

# Magnetic bacteria can help diagnose stomach cancer

## Summary

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In a first, scientists have developed magnetic bacteria that can be added to food to help diagnose diseases of the digestive system like stomach cancer.

Scientists from the University of Granada in Spain said the findings constitute the first use of a food as a natural drug and aid in diagnosing an illness, anywhere in the world.

To design these magnetic bacteria, the researchers tried to copy magnetobacteria, which naturally produce very limited numbers of internal magnets that, essentially, provide them with a means of orienting themselves as if they possessed an internal compass.

These artificial magnetic bacteria could have biomedical applications in magnetic resonance imaging – to facilitate diagnosis – or in heating malign cells through magnetic hypothermia and, thus, curing diseases like cancer.

The research was conducted in collaboration with BIOSEARCH SA, a private company.

The patented technology is still only in an experimental phase but it will facilitate the use of these probiotic bacteria, common in food, to diagnose and treat tumours and as an edible iron supplement, researchers said.

The results have been published in the journal Advanced Functional Materials.