

**ERC Starting Grant
ReEngineeringCancer**

Re-engineering the tumor microenvironment to alleviate mechanical stresses and improve chemotherapy

<https://cordis.europa.eu/project/id/336839>

**ERC Consolidator Grant
Immuno-Predictor**

Mechanical Biomarkers for Prediction of Cancer Immunotherapy

<https://cordis.europa.eu/project/id/863955>

“In solid tumours, cancer cells grow very fast and start to push the surrounding host tissue to expand further. At the same time, the host tissue exerts reciprocal pressure on the tumour to compress it. This combination of mechanical forces results in tumor stiffening and compression of blood vessels in the tumour, which in turn hampers effective drugs delivery. In many types of pancreatic and breast cancer, and sarcoma, 80% of the blood vessels are not functional anymore. This may seem positive as, without oxygen carried by blood, the tumour could die. But cancer cells bypass this mechanism and instead invade other tissues and organs, thereby developing metastasis.

This project focusses on intervening at the vascular level to re-establish blood flow to the tumour, so drugs can easily reach cancer cells and kill them.

