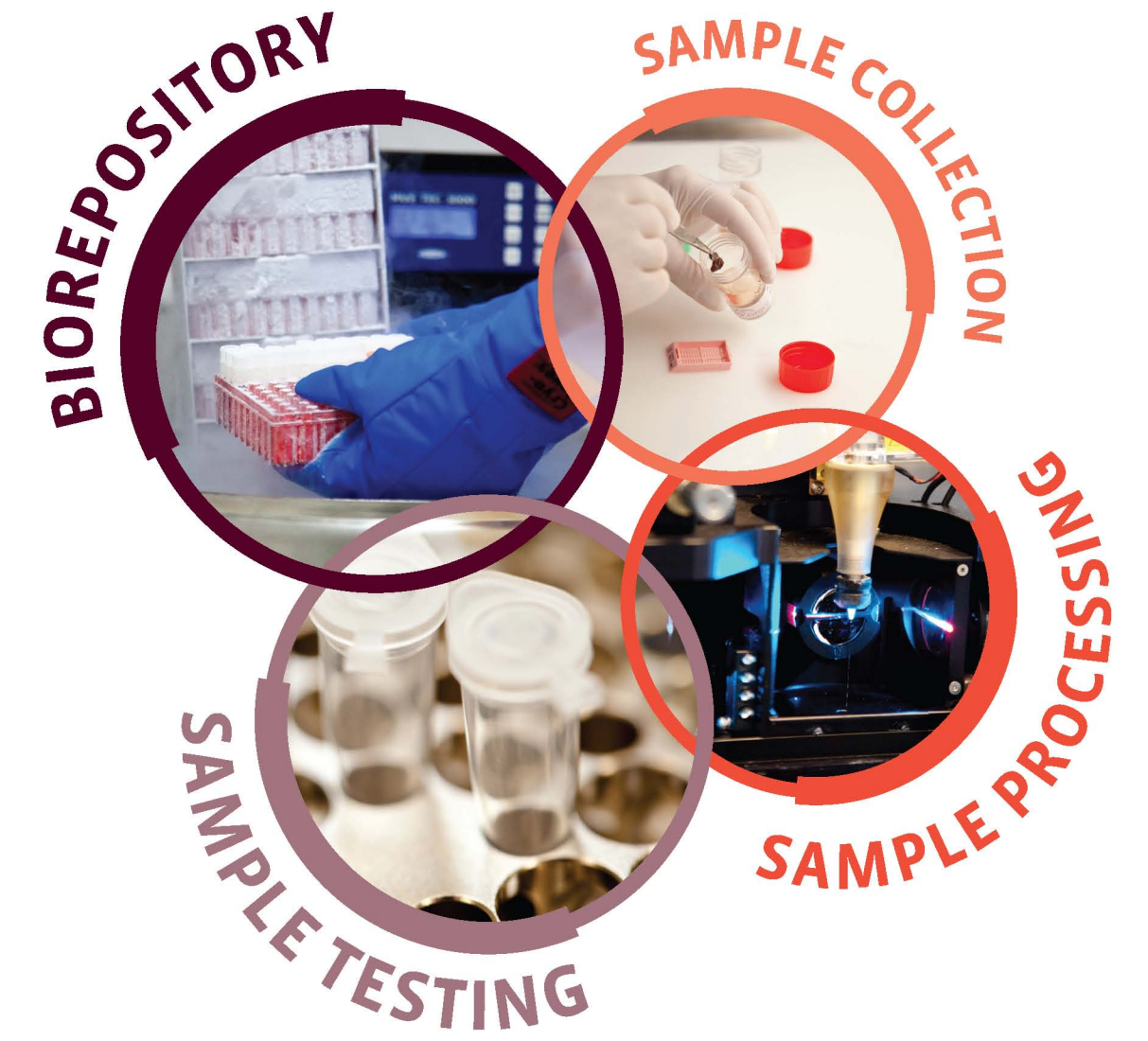


IBBL – YOUR PARTNER IN BIOMEDICAL RESEARCH
S E R V I C E O F F E R



▷ **A State-of-the-Art Infrastructure with Rigorous Application Processes**

The IBBL has built a well-equipped BSL2 specimen processing laboratory, including histopathology, a research oriented laboratory and a robust biorepository, kit assembly operation and cold chain management capability.

The IBBL is dedicated to complying with international standards in sample collection, storage, distribution and analyses. The IBBL is seeking NF96-900 Certification and ISO 17025 Accreditation. Its operations are compliant with ISO 17043:2010 Proficiency Testing, and with ISO Guide 34:2009 Reference Material Production.

▷ **Highly Qualified & Experienced Staff**

The IBBL is composed of 25 highly qualified staff including research scientists (PhDs), pathology specialists (MDs), technicians, project managers and very experienced senior management.

Dr Robert A. Phillips, PhD, Chief Executive Officer
 30 years experience in basic and applied cancer research, and 15 years in leadership roles in institutions focused on translational research and personalized medicine.

Fay Betsou, PhD, HDR, Chief Biospecimen Science
 Molecular biologist with over 15 years experience in molecular diagnostics, disease-oriented biobanking and biospecimen research.

Dominic Allen, Chief Operating Officer
 Engineer and economist with 9 years experience in commercial biorepositories and CROs and 25 years in financial services, strategy consulting, and engineering and construction.

Michel Laborde, MD, Chief Information Officer
 Doctor of Medicine specialised in medical informatics with 25 years experience in software design for the pharmaceutical industry, biobanks and medical research, and 19 years in a leadership role for an international software development company.

For further information, please contact:

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 FOR NEXT GENERATION HEALTHCARE

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IBBL – YOUR PARTNER IN BIOMEDICAL RESEARCH

The Integrated Biobank of Luxembourg (IBBL) is a newly founded independent, not-for-profit biobank designed to promote research in Luxembourg and bring the next generation of healthcare to its citizens.

Created in 2008 as part of the “Health Sciences and Technologies Action Plan” to develop Luxembourg as a centre of excellence in biomedical research, the IBBL’s initial goal is to support three priority research areas - Cancer, Type II diabetes and Parkinson’s disease - and to run a large population cohort for epidemiological studies.

▷ A Comprehensive Service Offer

The IBBL provides a wide variety of samples and offers a large range of services from sample collection and storage to sample processing and testing.

The IBBL takes on work for other organisations, seeking to recover its costs for this, partial recovery in the case of research partners, full recovery in other cases.

▷ International Partnerships

The IBBL collaborates with leading research and health organisations in North America, Europe and the Middle East, and with the major international biobanking societies.

The IBBL is ISBER’s operational partner in its proficiency testing programme for biorepositories, producing quality controlled test panels and shipping them to participating organisations worldwide.

BIOREPOSITORY

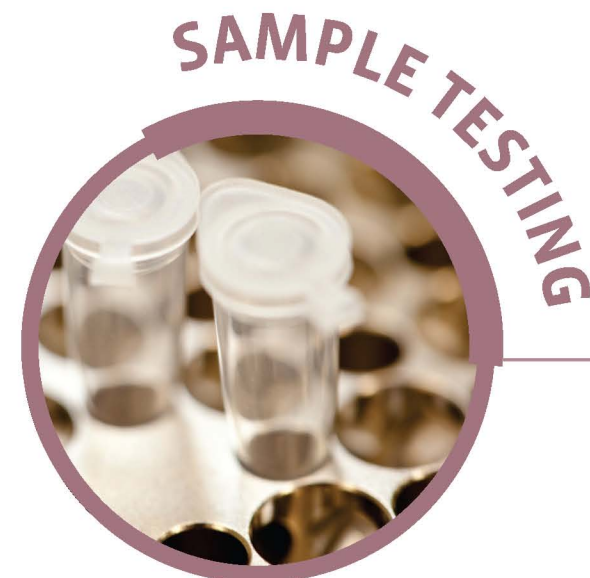


- 80° C storage
- LN2 storage
- Collection kit design and production
- Sample and kit shipping
- Data storage
- Pseudonimization by Trusted Third Party

SAMPLE COLLECTION



Tissue collection from hospitals by IBBL personnel, principally to support priority research projects, but potentially for other research



MOLECULAR BIOLOGICAL ASSAYS

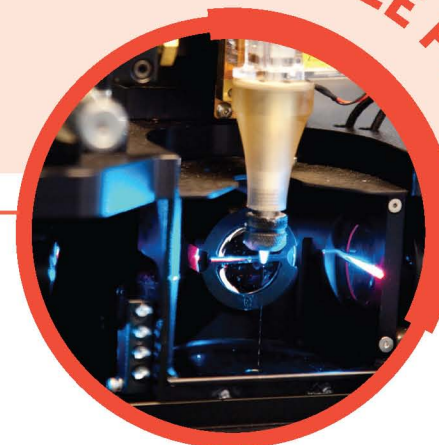
- DNA quantification
- DNA amplifiability
- RNA integrity (RIN)
- Total protein quantification
- qPCR gene expression analysis
- NGS (whole genome sequencing, RNA sequencing, whole genome methylation analysis)
- Wafergen high throughput gene expression analysis
- Long range PCR
- DNA fingerprinting
- DNA damage assessment

IMMUNOLOGICAL ASSAYS

- CD40L measurement
- IHC Multiplex cytokine, inflammation protein, phosphoprotein analysis (Luminex)
- Serum fingerprinting
- DEVELOPMENT AND VALIDATION OF CUSTOMISED NEW ASSAYS**
- ELISA
- Multiplex ELISA (antigen or antibody signatures)
- End-point PCR
- Single and multiplex qPCR - gene expression signatures
- Production of quality control materials
- CELLULAR ASSAYS**
- Cell viability, apoptosis
- Cell metabolic activity testing
- Histological QC (tumor, stroma, necrosis)

SERVICE OFFER

- Genomic DNA extraction
- Circulating DNA extraction
- miRNA extraction
- mRNA extraction
- Protein extraction
- Freeze drying
- Cell sorting - nuclei sorting (influx)
- Primary cell culture
- Lymphoblastoid cell line establishment
- FFPE
- Histology slides preparation
- TMA construction



SAMPLE PROCESSING