
1st Department of Internal Medicine – Cardioangiology

The 1st Internal Cardiovascular Clinic of the Hradec Králové Faculty of Medicine and University Hospital is part of a comprehensive cardiovascular centre, which is dedicated to curative and preventive care, pre- and postgraduate teaching and scientific research. The department is involved in a number of research projects: four research projects of grant agencies (e.g. the Medical Research Agency of the Ministry of Health of the Czech Republic), the Operational Programme Research, Development and Education, its own academic studies, research projects of students of doctoral study programmes (11), development projects of the Faculty of Medicine (3). The department is also involved in 10 clinical trials (clinical studies). The results of scientific research activities are presented at domestic and foreign scientific conferences and in the form of scientific publications in prestigious scientific periodicals. The scientific research focus covers virtually the entire spectrum of diseases of the cardiovascular system, including vascular diseases. In solving a number of projects, the I. Internal Cardiology Clinic cooperates with regional, national and international scientific institutions. The department is involved in the Cooperatio programme.

Main research topics

- Interventional cardiology - issues related to non-coronary and coronary interventions (e.g. development of devices for quantification of shunt circulation, participation in the PRAGUE study, etc.)
- Electrophysiology and pacing (e.g. new approaches involving physiological myocardial pacing)
- Heart failure and non-invasive cardiology (e.g. proteomics in cardiomyopathies, cardiotoxicity of anticancer therapy, new imaging methods in the diagnosis of cardiovascular diseases)

Scientific research groups

Most of the medical team of the Institute is involved in the above research projects in collaboration with non-medical professions. The members of the scientific research team are associated within the framework of a specific project. In solving individual projects, emphasis is placed on the involvement of young doctors, not only in the context of their doctoral studies. We consider the involvement of the young generation to be very important for the development and continuity of scientific research work at our clinic. In research projects, we support the cooperation of scientific research groups with scientific research teams of other departments not only within the region, but also at the national and international level.

Equipment

- In the field of interventional cardiology, there are 2 fully equipped catheterization rooms where coronary and non-coronary interventions can be performed.
- In electrophysiology and cardiac pacing, there is 1 electrophysiology and 1 cardiac pacing suite, both fully equipped.
- For other areas, the department is equipped with state-of-the-art imaging methods (a wide range of echocardiographic modalities, as well as magnetic resonance and CT), very close cooperation with other departments providing complementary methods (e.g. biochemistry, proteomic methods), very close cooperation with other departments at the Faculty of Medicine and other scientific research institutions in the region and the country.

Achievements

- Participation in the PRAGUE-17 study, which won the Lore Prize, the Czech Head project and the Rector's Prize
- Completion of the development and obtaining of CE mark of the device for thermodilution quantification of short circuits and flows
- Fifth edition of the monograph "Clinical Cardiology" - organized by J. Vojáček, J. Kettner, J. Dušek, and with the participation of a number of clinic staff