

# Test to protect food chain from human form of Mad Cow Disease

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Scientists are reporting development of the first test for instantly detecting beef that has been contaminated with tissue from a cow's brain or spinal cord during slaughter — an advance in protecting against possible spread of the human form of Mad Cow Disease. The study is scheduled for the August 13 issue of ACS' *Journal of Agricultural and Food Chemistry*.

Jürgen A. Richt and colleagues point out that removal of brain, spinal and other central nervous tissue after slaughter is "one of the highest priority tasks to avoid contamination of the human food chain with bovine spongiform encephalopathy," better known as Mad Cow Disease. "No currently available method enables the real-time detection of possible central nervous system (CNS) tissue contamination on carcasses during slaughter," the report states.

They describe a test based on detection of the fluorescent pigment lipofuscin, a substance that appears in high concentrations in the nervous tissue of cattle. The researchers found that it was a dependable indicator for the presence of brain and spinal tissue in bovine carcasses and meat cuts.

"Small quantities of bovine spinal cord were reliably detected in the presence of raw bovine skeletal muscle, fat and vertebrae. The research lays the foundation for development of a prototype device allowing real-time monitoring of CNS tissue contamination on bovine carcasses and meat cuts," the report says. It was done with colleagues from the

National Animal Disease Center of the USDA-Agricultural Research Service and Iowa State University.

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