**Dutch scientists are developing revolutionary cancer treatment method**

11 July 2013, by [Alexandra Gowling](http://www.iamexpat.nl/community/members/alexandragowling)

Dutch scientists in Utrecht are setting up a "Living Biobank" to develop cancer medicines based on the DNA profile of individual patients.

The biobank, part of the Hubrecht Organoid Technology, will be set up this summer by the Utrecht Medical Centre (UMC) and the Hubrecht Institute. It has been developed by biotech firm Merus and the Royal Dutch Academy of Sciences (KNAW).

**Taking the living tissue**

The first central project is a trial with 240 patients being treated at UMC for intestine, prostate and pancreas cancer.

UMC will send both healthy and tumour cells from the patient to partnering laboratories in the Netherlands and abroad, where computers will determine the patient’s genetic code (DNA).

Practice shows that the DNA of tumour cells differs from healthy cells, either slightly in dozens of places, or greatly in around 100 places. The difference for each patient provides doctors with a guide for selecting a number of possibly effective medicines from databanks of potentially healing substances.

The cells will then go to labs of Living Biobank, after which researchers will test cancer drugs on them, creating a mini-organ grown in the lab.

**Making cures for cancer**

By generating large collections of mini-organs, researchers expect to be able to better understand why patients respond differently to various anti-cancer drugs. Eventually, a total picture will be built up of the relationships between tumours and subgroups with a specific DNA profile.

This experiment is expected to teach scientist more about the "rules" around how cancer functions and learn which DNA changes lead to a certain sensitivity or insensitivity to medicines.

Many of the medicines necessary for treating cancer do not yet exist, although a number are currently in the making.

"We understand cancer in theory, but the practice of developing better medicines is stubborn,” said chairman of the KNAW Professor Hans Clevers. “The number of deaths is still increasing. Our method may provide a new opening."