Medical Xpress

Oncologists aim to fast-track personalised cancer therapy

June 26 2014

Cancer is incredibly complex, and each tumour is unique. This calls for a targeted approach. Researchers at KU Leuven's Department of Oncology, in Belgium, want to fight cancer by developing 'personalised' cancer therapies. To bolster their efforts, they have established the new Fund for Innovative Cancer Research.

Professor Frédéric Amant is chair of the fund: "Despite the progress made in fighting cancer in recent years, we are all too often powerless. That is the reality. But it should not deter us. Our goal in establishing this fund is to finance projects that transcend the domains of oncology and have the potential to produce real breakthroughs."

The fund is now seeking financial support for the Tumour Xenograft Project, its first major fundraising target. The project is dedicated to a promising line of cancer research that significantly narrows the gap between success in the lab and success in the patient.

The 'Patient-Derived Tumour Xenograft Model' is a technique for gaining more and better information about a tumour. Professor Frédéric Amant: "The Tumour Xenograft Model is a patient-specific approach. By implanting cancerous tissue samples from the patient into mice, we can study the tumour and gain insight into its structure and development, just as if it were growing in the patient."

The researchers comb through the tumour's genetic and other characteristics looking for 'biomarkers' that can be targeted by both

experimental and proven therapies.

These therapies are then tested on mice carrying the tumour. If a therapy shows promising results in the mice, there is a good chance it will also be effective in the patient.

Treatments found to work for one patient can also be used to provide targeted care for other patients with tumours exhibiting the same biomarker.

The researchers want to use the promising 'Tumour Xenograft Model' to study as many tumour types as possible. Insights gained can be used to develop personalised therapies that give each patient the best possible chance of beating their tumour while also minimising side effects.

Because some cancer types are extremely rare, international cooperation is essential. Tissue samples gathered during the project will be included in an international bio-bank and made available to oncologists around the world.

There are no new therapies without innovative research. In establishing this fund, the Leuven researchers call on the support and involvement of the pharmaceutical and technology industries, government and members of the public.

Provided by KU Leuven