

The Laboratory of Tumor and Developmental Biology, GIGA-Cancer, at the University of Liège (Belgium) has an opening for a PhD candidate on breast cancer resistance to targeted therapies (PI: Nor Eddine SOUNNI, team cancer and metabolism)

**Topic:** Targeting breast cancer metastasis

**Project summary:**

Despite advances in targeted therapies against HER2+, the presence of intrinsic and/or acquired resistance to anti-HER2 therapy remains an important challenge in breast cancer. In the triple negative breast cancer (TNBC), while it expresses high level of EGFR, anti-EGFR targeted therapies in combination with chemotherapies were generally unsatisfactory in clinical trials. This project is based on our recent paper (Foidart et al. 2019, *Clinical Cancer Research*) in which we demonstrated the clinical relevance of 3 molecules, EGFR, MT4-MMP and RB in TNBC and showed efficacy of targeting EGFR and CDK4/6 in 50% of TNBC expressing MT4-MMP, EGFR and RB. The new project aim is to understand mechanism(s) of MT4-MMP in breast cancer progression. We will investigate the repertoire of substrates of MT4-MMP by iTRAQ and MS analysis. We will validate the role of the target substrate and perform functional assays for evaluating their role in breast cancer proliferation and migration in vitro, and tumor growth and metastasis in vivo. Our ultimate goal is to propose new therapies for the untreatable TNBC and for therapy resistant HER2+ breast cancer.

Technically, the project involves cell culture, siRNAs, proliferation and migration assays, western blots and immunoprecipitations, and in vivo study using xenografts and PDX for tumor growth and metastasis.

The ideal candidate will be highly motivated and have a Master in Biomedical Sciences/Biology/Biochemistry.

The available funding is 4 years Télévie grant (F.R.S-FNRS) starting on October 1<sup>st</sup> 2019.

Interested candidates should send their résumé and application letter to Dr. Nor Eddine SOUNNI (nesounni@uliege.be).