Subcutaneous blood cancer xenograft tumor model – THP-1

➢ Subcutaneous mouse tumor models

Subcutaneously implanted tumor cells represent a convenient means to test novel potential anticancer drugs *in vivo*. A large variety of human and murine cell lines derived from both, solid tumors or leukemias, covering a wide range of tumor geno- and phenotypes, have been adapted to grow in a murine host, and thus allow testing of a compound in the appropriate tumor model.

➢ THP-1 cells (CPQ-435)

Human THP-1 cells were isolated from a 1 year old male caucasian with acute monocytic leukemia.

➢ Tumor growth *in vivo*

THP-1 cells harvested from tissue culture flasks are implanted into the subcutaneous space of the left flank of the mice. Resulting tumors are monitored by calipering twice weekly.

Animal weights are measured three times weekly.
Animal behaviour is monitored daily.
All mice are maintained in separated isolated housing at constant temperature and humidity.

Accessory services: tumor wet weight and volume measurement at necropsy, blood sampling, flow cytometry, paraffin embedding of tumor tissue, histological & pathological analysis, cytokine determination, provision of tumor tissue for target validation.

➢ Quality Assurance

- Routine authentication of tumor cell lines by STR profiling
- Mycoplasma testing of implanted tumor cells by PCR just prior to implantation
- Routine health monitoring of sentinel animals (according to FELASA guide lines)
- Animal work according to the 5R rules (reduce, refine, replace, responsible, remember)

Figure 1: *Establishment study with THP-1 cells. Tumor cells were subcutaneously implanted and tumor volume was monitored via calipering twice weekly.*
Upper curve: individual tumor volumes.
Lower curve: mean values +/- SEM until day 42 (day of termination of third animal)

➢ Study example

If you are interested in receiving information on potential positive controls please reach out to our Business Development te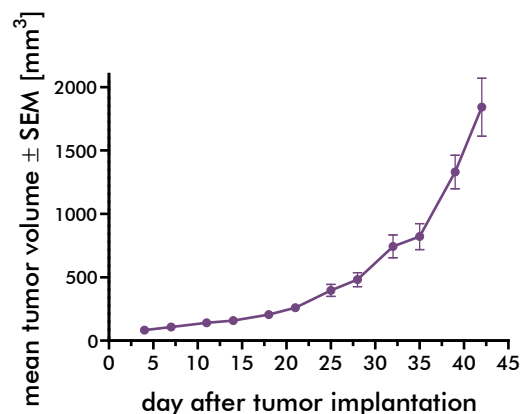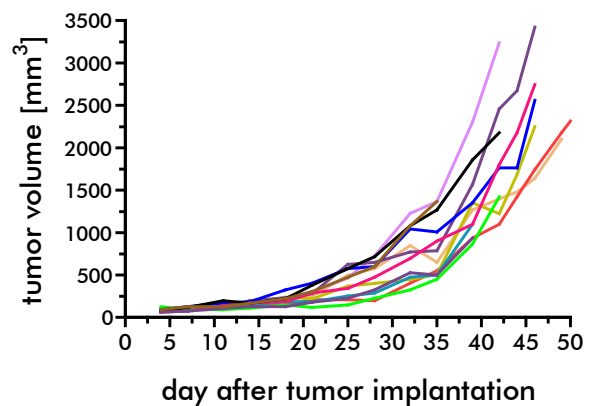am at requests@reactionbiology.com