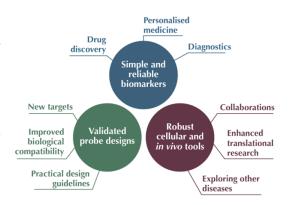DESCRIPTION FOR GENERAL PUBLIC

The main difficulty in the development of efficient therapeutic regimes against cancer is their extreme heterogeneity, observed not only between different cancer types, but also among patients with the same cancer class and even within one tumour. In order to tackle this problem, personalised medicine was developed to adapt the most suitable therapy to each individual case separately, on the basis of the molecular characteristics of the tumour. Currently, tumours are assessed mainly on the basis of their genetics.

The aim of this work is to develop innovative bioluminescent tools to image and classify the cancer on the basis of the non-genetic parameters of the tumour microenvironment.

The use of such probes will enable easier diagnosis and their application during the testing of the treatment will allow for the development of more effective targeted anticancer therapies.