Eyes of cattle may become new windows to detect mad cow disease

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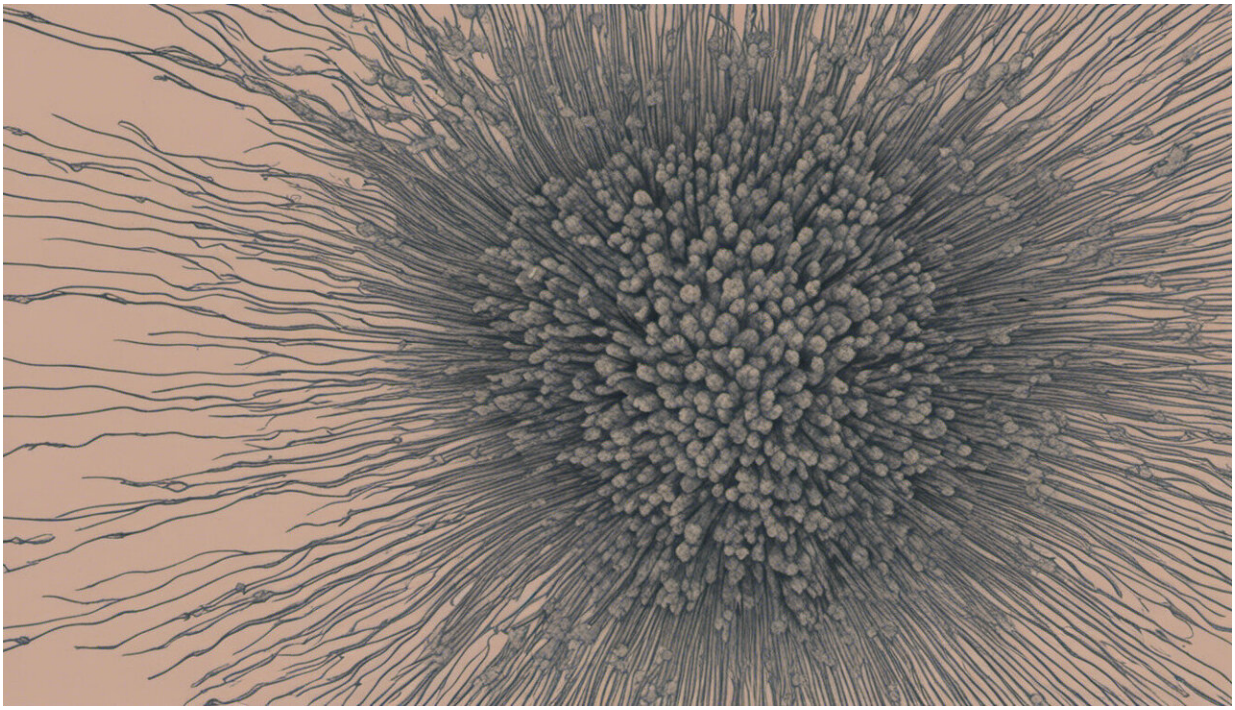

Credit: AI-generated image (disclaimer)

The eyes may or may not be windows to the soul, as the old adage goes, but scientists are reporting evidence that a peek into the eyes of cattle may become the basis for a long-sought test to detect infection with the agent that causes Mad Cow Disease. That test could help prevent the disease from spreading in the food supply. A study on using the tell-tale

glow given off by eyes infected with the Mad Cow agent appears in ACS' journal *Analytical Chemistry*.

Jacob Petrich and colleagues note that the human form of Mad Cow Disease is linked to eating beef from animals infected with abnormal proteins called prions implicated in a range of brain diseases. Scientists are trying to develop tests to detect infected cattle before they enter the food supply. Past studies suggest that chemical changes in an animal's retina, the light sensitive nerve tissue in the back of the eye, may provide a basis for detecting prion diseases.

The scientists showed that retinas of sheep infected with scrapie, a disease similar to Mad Cow Disease, emit a characteristic glow when examined with a beam of light from a special instrument. They suggest that eye tests based on the finding could become important in the future for fast, inexpensive diagnosis of prion diseases and other neurological diseases.

More information: "Fluorescence Spectroscopy of the Retina for Diagnosis of Transmissible Spongiform Encephalopathies", *Analytical Chemistry*.

Provided by American Chemical Society