

THE EUROPEAN LEUKEMIC MATRISOME INTERFACE (ELMI) CONSORTIUM

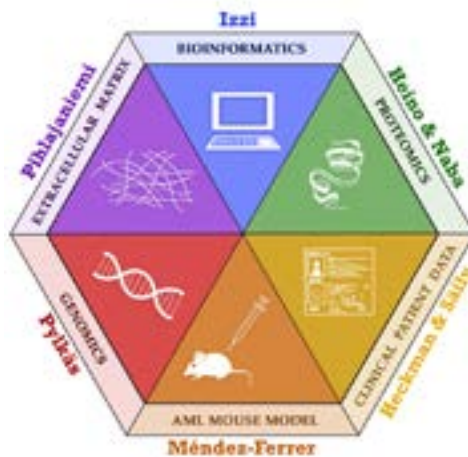


Principal Investigator: Taina Pihlajaniemi, University of Oulu

The European Leukemic Matrisome Interface (ELMI) consortium develops an idea born from the collaboration between the Oulu and Turku Universities, and expands further through collaborations with the Oulu University Hospital, the Helsinki University, the Cambridge Stem Cell Institute and the University of Illinois at Chicago. At the core of our project is the known feature of acute myeloid leukemia (AML), the most aggressive and deadliest form of blood cancer, to interact with other cells in our body in order to subsequently grow and spread. The interaction of AML cells with bone-forming cells, called osteoblasts, is particularly important in determining whether a patient will respond to therapies. Although several mechanisms of interaction have been described, yet no investigation has focused on:

- a. How do both AML cells and osteoblasts change, in terms of their internal circuitry, when they interact? How do each influence the other?
- b. Is the “matrisome” (an extra-cellular “molecular glue” keeping all our cells connected) involved in the dialogue between AML and osteoblasts?

Our hypothesis is that, by answering these two questions, we will be able to understand the fundamentals of AML development as well as to identify novel markers for early diagnosis and new targets for therapy. To this aim, we will combine extensive cell culture modelling with bioinformatics, next generation sequencing, animal models and data from Finnish and worldwide patients to build a knowledge base to guide further clinical and pharmacological investigations.



RESEARCH CONSORTIUM:

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