



Reveal Pharmaceuticals

NEWS RELEASE
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GADOLINIUM-FREE MRI CONTRAST AGENT EXCELS VS GBCAs

Researchers have taken a key step forward in the development of a manganese-based MRI contrast agent which may provide a safer alternative to current MRI contrast agents.

Contrast agents are essential for modern medicine: over 30 million contrast enhanced MRI scans are performed each year, providing vital information for the diagnosis and management of disease. All approved MRI contrast agents are based on gadolinium, but concern about the safety and potential late effects of these gadolinium-based contrast agents (GBCAs) is rising. In recent years scientists have shown that every GBCA causes the accumulation of gadolinium in the brain and body of each patient.

The new contrast agent (Mn-PyC3A) was designed with the goal of providing a safer, gadolinium-free direct substitute for GBCAs. To improve safety, Mn-PyC3A is based on the biocompatible element manganese, which is essential for human life. The study, published in this month's *Investigative Radiology*, directly compared the imaging efficacy and full body elimination of Mn-PyC3A to leading GBCAs.

It was shown that Mn-PyC3A provides comparable tumor contrast enhancement to state of the art gadolinium-based contrast agents in models of breast cancer and liver metastasis. The new agent also may be safer than GBCAs: manganese from Mn-PyC3A is much more quickly and thoroughly cleared from the body than gadolinium from even the 'safest' GBCA.

The study, from Drs. Eric Gale, Peter Caravan, and coworkers from Massachusetts General Hospital and Harvard Medical School, was funded by grants from the National Institute for Biomedical Imaging and Bioengineering, the National Heart Lung and Blood Institute, and the National Institute of Diabetes and Digestive and Kidney Diseases to Caravan, Gale, and Reveal Pharmaceuticals.

Related press release from Massachusetts General Hospital:

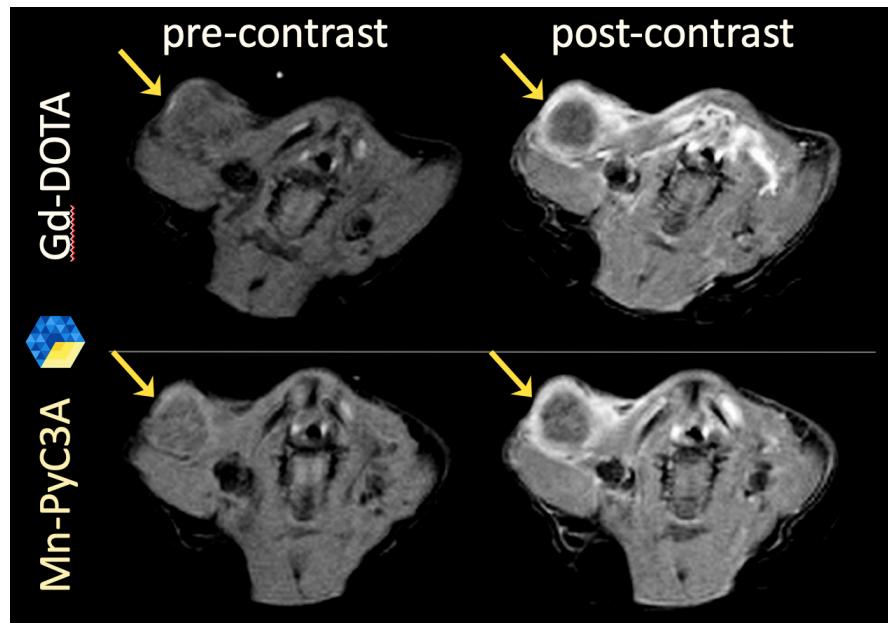
<https://www.massgeneral.org/news/press-release/new-contrast-agent-could-make-mris-safer>



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Equivalent contrast to Gd-DOTA in mouse model of breast cancer:



Mn from Mn-PyC3A is more efficiently eliminated than Gd from Gd-DOTA:

