



DEPARTMENT OF LIFE SCIENCES AND MEDICINE (DLSM)

The DLSM combines basic and translational, wet lab and computational research to address critical questions in human health and disease. In the focus area "tumor biology", we investigate mechanisms that govern tumor initiation, migration, invasion and metastasis, the tumor microenvironment, and drug responses by using a combination of experimental in vitro, in vivo and in silico approaches.

Next to their research mission, DLSM members have been implementing and coordinating all teaching programs in Biology, Medicine and Nursing. In the growing field of medical education, we aim at developing novel e-learning tools as alternative teaching approaches. The advanced simulation unit provides the students with a realistic healthcare situation to facilitate learning and practice in preparation of their upcoming clinical experience. Research activities in the field of Nursing Science (nursing education and management, public health, clinical practice) will strengthen the DLSM in the near future.

CONTACT

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CAMPUS

Belval, Biotech I

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L-4362 Esch-sur-Alzette

Belval, Biotech II

6, avenue du Swing

L-4367 Belvaux



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MEMBERS

- 11 professors and associate professors
- 27 Post-Docs and research scientists
- 17 Doctoral candidates
- 27 Technical and administrative staff

FUNDING AND COLLABORATIONS

- Acquired funding 2020-2023: €6 million



Fonds National de la
Recherche Luxembourg

- More than 40 national & international collaborations with research institutions, universities, companies & hospitals

PUBLICATIONS

- 75 peer-reviewed articles in scientific journals (2021-2022)



DLSM

DEPARTMENT OF LIFE SCIENCES
AND MEDICINE

Research areas

CANCER CELL BIOLOGY & DRUG DISCOVERY

- Cancer cell biology of RAS associated stemness traits
- Drug targeting of RAS signalling
- Molecular cell biology of RASopathies

MOLECULAR DISEASE MECHANISMS

- Molecular mechanisms underlying colon cancer initiation and development
- Role of the microenvironment and environmental factors on colon cancer
- Identification of biomarkers and therapeutic targets in colon cancer

SIGNAL TRANSDUCTION

- Intercellular communication in cancer
- Cytokine signal transduction
- MiRNAs and long non-coding RNAs
- Drug screening in 3D cancer models
- Metabolic rewiring in cancer

SYSTEMS BIOLOGY

- Model based Data Integration and Analysis of Disease specific Networks
- Cancer specific signaling networks and multi-scale modeling of cancer
- Integrated modelling and epigenetic regulation of metabolism
- Data mining of human clinical and cohort data
- Tool development

