

Identification of DNA Aptamer that inhibits Enterotoxigenic *Escherichia coli* K88 & K99 cell growth

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Enterotoxigenic *Escherichia coli* (ETEC) strains may cause diarrheal diseases in humans and farming animals. For pigs and calves, K88 and K99 fimbriae, which are expressed by ETEC strains, are responsible for most neonatal infections and the majority of diarrheal infections. Aptamer is single-stranded DNA or RNA that can bind to various targets with high specificity. It has a number of advantages that is high stability at high temperature and pH, and easy modified with a various functional groups. Therefore, in this study, we selected DNA aptamers specific to *E. coli* (K88, K99 strains) using a whole bacterial Cell-SELEX process and characterized their affinity, and specificity to other cells. This work was carried out with the support of "Cooperative Research Program for Agriculture Science & Technology Development (Project title: Development of Monitoring and Diagnostic Method for Environmental Animal Disease, Project No: PJ010530)" Rural Development Administration, Republic of Korea.