakt

New antiviral therapy for pandemic influenza mediated by the H9N2 avian influenza virus (AIV) is increasingly in demand not only for the poultry industry but also for public health.



Aptamers are confirmed to be promising candidates for treatment and prevention of influenza viral infections. Thus, we studied two DNA aptamers, A9 and B4, selected by capillary electrophoresis-based systemic evolution of ligands by exponential enrichment (CE-SELEX) procedure using H9N2 AIV purified haemagglutinin (HA) as target. Both aptamers had whole-virus binding affinity. Also, an enzyme-linked aptamer assay (ELAA) confirmed binding affinity and specificity against other AIV subtypes. Finally, we studied aptamer-inhibitory effects on H9N2 AIV infection in Madin–Darby canine kidney (MDCK) cells and quantified viral load in supernatant and in cell with quantitative PCR (qPCR). Our data provide a foundation for future

development of innovative anti-influenza drugs. DOI: 10.1371/journal.pone.0123060

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