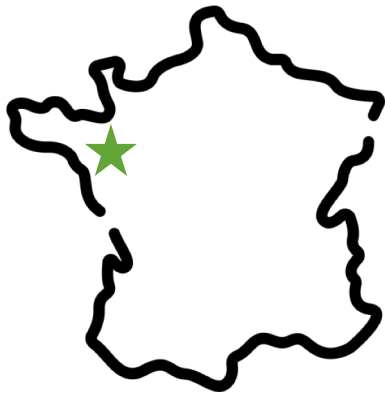




WE ARE HIRING !!

ANR-funded and INCR-funded project (2026-2029)

*To target the alpha-synuclein protein by CEST imaging:
towards a new biomarker of Parkinson's disease*

JOB POSITION



Doctoral position in clinical and preclinical MRI



Master degree or Engineer

Expertise in quantitative MRI, data acquisition and analysis
Experience in CEST-MRI would be appreciated



Rennes, France – LTSI Inserm 1099



From october/november 2026 – 36 months



21-22 k€/year after taxes

WHY WORK WITH US ?

- ✓ Be part of an innovative research project on a neurodegenerative disease
- ✓ Work with a collaborative group based in Rennes, Lille, Angers and Bordeaux
- ✓ Apply pioneering MRI methods at 3T and 7T
- ✓ Live in Rennes, a dynamic city with high quality of life and direct access to the sea and Paris

APPLY NOW



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Neurodegenerative diseases are characterized by protein aggregation, with alpha-synuclein being one of the most common aggregating proteins. Parkinson's disease is one of the most common alpha-synuclein-related disorders. Recent experimental evidence suggests that this normally soluble protein adopts an abnormal conformation under pathological conditions, aggregates, and then spreads throughout the brain. *In vivo* quantification of aggregated alpha-synuclein throughout the brain therefore appears to be a potential neuroimaging biomarker for the spread and, consequently, the progression of Parkinson's disease. Despite significant progress made in recent years for other proteins involved in neurodegenerative diseases - such as Alzheimer's disease, for example - no reliable imaging biomarker is yet available for quantifying alpha-synuclein with the precision, sensitivity, and specificity required for routine clinical use.

In this context, the project aims to develop new diagnostic tools for Parkinson's disease by harnessing the potential of MRI to identify new neuromarkers: In particular, the project will focus on developing innovative imaging methods (based on chemical exchange) to noninvasively target brain proteins whose abnormal presence (quantity, form) in the brain is a sign of disease progression. This project also involves the development of comprehensive protocols for processing this data. **These innovative methods represent a major turning point in clinical research today, particularly for neurodegenerative diseases.**

The image acquisition and processing steps will be developed and validated using project-specific samples containing different forms of the protein and different concentrations. The results obtained will serve as a preliminary step prior to the validation of our new MRI methodology in animal models of the disease, then in healthy volunteers and its subsequent application in patients. These new neuromarkers will complement those already used in routine clinical practice, with the aim of refining the early diagnosis of the disease, improving the prediction of whether symptoms will progress to cognitive decline, and enabling more targeted treatment options for patients, thereby improving their quality of life.

For more information about this project, please contact:

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