OPENING FOR A PhD POSITION
(2019 – 2022)

INSERM Montpellier (France) in partnership with NH TherAguix (Lyon, France) offers one PhD position on:

Potentiation of targeted radionuclide therapy using gadolinium-based nanoparticles

The position is for three years starting in October 2019 – The salary grade is based on the job characteristics of the collective agreement applicable to INSERM*.

**Inserm is the only public research organization in France entirely dedicated to human health. Its objective is to promote the health of all by advancing knowledge about life and disease, treatment innovation, and public health research.*

Summary of the Thesis Project

Context. Currently there is a need for theranostic (diagnostic + therapeutic) tools in ovarian cancer and peritoneal carcinomatosis. Indeed, there is no highly efficient treatment for patients with ovarian cancer, and 70% of them will relapse within 3 years. Therefore, therapies with a better therapeutic index are required for personalized treatments. The GADORIT project proposes new therapeutic strategies combining internal radiotherapy and clinical gadolinium-based nanoparticles (AGuIX-NPs) that have been shown to be radiosensitizing in external radiotherapy. We suggest that AGuIX-NPs will i) radiosensitize tumors combined to radionuclide therapy using alpha or beta- particle emitting radionuclides and ii) allow multi-imaging modalities combining MR and SPECT/PET imaging.

Specific aim. The project will assess in preclinical models the radiosensitizing properties of gadolinium-based NPs (AGuIX-NPs) combined with therapeutic radionuclides. Radionuclides will be either directly labelled to AGuIX-NPs or to Trastuzumab (targeting HER2 tumors, as this receptor is overexpressed in ovarian cancer) co-administered with AGuIX-NPs. The project will define the best drug design, as well as innovative routes of administration to address ovarian cancer, for further clinical translation in the context of ovarian cancer.

A background in preclinical (*in vivo*) research would be an advantage.

Keywords: theranostic approach, targeted radionuclide therapy, radiopharmaceuticals, imaging, pharmacology

If you are interested in this position, please send an informal application with your CV, previous research experience and name/phone/email of at least one reference to:

jean-pierre.pouget@inserm.fr.
(*https://ircm.fr/index.php?project=crcm_en*)