FACULTY OF MEDICINE IN PILSEN
CHARLES UNIVERSITY

Faculty of Medicine in Pilsen Charles University

Laboratory of Antibiotic Resistance and Application of Mass Spectrometry



Charles University

FACULTY OF MEDICINE IN PILSEN

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Charles University: established in 1348

Faculty of Medicine in Pilsen: established in 1945



Univerzita Karlova | Lékařská fakulta v Plzni



Number of students:

General Medicine: 2078

Dental Medicine: 339

(including English-language programme)

Ph.D. Programmes: 222



BIOMEDICAL CENTER

- Modern research facility of the Faculty of Medicine in Pilsen
- Established in 2014

02

Specializations (Research Programmes):

- **Infectious Diseases** (antimicrobial resistance, sepsis, viral infections in immunocompromised hosts)
- **Experimental Surgery and Cancer Research**







Laboratory of Antibiotic Resistance and Applications of Mass Spectrometry in Microbiology

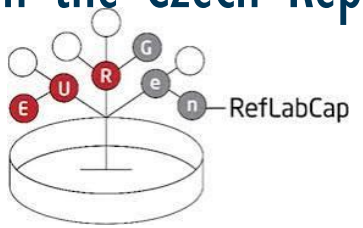
- Molecular epidemiological analysis of multidrug-resistant Gram-negative bacteria
- Development of rapid diagnostic methods based on mass spectrometry
- Microbiological research on sepsis using a large-animal (porcine) model





Laboratory of Antibiotic Resistance and Applications of Mass Spectrometry in Microbiology

- Reference typing of multidrug-resistance Gram-negative bacteria isolated in the Czech Republic
- International projects: EuSCAPE, EURGen, EURGen-RefLabCap



- Development of Czech National Guidelines for the Prevention and Control of Carbapenemase-Producing Bacteria
- Development of novel tests for rapid rapid clinical mikrobiology diagnostics using MS

One Health research — collaboration with University of Veterinary Sciences Brno (CZ)

- **Molecular epidemiology and genomics of antimicrobial-resistant bacteria**

  from livestock, companion animals and wildlife

- **Transmission and persistence of resistance determinants**

  with emphasis on mobile genetic elements, plasmids and high-risk clones

- **Wildlife as a sentinel and reservoir of AMR**

  including studies of birds and human-impacted environments

- **One Health surveillance**

  linking veterinary, environmental and human AMR data

