RESEARCH FACILITY

Cell and Tissue Engineering Unit (CTEU-cGMP)

PRINCIPAL INVESTIGATOR

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KEY INTERESTS
Cell-Based Medicinal Products • Advanced Therapy Products • Tissue Engineered Products • Adult Stem Cells • Human Embryonic Stem Cells • Human Induced Pluripotent Stem Cells • Gene Therapy

RESEARCH FOCUS
CTEU-cGMP facility represents a unit for Cell-based Medicinal Products (CBMPs) or Advanced Therapy Products (ATPs) including cell therapy and tissue engineered products. These products are manufactured from viable autologous, allogeneic or xenogeneic cells and they can also contain non cellular components (chemical/biological compounds, matrices, scaffold etc.). All manufacturing and production control activities in CTEU are carried out in accordance with the principles of cGMP quality, to provide the authorization for the manufacture of investigation all medical products within the clinical trials. Environmental Monitoring and Assessment is conducted continuously during the production processes.

RESEARCH OBJECTIVES
Development of clinical-scale manufacturing processes based on cell and tissue engineering.
Development of analytical methods for product characterization and release.
GMP manufacturing and quality control of releasing clinical-grade products.

EDUCATION
- 2001: Ph.D. in Molecular Biology and Genetics, Masaryk University, Brno, Czech Republic
- 2001: RNDr. in Molecular Biology, University of South Bohemia, České Budějovice, Czech Republic
- 1997: MSc. in Biochemistry, Masaryk University, Brno, Czech Republic

CREATING THE FUTURE OF MEDICINE

CLINICAL CARDIOLOGY
CLINICAL NEUROLOGY
TRANSLATIONAL MEDICINE
BIOMOLECULAR AND CELLULAR ENGINEERING
RESEARCH FACILITIES
OFFERED SERVICES AND EXPERTISE

The facility provides licensed manufacturing and testing of cGMP grade cell-based medical products for pre-clinical and clinical trials and is available to academic and private sector scientists.

Take care of the project license and authorization process.

MAIN PARTNERS AND COLLABORATING INSTITUTIONS

- Institute of Hematology and Blood Transfusion, Praha, Czech Republic
- Masaryk University, Brno, Czech Republic
- The Institute of Genetic Medicine, Newcastle, United Kingdom

TECHNOLOGICAL EQUIPMENT

- 4 clean room units grade A inside grade B rooms and multifunctional C grade laboratory.
- Independent systems for cell expansion: CliniMACS Prodigy® System; Terumo Quantum® Cell Expansion System.
- Inverted Fluorescence Microscope with micromanipulators and injectors for applications such as Confocal, FRET, High Content Analysis (HCS), and Photobleaching/Photo Activation to study interaction of fluorescence protein molecules in living cells and tissues.
- Independent Quality Control Unit.