

Development of DNA Aptamer Specific to *Salmonella typhimurium* for Early Detection of Salmonellosis

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*Salmonella* is a major foodborne pathogens and a cause of salmonellosis. Conventional detection methods are complicated and time-consuming, so that the need for rapid detection has increased. Aptamers are single-stranded oligonucleotides that can bind to their targets with high affinity and specificity. In this study, we carried out whole-cell SELEX to obtain specific ssDNA aptamers against *S. typhimurium*. After 10 rounds of selection, the binding affinity was confirmed by nano-drop and real-time PCR. We measured affinity of aptamers against various microbes by SPR. These aptamers can be used to early detection system for *S. typhimurium*. This work was carried out with the support of “Cooperative Research Program for Agriculture Science & Technology Development (Project title: Risk Assessment Research and Development of Rapid Diagnostic Method for Biological, Chemical and Environmental Animal Disease, project No.: PJ01052301)” Rural Development Administration, Republic of Korea.