



BIOLOGICAL RESEARCH CENTRE, SZEGED

www.brc.hu/en

- **Founded in 1973**
- **Located in Szeged**
- **Member of the Eötvös Loránd Research Network**
- **Centre of Excellence of the Hungarian Academy of Sciences**
- **EU Centre of Excellence**
- **Institutional memberships in 2 international organizations**
- **2 consortial research projects**
- **6 bilateral governmental projects**
- **481 employees of which 210 researchers**
- **233 publications (2020)**
- **12556 citations (2019)**
- **Impact Factor: 1226 (2020)**

The **Biological Research Centre, Szeged** is open to further joint research activities at the international level.

For any additional information on possible international cooperation please contact Mr. László SIKLÓS PhD at siklos.laszlo@brc.hu.

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The **Biological Research Centre, Szeged** is the largest research facility of the Eötvös Loránd Research Network. Its activity covers all areas of modern biology. **The Biological Research Centre, Szeged**, is an outstanding institution of the internationally acknowledged Hungarian biological research. In 1973 the inauguration ceremony of the **Biological Research Centre, Szeged** was honored by the presence of **Albert Szent-Györgyi**, Hungarian Nobel Laureate scientist, who had the opportunity to visit the place of his former research activities, that had led him to discover vitamin C, the University of Szeged.



The guiding principle of the **Biological Research Centre, Szeged** was to create a platform for modern multidisciplinary research, thus independent research institutes with different research profiles were established.

- **Institute of Biophysics:** dynamics of biological macromolecules, mechanics of biomolecular interactions, ultrafast photobiological processes, optical micromanipulation, microfluidics and lab-on-a-chip technology for biology, biophotonics, biological barriers and, in particular, the neurovascular unit, motoneuron-degenerative diseases

- **Institute of Biochemistry:** bacterial and fungal evolutionary studies, bacterial genome engineering, cell cycle and transcription regulation, genome-scale analysis of metabolic circuitry, membrane composition and stress response, microscopic image analysis and machine learning, protein conformation and ligand binding, transgenic mice as disease models, tumor pharmaco- and immune-therapy
- **Institute of Genetics:** genome editing, drug testing in insects, genetic analysis in disease models, DNA based cancer diagnostics, transposon characterization for gene therapy, identification of factors influencing DNA repair with genetic and molecule screening, IPS based cellular disease models, stem cell based veterinary therapy, production of diagnostic biological drugs in cell cultures
- **Institute of Plant Biology:** biomedical application of plant peptides, re-designing plant morphology, improvement of nitrogen fixation and stress tolerance, in silico and artificial photosynthesis, optigenetic control of gene expression, affordable plant and algal phenotyping platforms, wastewater treatment with coupled bioenergy generation, microfluidic devices for single cell studies, biohydrogen and bioenergy production

The Biological Research Centre, Szeged is mainly a scientific basic research centre, but its scientists play an initiative role in the foundation and promotion of biotechnological companies, as well as in educational duties. The successful activity and high-level scientific research pursued in the **Biological Research Centre, Szeged** were also acknowledged by

the **European Molecular Biological Organization (EMBO)**, and in 2000 the **European Union** awarded the title of “**Centre of Excellence**“ to the **Biological Research Centre, Szeged**.

Human resources data (researchers and other employees)

In the **Biological Research Centre, Szeged** the average number of employees was 481 in 2019, of which the number of researchers was 210. 39% of the researchers were women. 19 scientists held the title of Doctor of the Hungarian Academy of Sciences, and 152 co-workers had a PhD. The rate of young researchers (under 35) was 50%.

Institutional membership in international organisations

- EuroBioImaging
- Association of Resources for Biophysical Research in Europe – ARBRE

List of articles on the main achievements of the Biological Research Centre, Szeged published in 2020

- A transition to stable one-dimensional swimming enhances *E. coli* motility through narrow channels ([link](#))
- I-Block: a simple *Escherichia coli*-based assay for studying sequence-specific DNA binding of proteins ([link](#))
- The chromatin remodeler ALC1 underlies resistance to PARP inhibitor treatment ([link](#))
- Differential phosphorylation of the N-terminal extension regulates phytochrome B signaling ([link](#))

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