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## Recent Trends of Advanced Biosensors for Mycotoxin Analysis

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A mycotoxin is a toxic secondary metabolite produced by organisms of the fungus kingdom, commonly known as molds and has been widely contaminated in agricultural products such as grains and cereals. Many methods including high performance liquid chromatography (HPLC) and gas chromatography (GC) have already been proposed and reviewed for mycotoxins. These methods are either expensive or time-consuming due to the complication of sample preparation and pre-concentration before determination. In addition, both methods are unsuitable for the routine screening of large sample numbers. A biosensor is a fictive analytical device that combines a biological component with a physicochemical detector for the detection of an analyte. Biosensors represent a rapidly expanding field, at the present time, with an estimated 60% annual growth rate; the major impetus coming from the health-care industry but with some pressure from other areas, such as food safety and environmental monitoring. Antibodies and aptamers are bioreceptors which have been used in the development of biosensors. There are many kinds of antibodies and aptamers specific to mycotoxin, and antibody (or aptamer)-based biosensors have been successfully developed for the detection of mycotoxin. The biosensors permit the rapid, sensitive, simple, and on-site detection of a range of mycotoxins and can be an alternative method to traditional methods such as HPLC and GC. This presentation provides the development trends of biosensors to mycotoxins and their application to food and agricultural products.