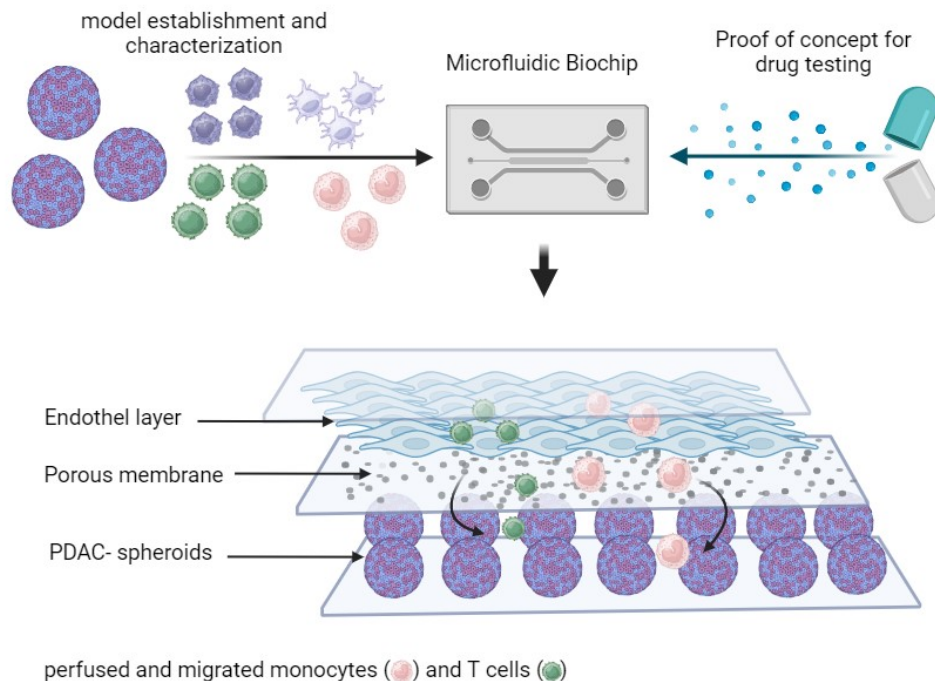


## Immunocompetent 3D pancreatic adenocarcinoma (PDAC) BioChip model for preclinical drug testing



Pancreatic ductal adenocarcinoma (PDAC) is the fourth most common cause of cancer fourth leading cause of cancer death worldwide, and the trend is rising. PDAC patients are treated with unspecific chemotherapeutic agents. Many new drug candidates fail in clinical trials. This is mainly due to the inadequate informative value of the models used in the preclinical phase. PDAC is characterized by a particular tumor microenvironment that drives tumor progression. Frequently used, immunocompromised mice cannot reproduce this and are of no use. In addition, the human and murine immune cell populations and PDAC tumor cells differ significantly in their characteristics. The goal is to construct three-dimensional human PDAC microtumors, in part vascularize them and to recreate the inflammatory tumor microenvironment under physiological conditions in an organ-on-chip approach. This immunocompetent human 3D pancreas tumor micromilieu model will be used as an alternative to animal experiments in drug research.