

Scientists see benefits of nanocerium

November 1 2006

A U.S. study suggests cerium oxide -- used in polishing glass and in car exhaust systems -- might be used to treat various eye disorders and other diseases.

James McGinnis and colleagues at the University of Oklahoma injected cerium oxide nanoparticles into the eyes of rats and discovered the substance can protect the retina against exposure to damaging levels of illumination. If injected after exposure, the nanoparticles assisted recovery.

The researchers say the nanoparticles neutralize the effects of compounds known as reactive oxygen intermediates, or ROIs, although the mechanism underlying the process remains unclear.

The study's results indicate cerium oxide nanoparticles may be effective in inhibiting cell death caused by ROIs, which is thought to be involved in various medical conditions affecting the eye, such as macular degeneration and retinitis pigmentosa.

The researchers speculate the particles might be effective in treating a range of other degenerative diseases involving ROIs, such as diabetes, Alzheimer's disease and strokes.

Study results appear in the journal *Nature Nanotechnology*.

Copyright 2006 by United Press International

Citation: Scientists see benefits of nanoceria (2006, November 1) retrieved 30 April 2024 from <https://phys.org/news/2006-11-scientists-benefits-nanoceria.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.