

are examples of medical fields where new technologies are finding their way into research and applications, radically altering the way the diseases are being diagnosed and treated. Especially methods that yield information on molecular and cellular mechanisms open up the way for novel effective therapies for disease prevention and disease curing.

The aim of this ITN is to conduct training and research in the field of novel bio-analytical methods and tools for cell based diseases, in specific for severe cancers and brain diseases. These methods and tools should allow faster and more reliable diagnosis, but are also of great importance for therapy research leading to novel treatment methods. This ITN combines disciplines such as engineering, biotechnology, medicine, and chip-technology and the consortium covers universities, hospitals and industry. The functionality of the devices is determined by the type of measurements that need to be performed, therefore we will focus on a few specific diseases: our cancer research will be aimed at skin cancer (melanoma) and blood cancer (leukaemia), and the part on brain diseases will focus on schizophrenia. Although we will direct our activities towards these three diseases in particular, we expect that the research (methods, devices, and technology) will also have impact on the understanding of other cancer types and other brain diseases.

The partners have ample experience in training and teaching of students (MSc and PhD). The cooperation represents a very attractive opportunity for early stage researchers to acquire interdisciplinary knowledge in a rapidly emerging field and to enrichment their future scientific and industrial careers.

Start date:	April 1, 2011
Duration:	4 years
Consortium:	11 partners from 7 countries
Fellowships:	432 person months for early stage researchers 36 person months for experienced researchers