

## **Influence of mammary tumor extracellular vesicles in the development of brain metastases.**

A 2-year postdoctoral position in extracellular vesicle-dependent cell communication in cancer is available in PRISM laboratory, Inserm UMR-1192, Université de Lille, directed by Pr. Michel Salzet.

The postdoc will study the physiopathological features of breast cancer leading to brain metastasis. For this purpose, the extracellular vesicles from in vitro models of tumor microenvironment will be isolated and molecularly characterized. Their potential to prepare metastatic niches and regulate the inflammatory balance will be deciphered.

The applicant should have a strong background in cell biology and EV studies including their isolation, labeling and possible in vivo tracking.

The appointment would start between October 2021 and February 2022. Interested candidates should send their CV, list of publications, motivation letter and the name of two referees to Pr. Michel Salzet ([michel.salzet@univ-lille.fr](mailto:michel.salzet@univ-lille.fr)). More details about the job description will be given during the interview.

More info about the lab: <https://laboratoire-prism.fr/>

### List of EV publications

1: Lemaire Q, Duhamel M, Raffo-Romero A, Salzet M, Lefebvre C. Characterization of Immune Cell-derived Extracellular Vesicles and Studying Functional Impact on Cell Environment. *J Vis Exp*. 2020 Jun 2;(160). doi: 10.3791/60118. PMID:32568235.

2: Murgoci AN, Cardon T, Aboulouard S, Duhamel M, Fournier I, Cizkova D, Salzet M. Reference and Ghost Proteins Identification in Rat C6 Glioma Extracellular Vesicles. *iScience*. 2020 May 22;23(5):101045. doi: 10.1016/j.isci.2020.101045. Epub 2020 Apr 10. PMID: 32334413; PMCID: PMC7182720.

3: Le Rhun E, Seoane J, Salzet M, Soffietti R, Weller M. Liquid biopsies for diagnosing and monitoring primary tumors of the central nervous system. *Cancer Lett*. 2020 Jun 28;480:24-28. doi: 10.1016/j.canlet.2020.03.021. Epub 2020 Mar 27. PMID: 32229189.

4: Murgoci AN, Duhamel M, Raffo-Romero A, Mallah K, Aboulouard S, Lefebvre C, Kobeissy F, Fournier I, Zilkova M, Maderova D, Cizek M, Cizkova D, Salzet M. Location of neonatal microglia drives small extracellular vesicles content and biological functions in vitro. *J Extracell Vesicles*. 2020 Feb 18;9(1):1727637. doi: 10.1080/20013078.2020.1727637. PMID: 32158520; PMCID: PMC7049881.

5: Lemaire Q, Raffo-Romero A, Arab T, Van Camp C, Drago F, Forte S, Gimeno JP, Begard S, Colin M, Vizioli J, Sautière PE, Salzet M, Lefebvre C. Isolation of microglia-derived extracellular vesicles: towards miRNA signatures and neuroprotection. *J Nanobiotechnology*. 2019 Dec 4;17(1):119. doi: 10.1186/s12951-019-0551-6. PMID: 31801555; PMCID: PMC6894150.

6: Arab T, Raffo-Romero A, Van Camp C, Lemaire Q, Le Marrec-Croq F, Drago F, Aboulouard S, Slomianny C, Lacoste AS, Guigon I, Touzet H, Salzet M, Fournier I, Lefebvre C, Vizioli J, Sautière PE. Proteomic characterisation of leech microglia extracellular vesicles (EVs): comparison between

differential ultracentrifugation and Optiprep™ density gradient isolation. *J Extracell Vesicles*. 2019 Apr 23;8(1):1603048. doi: 10.1080/20013078.2019.1603048. PMID: 31069026; PMCID: PMC6493217.

7: Raffo-Romero A, Arab T, Al-Amri IS, Le Marrec-Croq F, Van Camp C, Lemaire Q, Salzet M, Vizioli J, Sautiere PE, Lefebvre C. Medicinal Leech CNS as a Model for Exosome Studies in the Crosstalk between Microglia and Neurons. *Int J Mol Sci*. 2018 Dec 19;19(12):4124. doi: 10.3390/ijms19124124. PMID: 30572617; PMCID: PMC6321190.

8: Mondello S, Thelin EP, Shaw G, Salzet M, Visalli C, Cizkova D, Kobeissy F, Buki A. Extracellular vesicles: pathogenetic, diagnostic and therapeutic value in traumatic brain injury. *Expert Rev Proteomics*. 2018 May;15(5):451-461. doi: 10.1080/14789450.2018.1464914. Epub 2018 Apr 25. PMID: 29671356.

9: Duhamel M, Rose M, Rodet F, Murgoci AN, Zografidou L, Régnier-Vigouroux A, Vanden Abeele F, Kobeissy F, Nataf S, Pays L, Wisztorski M, Cizkova D, Fournier I, Salzet M. Paclitaxel Treatment and Proprotein Convertase 1/3 (PC1/3) Knockdown in Macrophages is a Promising Antiglioma Strategy as Revealed by Proteomics and Cytotoxicity Studies. *Mol Cell Proteomics*. 2018 Jun;17(6):1126-1143. doi: 10.1074/mcp.RA117.000443. Epub 2018 Mar 12. PMID: 29531019; PMCID: PMC5986247.

10: Murgoci AN, Cizkova D, Majerova P, Petrovova E, Medvecký L, Fournier I, Salzet M. Brain-Cortex Microglia-Derived Exosomes: Nanoparticles for Glioma Therapy. *Chemphyschem*. 2018 May 22;19(10):1205-1214. doi: 10.1002/cphc.201701198. Epub 2018 Feb 19. PMID: 29327816.