



**30.06.2015, Dr. Ross Okimoto, unpublished data**

Lung cancer is among the deadliest forms of cancer worldwide.

While the discovery of oncogenic driver mutations led to the development of innovative pharmacotherapies a majority of patients will still suffer from relapse in form of metastases and/or acquire some form of drug resistance. This leads to the question, whether there is a relationship between the development of metastases and the emergence of drug resistance.

An in vivo platform allowed the identification of novel effectors of lung cancer metastasis. Dr. Ross Okimoto functionally validated a metalloproteinase as regulator of lung cancer metastasis:

- (1) A gene knockdown by shRNA led to a decreased invasion efficiency in vivo and in vitro and in vivo.
- (2) Cells overexpressing the metalloproteinase preferentially form colonies inside the lung.

He furthermore discovered a novel tumor/metastasis. Genetic loss of said repressor promotes lung cancer metastasis via the identified metalloproteinase.