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**FDA Selects Xenobiotic Detection Systems' Bio-Assay for Dioxin Research**

Durham, NC – October 25, 2001 – Xenobiotic Detection Systems' (XDS) patented CALUX<sup>®</sup> technology has been selected by the Food and Drug Administration (FDA) for investigation as a possible screening tool for chemical contamination of the food supply.

The FDA Center for Veterinary Medicine (CVM) and the FDA Office of Regulatory Affairs (ORA), Arkansas Regional Laboratory (ARL) have signed a licensing agreement to use the CALUX<sup>®</sup> bioassay for investigation as a new technology in the detection of dioxin-like compounds. Dioxins are by-products of a number of chemical processes, including the burning of plastics in waste disposal. These toxic compounds are routinely found in trace amounts in the environment. However, they can bio-accumulate and be concentrated in the food supply leading to human exposure. Dioxins are known to cause birth defects, immunotoxicity, tumors, and even death.

XDS President, Dr. George Clark announced a five-year licensing agreement with the FDA to install a CALUX<sup>®</sup> laboratory at the FDA facility in Jefferson, Arkansas. XDS will train FDA scientists in CALUX<sup>®</sup> protocols that are proven to measure dioxins at less than one part per trillion.

Acting ARL Director John Gridley states "We are looking at the CALUX<sup>®</sup> system as a new technology that may allow us to respond quickly and effectively to a crisis situation." The Center will be comparing traditional technology to this quicker and less expensive bioassay "to determine the effectiveness of using CALUX<sup>®</sup> as a screening tool."

XDS has genetically engineered mammalian cell lines to contain the gene for luciferase, an enzyme fireflies use to produce light. In the patented CALUX<sup>®</sup> process, firefly luciferase is produced when dioxin-like chemicals are present. The amount of light produced is directly related to the amount of dioxin-like chemicals. Using XDS's (patent pending) separation techniques, it is possible to differentiate between dioxin/dibenzofurans and PCB contamination.

Founded in 1995, XDS was formed around technology pioneered by Michael Denison, a toxicologist at the University of California at Davis. Further development of the technology was supported by Small Business Innovation Research (SBIR) grants from the National Institute of Environmental Health Sciences.

XDS has also signed similar licensing agreements with the Hiyoshi Corporation of Japan and the Institute of Public Health of Belgium.

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