Laboratoire de Biologie Moléculaire et Cellulaire du Cancer (LBMCC)

Activities

**Staff number**
10-49

**Description of activities**

The LBMCC is a laboratory of fundamental research. It is interested in:

- molecular mechanisms implicated in the development of resistances against chemotherapeutic agents;
- the differentiation therapy based on an approach where malignant cells are treated in a way that these more immature cells may differentiate into more mature cells;
- the development of novel therapeutic approaches based on compounds of natural origin.

The LBMCC is involved in two European projects:

- CORENA-Network; to promote the use of natural products and to form a network between researchers, the industry and Universities. Website: [www.corena-network.eu](http://www.corena-network.eu)
- RedCat-Network; an initial training network for experienced and early stage researchers. Website: [www.redcat-network.eu](http://www.redcat-network.eu)

**Products and services**

As a service provider, we collaborate with different chemist groups or companies in order to quantify specific natural compounds or assess biological effects of extracts or purified compounds regarding cell death and inflammation mechanisms. We have the ability to test and/or screen for any kind of natural or synthetic compounds. For the moment we are assessing the effect various garlic and curcumin compounds and different compounds from marine and plant origins. They are all tested for their potential anti-cancer and anti-inflammatory properties.

**Trading area**

- International

**International locations**

- Greater Region

**Additional information**
The LBMCC is co-financed by the association "Recherche Scientifiques Luxembourg", by the fundation "Fondation de Recherche Cancer et Sang", and by the Télévie. The LBMCC also receives financial support from "Een Haerz fir Kriibskrank Kanner" and the Ministry of Research.

**Contact details**

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**Keywords:** Cancer Research

**RDI**

**R&D Investments**

100% of turnover in 2014

**Industrial property**

Licence(s) on the company's/research centre's technologies granted to third parties: Yes

**Technological/Technical capabilities**

This lab is equipped in order to be able to study the effect of a given natural compound from its extraction out of a plant to the cellular mechanism triggered by this compound. For this, we use Agilent HPLCs coupled to UV and LCMS detection in order to detect fractions with active compounds. Then, we use the different tools to study the effect of these isolated compounds on the regulation of gene expression including DNA (epigenetics) and RNA (Real-time PCR) analysis as well as transfection of various cell lines. We focus more specifically on cell death mechanisms related to stress or mitochondrial cell death as well as anti-inflammatory effects. Results can be completed by in house microarray- (Agilent 44k slides and Axon scanner) and proteomics (GE DIGE with Typhoon scanner).

**Technology keywords**

- Micro- and Nanotechnology related to Biological sciences (Main technology keywords)
- Genome Research (Main technology keywords)
- Biology/Biotechnology (Main technology keywords)
- Medical Technology/Biomedical Engineering (Main technology keywords)
- Medical Research (Main technology keywords)
- Gene - DNA Therapy (Main technology keywords)
• Diseases (Main technology keywords)
• Cytology, Cancerology, Oncology (Main technology keywords)

**Areas of competence**

• Life Sciences, health and biotechnology

**RDI Contact Person**

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