BRACCO FELLOWSHIPS
EDUCATION IN RESEARCH
ENROLMENT FORM

Name of Institution / HOSPITAL DE LA SANTA CREU I SANT PAU

City and Country of Institution BARCELONA

RESEARCH GROUP

Brief description of the research group and of its mission:

The mission of the radiology department research group in hospital de Sant Pau (a 3rd level university hospital in Barcelona), is to advance the knowledge of quantitative biomarkers as well as the development of artificial intelligence tools.

We have a research area focused on Artificial Intelligence, in collaboration with the 3D and AI lab of the hospital, which include engineers and other researchers as well as a close collaboration with technical universities.

The aim of the project is to train a fellowship in the research in the field of Generative AI, applied both in image and text in neuroradiology.

TITLE OF PROPOSED RESEARCH PROJECT

Generative AI Radiological NeuroImaging: From the medical image, to the generated structured text and the synthetic biomodel

OBJECTIVES

- To know the different AI Generative Algorithms in medical imaging
- To learn a comprehensive approach of prompts and data generation
- To develop synthetic biomodels
- To correlate information results comparing natural language, structured reports and prompts

APPLICANT'S DUTIES

- Creation of an image and text-report database of different neurological and oncological diseases

- Definition and testing of medical prompts
- Design of biomodels according specific diseases, radiological codes and prompts
- Analysis of similarities comparing real cases, synthetic images and text
- Participation in general meetings of the radiological department as well as the 3D and AI lab

APPLICANT'S BENEFITS
- Participation on scientific outcomes of the project i.e. presentations to congresses or publications of papers
- A specific one-to-one training in post-processing tools
- Mentoring by a senior radiologist specialist in Medical Informatics
- Access for study to a database of the hospital.

- Project Leader: Josep Munuera
- Members: Esther Granell, Andrea Lozano, Juan José Sanchez, Albert Pla, Mario Tecame, Abdel Hakim Moustafa