

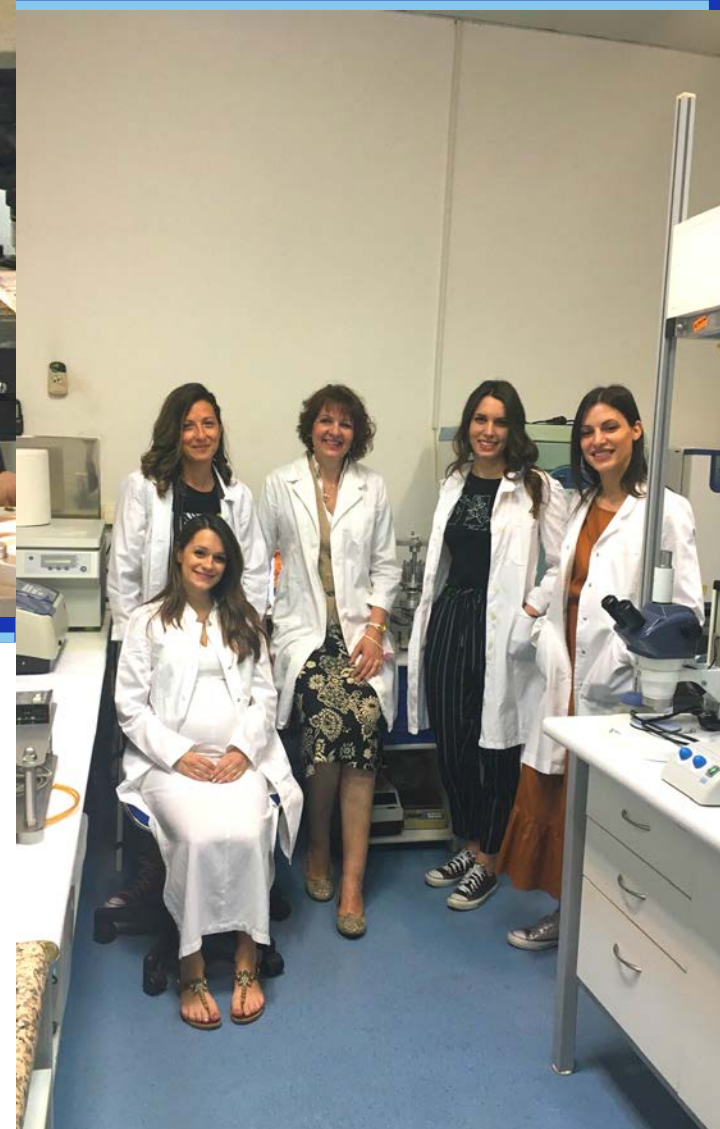
About us

The Biomedical Engineering Laboratory at the Chemical Engineering Department, Faculty of Technology and Metallurgy, University of Belgrade, was established to conduct research in the fields of biomedical and biochemical engineering for variety of applications in biotechnology, pharmacy and biomedicine. In the year 2004 the Biomedical Engineering Laboratory was renovated according to GLP standards by the Ministry of Science as a potential center of excellence for biomedical research in the country.



Biomedical Engineering Laboratory

Faculty of Technology and Metallurgy
University of Belgrade



Contact Us

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Mission

We are working on development of new products and technologies for skeletal tissue engineering, as well as on development of novel biomaterials for medical, veterinary and pharmaceutical applications.

Vision

To become an internationally recognized scientific-research group in the field of biomedical engineering doing transfer of innovative ideas and scientific results into novel, actual products ready for the market in collaboration with industrial partners.

Services

- Biomimetic bioreactor systems (perfusion, with dynamic compression, with hydrostatic pressure) for biomaterial evaluation under controlled in vivo-like conditions (e.g. cytotoxicity studies on animal cells, biodegradation, release kinetics of active substances)
- Immobilization of active substances and cells in hydrogels and development of controlled release systems
- Mathematical modeling
- Consulting on 3D cell and tissue cultures
- Design, development and scale-up of novel bioreactors
- Intellectual property consulting and services

Team



PROF. DR. BOJANA OBRADOVIĆ
Head of the laboratory

Principal investigators



Jasmina Stojkowska, PhD
mol. biol, biochem. eng.



Andrea Osmokrović, PhD
MD, biomed. eng.



Jovana Zvicer, PhD
chem. & biomed. eng.

Researchers



Mia Radonjić



Ivana Baničević



Jelena Petrović

Research

- development of **novel biomimetic bioreactor systems** that imitate physiological conditions to stimulate in vitro tissue regeneration
- development of **multifunctional biomaterials** based on polymer hydrogels (e.g. alginate, poly(vinyl alcohol), gellan gum) and different active substances (e.g. silver nanoparticles, honey, activated charcoal with adsorbed therapeutic agents) for biomedical applications such as wound dressings and soft tissue implants
- biomaterial evaluation and 3D cell and tissue studies utilizing **biomimetic bioreactors as relevant model systems** to predict outcomes upon in vivo application as well as to decrease the extent of required animal tests
- relevant and reliable **3D models for drug screening**

Publications

>200

Patents

3

Technical inovations

3