



# Alternatives to Gd

Safer diagnostic agents for MRI

# RATIONALE

Recently, EU authorities issued a recommendation to suspend three widely used gadolinium-bearing contrast agents and US authorities required new class warnings for these agents.

This decision relates to potential health concerns resulting from long-term accumulation of gadolinium. This sends a clear message to carefully consider the necessity of each contrast injection. However, for a number of diagnostic procedures, such as tumour characterisation, the use of a contrast agent is often essential.

**There is a clear unmet clinical need for gadolinium-free contrast agents.**

# SAFER CONTRAST AGENTS

**The AlternativesToGd project is developing a new type of contrast agent for medical imaging.**

Current generation contrast agents rely on gadolinium, which has raised major health concerns from long-term accumulation in patients' bodies.

Our new contrast agents will be hyperpolarised, gadolinium-free molecules with high sensitivities even at very low doses.

**These new compounds can radically impact the field and, leading to a paradigm shift in MRI-based diagnosis.**

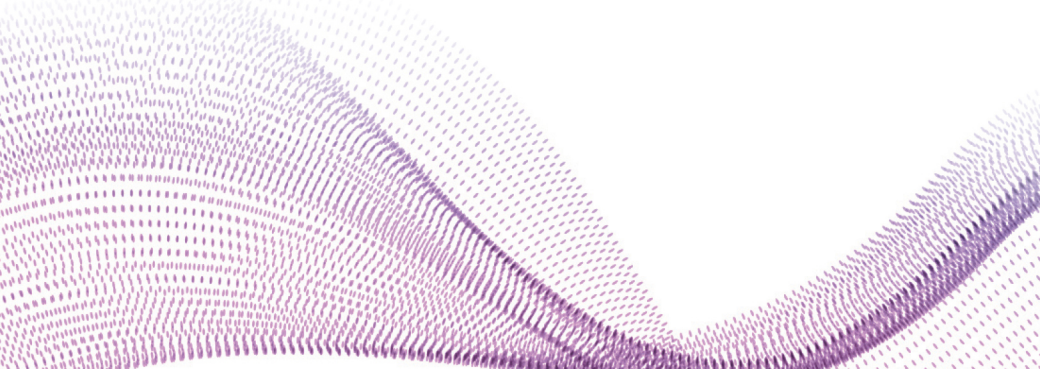
Our ultimate goal is to demonstrate the feasibility of replacing gadolinium-bearing contrast agents with a metal-free approach in at least one type of contrast-enhanced MRI examination in animal models.

## IMPACT

**The use of hyperpolarised contrast agents for perfusion imaging or tissue-retention imaging is a new technology that does not exist today.**

We will lay the foundation for such a technology by providing the contrast agents, the means to increase their signal, and the routes for imaging of these hyperpolarised signals on clinical MRI scanners.

Society will gain by having access to medical imaging that does not leave potentially toxic deposits in the bodies of patients undergoing MRI examinations.



# ABOUT THE PROJECT

AlternativesToGd is a **3-year** collaborative research project coordinated by Prof. Rachel Katz-Brull, concluding in September 2022.

The project received €3,065,956.25 in funding. It brings together highly experienced **engineers, physicists, chemists** and **radiologists** from 10 institutions in 6 countries

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