Melanoma model: B16-F10
syngeneic – intravenous – metastasis

REACTION BIOLOGY

IN VIVO TESTING SERVICES

➢ Orthotopic tumor and metastasizing mouse models

In contrast to subcutaneously engrafted cells, cells proliferating inside the organ of their origin ("orthotopically") spread to metastatic sites in other organs, with specificities comparable to the human situation. Another way to generate metastases without initial orthotopic tumor growth is to implant tumor cells intraveneously and wait until metastases appear in organs like lung or heart.

➢ B16-F10-Luc cells (CPQ-365)

Origin:	skin / mouse C57BL/6
Description:	melanoma
Modification:	stable expression of firefly luciferase

➢ Study outline

B16-F10 cells are implanted intravenously, and cell growth is monitored via in vivo bioluminescence imaging (BLI). The animals are randomized into treatment groups according to the luminescence signal. During the study, metastasis is monitored via BLI once per week, animal behavior is monitored daily and animal weights are measured three times per week. At necropsy, organs of interest are isolated and homogenized and the amount of B16-F10 cells per organ will be quantified via ex vivo luciferase analysis.

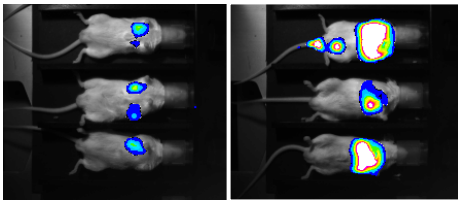

Figure 1: *In vivo BLI of mice with intravenously implanted B16-F10 cells were measured 13 days (left panel) or 20 days (right panel) after implantation.*

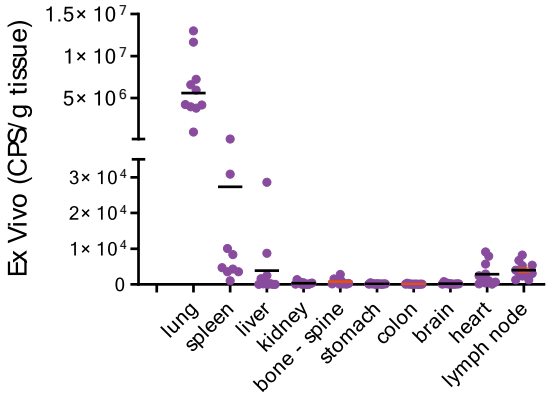

Figure 2: *Ex vivo luciferase detection of metastatic spread of intravenously implanted B16-F10 cells.*

➢ Study example – Gemcitabine

Mice with intravenously injected B16-F10 cells were treated with Gemcitabine after randomization.

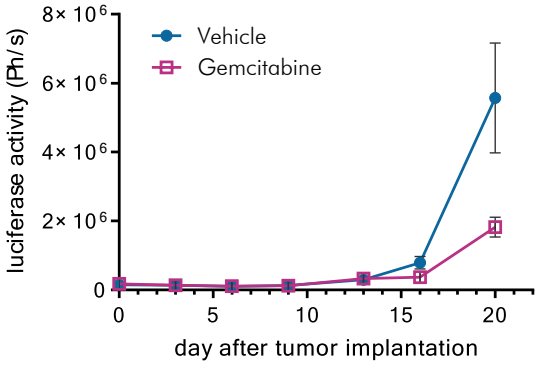

Figure 3: *In vivo BLI of lung metastasis of B16-F10 cells, mean values +/- SEM*