

Respiratory

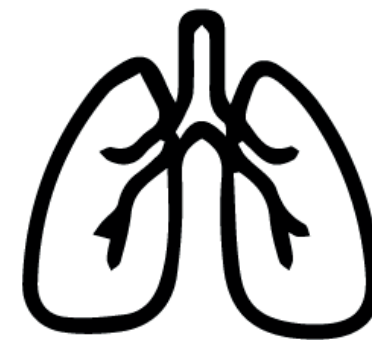
A dedicated portfolio of services for your biomarker research in respiratory diseases

THERAPEUTIC FOCUS

- Chronic Obstructive Pulmonary Disease (COPD)
- Asthma
- Lung cancer

CLINICAL STRENGTHS

- Research Institute for asthma and COPD
- Biomarker Development Center
- Key clinical experts in the Respiratory field
- Multidisciplinary translational studies
- Experience with biomarker discovery
- Experts in patient phenotyping and stratification
- Genetic studies of asthma and COPD
- Biomarker research in Phase I and Phase II clinical trials



PRECLINICAL CAPABILITIES

- Preclinical testing for asthma, COPD, smoked-induced COPD
- Microdialysis in lungs
- Cell interactions studies in sputum, airway and lung tissues
- Genetic studies, translational research

SAMPLE COLLECTIONS

- Patient cohort studies in asthma, COPD and severe COPD
- Large-scale intervention studies
- Possibility of de-novo sampling in patients
- Biomarker discovery in general population biobank (165.000 subjects)
- Matrices: cells, tissues, BALF, plasma, urine, DNA, RNA, sputum

BIOANALYTICAL SOLUTIONS

- **Respiratory assays specialties:**
 - **Fibrinogen in plasma**
 - **Desmosine & isodesmosine in urine**
 - **Survivin protein in serum**
 - **MMP-9 in BALF**
 - **Histamine metabolites in urine**
 - **Inflammatory markers**
 - **Soluble RAGE**
- Validated assays available in primary cells, lung tissue, microdialysates, BALF, sputum, plasma, urine, exhaled breath