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Letter to the editor

Dear Editor

As we know, food-borne illness is one of the health problems worldwide especially in developing countries. The suitable and powerful analytical methods for detection of hazards in food are necessary in order to reduce the risk of the disease. One of the key issues for rapid detection could be based on development of receptors with high affinity with the target (food hazards). This method would have high sensitivity and specificity comparison of current analytical chemistry methods.

Aptamer could play an important role as a receptor. It is a nucleic acid fragment with especial secondary structure with high affinity to the target. The most important characteristics of aptamers include the low cost, labeling with different reporter molecules and high affinity, sensitivity and specificity.

The Aptamers can apply for detection of various food hazards such as pathogens, allergens and toxins. It is crucial to design new aptamers for detection of hazardous that can be found in food. In this field, considering the issues for rapid and ease of sample preparation is another challenge that recommend for scientist to focus on it.

Finally, it is recommended to design and optimize especial aptamers as a commercial kit for detection of food-borne pathogens especially for using in developing countries where high prevalence of these kinds of illnesses is observed.

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