# Investigating aging and senescence in the leukemic stromal bone marrow microenvironment (BMM)

## Our findings:

- Demonstrated the key role of the bone marrow niche in sustaining AML and regulating drug resistance
- AML cells **induce senescence** in the stromal compartment of the BMM.
- Primary (patient) derived stromal cells are **age-accelerated** compared to normal donor stromal cells.
- Dysregulation of **metabolic pathways** in AML stromal cells may contribute to the aging phenotype identified in AML stromal cells.

## Impact:

- Through studying aging of the stromal compartment of the BMM, our work aims to identify key drivers of aging in the BMM to ultimately **identify therapeutic targets** (adjuvant therapies targeting the microenvironment) and potential **predictive biomarkers** in adult AML, a malignancy of advanced age.
- **Concomitant targeting** of leukemic cells and supporting cells of the microenvironment, will result in reduced leukemia re-occurrence and improved patient survival.


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**Recent publications:**

*Cells 2023 (PMC10453346)*
*Blood 2019* (PMC6356984)


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