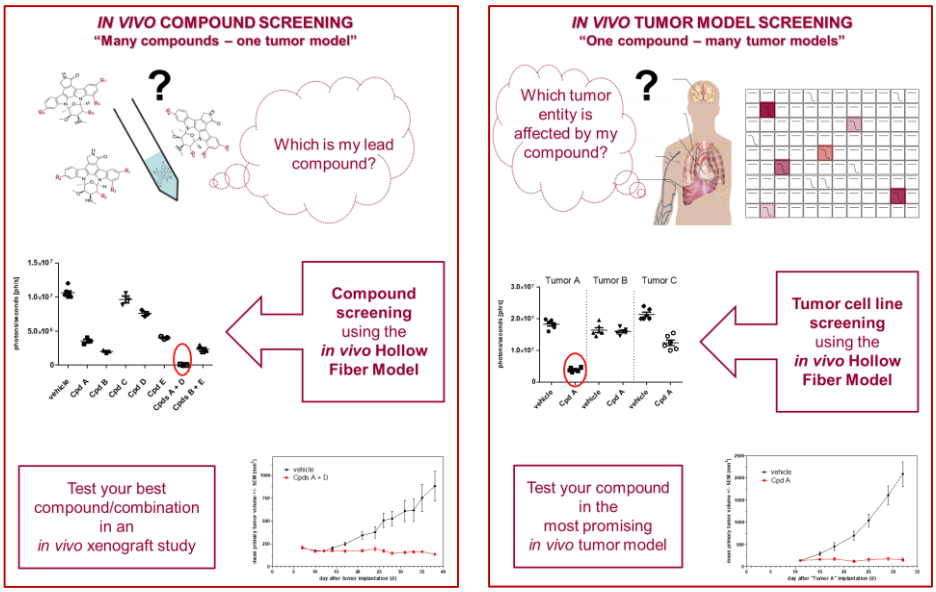
# *In vivo* Hollow Fiber Model

ProQinase TARGETING CANCER

In Vivo Testing Services

## ➢ *In vivo* Hollow Fiber Model

In drug development, predicting *in vivo* inhibitory drug activity from cellular assay data is difficult due to the complexity of the living system, resulting in the sacrifice of many mice in vain. In order to prescreen compounds for their *in vivo* activity more efficiently, the hollow fiber assay was developed in 1995 by Hollingshead et al. (Life Science 1995;57(2):131-41). The *in vivo* Hollow Fiber Model allows the simultaneous evaluation of multiple cell lines implanted in separated drug- (but not cell-) permeable fibers within a single mouse.
The *in vivo* Hollow Fiber Model is a predictive *in vivo* screening tool in order to find the appropriate test compound or tumor cell line.




## ➢ Design

Hollow fibers are loaded with three cell lines of interest (ProQinase portfolio or customer-derived) and implanted subcutaneously and intraperitoneally into each mouse. During the experimental period (14 days-studies), animals are treated with the test compound. At the end of the *in vivo* phase, hollow fibers are harvested and analyzed for cell viability using CellTiter-Glo® assay.

## ➢ Study Example

***Figure 1: In vivo Hollow Fiber Model using MKN-45 tumor cells (A) in comparison to subcutaneously implanted MKN-45 tumors (B) after treatment with Crizotinib.***
*(A) Level of MKN-45 tumor cells in the hollow fibers implanted subcutaneously (left) and intraperitoneally (right) shown as MTT readout.*