



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

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## **EPIDEMIOLOGY, BIOBANKING AND COHORTS**

*Exploiting information generated by clinical practice to identify unmet clinical needs and improve knowledge in diagnosis and therapeutic approach to diseases.*



The **excellence in clinical activity** that for decades has characterized the University of Bologna and the hospitals connected with it provides large opportunities for observational research: several longitudinal collections of clinical data, biological samples and digital images are available and continuously enriched; they cover frequent clinical conditions with still unsolved diagnostic and therapeutic questions (e.g., inflammatory bowel diseases), as well as rare diseases (e.g., mitochondrial neurological diseases).

**Longitudinal collections** frequently include data on diet and lifestyle habits, and focus on longevity and healthy aging. In addition, data on psychological and psychiatric status are collected in specific cohorts of patients. Clinical expertise that characterise all relevant research groups and departments are complemented by **ICT excellence**, which provides updated support in data storage, protection and linkage, as well as in innovative datamining and analysis.

## HIGHLIGHTS

**Biobanks and cohorts of neurological diseases:** biological samples and clinical data from the Neurogenetics Laboratory; record-linkage of healthcare data of patients with Parkinson Disease (**ParkLink**); biological samples and clinical data on mitochondrial disorders from the neurological services of the Emilia-Romagna region (**ER-MITO**).

**Biobanks and cohorts of gastrointestinal/hepatic diseases:** samples and clinical data for the study of microbiota and related diseases; liver disease biobanks; whole genome studies of rare tumors.

**Longitudinal population-based investigations:** Brisighella Heart Study (**BHS**), started in 1972 and involving 3000 subjects clinically evaluated at baseline and every four years thereafter, by collecting an extensive amount of clinical and laboratory data; H2020 projects, e.g. **ORCHESTRA**, aiming at building a pan-European cohort in response to the COVID-19 pandemic, and **ENLIGHTENme**, a population study on the impact of urban lighting on health and wellbeing.