Taxane Treatment in a Mouse Breast Cancer Model

Poster #2336

Treatment with certain anti-cancer agents, particularly taxanes and sunitinib, can lead to vascularization of tumors, which is key to their growth and metastasis. In this study, we investigated the effects of M402, a Heparan Sulfate Mimetic, on tumor vascularization, invasion, and metastasis in a mouse breast cancer model.

RESULTS

**EPC Mobilization**

- **M402 Inhibits High-Dose Docetaxel-Induced EPC Mobilization**

**Tumor Vascularization**

- **M402 Reduces Primary Tumor Invasion and Metastasis**

**Tumor Invasion and Metastasis**

- **M402 Inhibits Tumor Metastasis**

**Materials and Methods**

- **MATERIALS**
  - Balb/c mice were implanted with 1x10^5 4T1-luc cells into the 4th mammary fat pad. On Day 7, mice were dosed with M402 (40 mg/kg) or saline control. In some experiments, M402 was dosed also daily thereafter.
  - For analysis of tumor vascularization, mice were perfused with Microfil, and tumors were excised and stained for CD31 (Mec13.3, Biocare). 40x images.
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**CONCLUSIONS**

- **M402 Inhibits EPC mobilization in response to docetaxel or 4T1-tumor secreting factors by trapping the EPCs in the bone marrow.**
- **M402 affected recruitment and outgrowth of EPCs/tumor cells in the tumor, leading to reduced tumor vascularization, invasion and metastasis in response to docetaxel.**

**Acknowledgements/References**