

## **Bank for tumor cells and nucleic acids (BTCNA)**

BTCNA was established in the last quarter of 2002, under the initiative of Acad. Laurențiu M. Popescu, general manager, after winning a priority project VIASAN by a consortium comprising the University of Medicine and Pharmacy „Carol Davila” Bucharest and „Victor Babes” Institute. Project Leader of the Institute was Dr. Cornel Ursaciuc Head of Immunology Department, so that BTCNA is comprised in this department with a permanent collaboration with other laboratories of the institute. BTCNA began operating in early 2003 and represented for the institute the extension of activities that were made in distinct laboratories: cryopreservation of tissue and tumor cells, nucleic acids extraction, cellular and molecular determinations for research or diagnosis.

The experience of the institut, in conjunction with the clinical base of University of Medicine and Pharmacy "Carol Davila", determined to create a logistic system and BTCNA is the Central Unit, BTCNA - CU. This system involves selecting cases of malignant tumours and collection of biological samples in clinical units, the transport of samples to BTCNA - CU where they are cryopreserved and recorded in the database. These samples will represent working material for cellular and molecular diagnosis, activity carried out with support of several laboratories of the institute, that perform specific tests:

- Immunopathology - tumour markers, cytokines, tumour genomics
- Cytometry - immunophenotyping, cell cycle, apoptosis
- Histopathology - histopathology, immunohistochemistry, hybridization
- Biochemistry – proteomics
- Genetics - genotyping, cytogenetics

The purpose of these determinations is double:

- Fundamental – oncological and pharmacological research
- Clinical - diagnosis, monitoring progress, prognosis

The biological samples received by BTCNA are primarily processed and tumour fragments, cell suspension, integral blood, plasma, serum are kept in order to cryopreservation. The samples' data processing and cryopreservation has been coordinated by Carolina Constantin, biochemist, PhD between 2003 - 2009 and since 2009 by Maria Dobre, biologist. BTCNA has not its own team; it was intended for the use of all reserarch groups in the institute being interested in this field.

In 2007 BTCAN developed by attaching the The Immunogenomic Unit, having funds from a project of PN2-Capacities Programme; its target was cancer molecular screening. The Immunogenomic Unit is also part of the Laboratory of Immunopathology and BTCNA and is intended for border studies in oncology, internal medicine, pediatrics, rheumatology, transplantology, etc.. by the determination of gene analysis and soluble and cellular markers. This unit is coordinnated by Radu Huica, Ph.

Since 2008, BTCAN is an associate partner in „BBMRI” ( Biobanking and Biomolecular Resources Research Infrastructure) PC7 European project led by University of Graz, Austria, which involves achievment of an international network of biobanks. Also through BTCNA, INCD "Victor Babes" is a provider of clinical data and biological material within the project "Resource Center GRID for Translational Research in Oncology”, project with European funds led by UMF „Carol Davila" Bucharest, in which the INCD" Victor Babes" is also a user of the GRID network facilities in Romania.



PhD. bioch.  
Carolina Constantin



Biol.  
Maria Dobre



MD. PhD  
Radu Huică