DBM Basel
Department of Biomedicine

Universitätsspital Basel

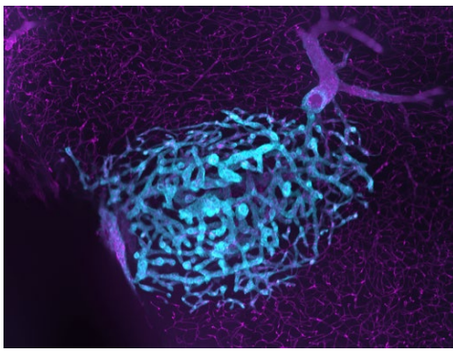
MASTER THESIS PROJECT:

Effects of the brain microenvironment in the resistance of breast cancer metastasis to systemic therapy

Project outline

Brain metastasis is a challenge and life-threatening consequence of disease progression which face 15 to 30% of breast cancer patients. Breast cancer cells that extravasated in the brain are exposed to the unique environment with brain-resident cells (e.g., endothelium, pericytes, astrocytes, microglia and neurons). How this environment contributes to cancer cell resistance to systemic therapies and facilitates outgrowth remains largely unknown, and is the aim of this project.

Your profile



We offer a master›s project in biology to work in our interdisciplinary team. We are looking for a highly curious and motivated master student with good communication skills and a strong interest and background in oncology and/or neuroscience. The candidate should be willing to work independently and develop a research project with the supervision of a postdoc and the PI. The laboratory language is English.

Our contribution

We offer you a dynamic environment where you can network, learn and develop your ideas. You will be able to interact and train with highly skilled experts in oncology, immunology, and computational and cell biology. You will work with primary cells and cancer cell co-cultures, and assist with animal experiments. In addition, you will be able to perform histology, flow cytometry, microscopy imaging, bioinformatics, and more. You will be supervised directly by an experienced postdoc and will present your own project regularly at lab meetings. See https://bentireslab.org for more information on the lab.

Application

Please send your full application consisting of a motivation letter and CV by E-Mail to:
m.bentires-alj@unibas.ch and maria.rafaeva@unibas.ch.

References

- Correia AL, Guimaraes JC, Auf der Maur P, …, Bentires-Alj M. (2021). Hepatic stellate cells suppress NK cell sustained breast cancer dormancy. Nature.
- Obradovic MMS, Hamelin B, Manevski N, …, Bentires-Alj M. (2019). Glucocorticoids promote breast cancer metastasis. Nature.
- Bonapace L, Coissieux MM, Wyckoff J, …, Bentires-Alj M. (2014). Cessation of CCL2 inhibition accelerates breast cancer metastasis by promoting angiogenesis. Nature.

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