



Gamma MRI

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A group of research organizations, together with one large and one small company, from four different European countries, have joined efforts to launch the GAMMA_MRI initiative. GAMMA-MRI is a project funded by the European Union under the "FET-Open Challenging Current Thinking" program. The GAMMA-MRI multidisciplinary consortium is composed of the following organizations: Haute Ecole Specialisee De Suisse Occidentale (HES-SO; Switzerland), the Project Coordinator, European Organization for Nuclear Research (CERN; Switzerland), Universidad Complutense de Madrid (Spain), University of Leuven (Belgium), University of Maastricht (Netherlands), Inspiralia S.L. (Spain) and RS2D (France).

The benefits of diagnostic imaging tools for patients with brain diseases have been well-known in recent years. Approximately 165 million people in Europe are affected by conditions such as Alzheimer's, Parkinson's, dementia, or strokes. The prevalence of most neurological diseases increases with age, and with the rise in life expectancy, their incidence is expected to continue growing. This is anticipated to be a significant societal challenge in Europe and worldwide, given that strokes are the second leading cause of death and the third cause of disability globally.

Diagnostic imaging has revolutionized healthcare, from diagnosis to treatment plans, and it is now impossible to imagine a contemporary healthcare system without its benefits. Despite significant advances, especially in the case of brain diseases, diagnostic imaging still heavily relies on expensive, complex, and bulky machines. These limitations result in only large hospitals being able to afford and utilize such devices, making treatments excessively costly and inaccessible to many.

The GAMMA-MRI project (www.gamma-mri.eu) represents an innovative approach to brain imaging by developing a device that combines the advantages of current leading diagnostic technologies. On one hand, it aims to achieve excellent spatial resolution and flexibility comparable to Magnetic Resonance Imaging (MRI) devices. On the other hand, it seeks to harness the sensitivity provided by gamma detection, while reducing the radiation dose required for patients.

As a result, the GAMMA-MRI technology is expected to be less complex and, therefore, less expensive than current state-of-the-art devices, especially hybrid ones. This disruptive approach will facilitate new forms of patient care and revolutionize the medical imaging market, making it more accessible, less invasive, and more user-friendly



Hes·so
Haute Ecole Spécialisée
de Suisse occidentale
Fachhochschule Westschweiz
University of Applied Sciences and Arts
Western Switzerland

HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE
(Project Coordinator)
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<http://www.hesge.ch/heds>

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