

## Biology Park Brno

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WWW: <http://biologypark.cz>

Park location on the map: [here](#)

Reg.nr.: 41602706

Director: Ing. Michal Burian, MBA ([info@biologypark.cz](mailto:info@biologypark.cz))

### Operating data of the park

**Membership in STPA:** YES

**State of the park:** accredited

**Partner in project SPINNET:** NO

**Launch day:** 1.1. 2016

**Founder(s):** Biology Park Brno a.s.

**Owner(s):** Biology Park Brno a.s.

**Operator(s):** Biology Park Brno a.s.

**Type of entity:** Biotechnological science and r

**Criteria for acceptance of innovation firm:** 1. Proven innovative potential

2. Less than 3 years since the company was based

### Description of the park

#### Introduction

Biology Park Brno is a science and technology park in Brno with a focus on biotechnology and biomedicine. The main purpose of this project is to support the competitiveness and transfer of research and development results in the field of biomedical and biotechnological applications, with an emphasis on encouraging the transfer of knowledge and technology between higher education institutions and business entities. There are spaces of various types available for rent - classical offices, biological laboratories and chemical laboratories. All these areas can be also used by business start-ups in a mode of business incubator.

For our clients, we also offer the contacts mediation and the possibility of using the outputs of regional research centers and universities. We provide contacts and opportunities to present your products and ideas to business angels, venture capital funds as well as individuals offering financial participation and support. Our clients can also take an active part in the projects implemented by us or the Regional Chamber of Commerce of South Moravia and therefore influence the objectives and use of outputs of the projects being solved. For those interested in using the reputation and address of a science and technology park, we offer the possibility to use a virtual office service with its own mailbox and various levels of other services. We also organize various workshops, either alone or in collaboration with companies that are settled in Biology Park, aiming at enhancing our clients' professional know-how, sharing experiences and networking between the companies.

## Description of technology transfer

1. Brightify s.r.o. – product „Drug Infusion“ – helps the doctors to choose the optimal infusion dose for the patients. The only appliance they need for is a smart phone.
2. Brightify s.r.o. – product „Instant ECG – Electrocardiogram Rhythms Interpretation Guide“ – holds more than 140 exam questions which test the knowledge on Electrocardiogram, interpretation reference netter images of the heart, blood supply, MI correlation to the ECG and myocardial action potential. It can be used by physicians, nurses and paramedics for a quick reference and as a study guide.

Among the activities of other settled entities, we would like to mention the following:

GENPROGRESS, s.r.o.

The company focuses on research in the field of the most modern genetic and cytogenetic methods, they have developed the beREADY product, which is a test that analyzes the maturity of endometrial receptivity from the point of view of the appropriate time for embryo implantation. This test uses the new and highly accurate TAC-seq DNA sequencing technology, which enables the detection of biomarker molecules at the single molecule level, providing maximum sensitivity and accuracy. Another test developed by the company is Prenatal Safe, this test can determine from a pregnant woman's blood whether her child is at risk of any of the most common syndromes (Down's, Pata's and Edwards'). This test can also examine sex chromosomes.

REFROMEDA Lab

In 2022, the company REFROMEDA Lab developed the most widespread version of a panel diagnostic analysis called PANDA Exom (a genetic test that detects mutations in all known genes causing monogenic diseases, this is a comparison of mutated genes in both partners, so-called genetic matching), in 2021 it was the PANDA Carrier test (predecessor of the PANDA Exom test, which investigated over 100 clinically relevant genes and mutations using the NGS method) and in 2020 it was the OneGene PGT test method for testing selected monogenic diseases (mutations in the genes CFTR, FMR1, HTT, BRCA1, BRCA2 and HBB).

FAGOFARMA s.r.o.

The company develops and researches biotechnological preparations based on bacteriophages, tries to use this segment of modern microbiology and transfer it to clinical practice. The use of bacteriophages represents one of the ways that lead to the solution of the pressing issue of the dramatic increase in resistance to antibiotics and the management of bacterial infections. The company therefore focuses on the preparation of immunobiological phage preparations, their final products will have the character of active substances (APIs), medicinal preparations, disinfectants, etc.

International Center for Clinical Research Faculty Hospital at St. Anna (FNUSA-ICRC)

Several FNUSA-ICRC research teams are allocated in our science and technology park, below we present their overview including their hypotheses and objectives:

- The Neuroscience and Aging in Translational Medicine research team aims to advance our understanding of aging and age-related disorders, particularly neurodegenerative. A thorough understanding of behavioral and cognitive neurology is associated with stem cell and animal models of aging and neurodegeneration with particular emphasis on synaptic and axonal changes.
- The research team of cellular and molecular immunoregulation, which focuses on various aspects of the human immune response, mainly on the connection of the basic mechanisms of immunity and immune cell signaling with the development of disorders and pathologies. The main topics are the role of the immune response in the progression of sepsis and septic shock, including the study of long-term consequences. The aim is to describe the role of TLR receptors in the acute immune response, chronic inflammation and tissue regeneration using mucosal 3D organoids and immune cells, as well as the description of the molecular connection between innate immune signaling and metabolic changes in myeloid cells and the mechanism controlling the activation of the immune

system in chronic inflammation (e.g. Crohn's disease).

- The mechanobiology of disease research team focuses on the research of disorders of the cardiovascular system using tissue and cell models, on which scientists reveal the mechanobiological changes accompanying pathological conditions during aging, the development of heart diseases and cancer. The group's working hypothesis is the finding that defects in the sensory apparatus, the so-called mechanosensing apparatus, contribute to pathologies associated with aging. The goal is the characterization of potential cellular mechanosensors that can participate in the development of cardiac pathologies, but also serve as suitable biomarkers of the disease. Furthermore, the aim is to identify new molecular processes involved in the acquisition of the cardiac phenotype.
- The epigenetics, metabolism and aging research team focuses on the study of histone splicing variants of histone macroH2A1 as energy sensors and oncogenes in many types of cancer and their function during cellular reprogramming in the induction of pluripotent cells. The aim of the group is to reveal the side effects of the „youth factor“ GDF11 in obese mice and humans, to investigate the role of longevity-associated allelic variants of the SIRT6 protein in liver cell metabolism, and to study macroH2A1 epigenetic isoforms and components of DNA repair mechanisms in endothelial cells reprogrammed to induced pluripotent stem cells (iPSCs).

### **Innovative entrepreneurship training**

498 / 5 000

Výsledky překladu

Výsledek překladu

Education for innovative entrepreneurship is ensured by close cooperation with the Regional Development Agency of South Moravia, the Regional Chamber of Commerce of South Moravia, the Chamber of Commerce of the Czech Republic and the regional branch of CzechInvest. With their support, we organize various seminars and workshops for settled subjects, the aim of which is to increase the competitiveness of settled innovative companies. These events are therefore focused both on legal, subsidy and accounting background, as well as on technological and business consulting.

### **Advisory services**

Biology Park offers a comprehensive service in technology transfer and in the area of project creation and management. It includes help in choosing a suitable subsidy program to support investments, including help in the complex processing of a project application, including advice in the awarding of public contracts. We provide joint marketing and PR, help with involvement in national and international networks and projects, in establishing communication with research and development workplaces, universities and industry.

### **Innovation infrastructure**

Our science and technology park is based on the regional innovation strategy of the South Moravian Region and the Statutory City of Brno for the period 2021-2027, which aims to increase the economic competitiveness of the entire South Moravia. This strategy also defines the sectors that are most prominently represented in the region and historically show the greatest potential for strengthening competitive advantage based on knowledge and innovation. These sectors are:

- a) Software and services in IT
- b) Instruments and devices for measuring and sensing
- c) Advanced machines and engineering equipment (engines, turbines, hydraulic equipment, special production machines)
- d) Instruments and devices for measuring and sensing
- e) Advanced machines and engineering equipment

f) Energy engineering and electrical components (distribution devices, motors, generators)

g) Medical and pharmaceutical products, diagnostics

h) Aerospace (aeronautical and space technologies)

Taken through the lens of our biotechnology park, points b) and g) concern us most from the point of view of the focus of the subjects settled here.

The strategic goals of RIS JMK include, for example:

- Creating a home for globally successful entrepreneurs with the aim of multiplying the number of people with a desire to do business, increase the number of dynamically growing companies, increase the number of companies capable of international expansion with their own product, expand the community and deepen the cooperation of local business leaders.
- To strengthen the cooperation of managers of innovative foreign corporations and their involvement in the development of the ecosystem.
- Encourage the use of skills through collaboration with practice.
- Strengthen the international attractiveness of research and education in profile fields and address the challenges of the contemporary world, strive to diversify the activities of global companies in the region for the use of the present knowledge potential.
- Increase the activity of local investors and investor clubs, form the background for the creation of business hubs.
- Mobilize the partnership of the best research teams with companies.

We believe that we also contribute to these selected strategic goals of RIS JMK through the activities of our science and technology park.

### **Cooperation with universities**

Arrangement and offer of internships for the students of Masaryk University in Brno with companies based in our VTP. Mutual use of technological environment and equipment. Mediation of lecturing activities of company representatives in VTP within the lectures at MU Brno. Providing rhetorical capacity of MU Brno for events held in VTP. Providing background materials and contacts for the solvers of bachelor, master and doctoral thesis. Further cooperation takes place at the level of our companies - organizing professional seminars on the latest scientific knowledge in the field of artificial insemination and reproductive genetics (GENPROGRESS), application of the own scientific results into practice (research section of FNUSA-ICRC).

### **Services provided to innovation companies**

**by STP**

**external**

**Consultancy**



business plans



technological advisory



patent advisory



certification advisory



financing advisory



accounting

☐

legal advisory

☐

marketing advisory

☐

education (courses for entrepreneurs)

**by STP**

**external**

**Technical services**

☐☐

secretarial services

☐

telephone exchange

☐

telephone, fax

☐

copy

☐☐

text processing

☐

reception

☐

buffet, canteen

☐

conference space

☐

computer for technical usage

☐☐

workshops

☐

laboratories

☐

access to data banks

☐☐

exhibition space

**by STP**

**external**

**Financing**

☐

equity

☐  
☐  
credits  
☐  
☐  
subsidies  
☐  
☐  
other forms

## **Service expenses**

### **STP service costs**

☐  
only according to actual costs  
☒  
only fixed payment tariff  
☐  
fixed payment and additional charge for use  
☐  
in lumps: rent, security, cleaning, phone, post

### **Other costs (p.a.)**

**acc. to usage**

**fixed CZK/m2**

heating

☐

electricity

☐

1600

others

☐

100

total

1700

### **Rent (p.a.)**

**CZK/m2**

office space

3500

production space

others

4300

## Statistical data

innovation

other

institutions

**TOTAL**

**Companies**

1

1

**Employees**

89

89

**Rented area m2**

2116

2116

STP

**Land area**

3978 m2

**Built up park area**

3270 m2

**Utility area**

3804 m2

**- Rented area**

2116 m2

**= Remains for rent**

1688 m2

## Innovation companies

**IFCOR-99, s.r.o.**

Reg.nr.: 25565052

This company operates on the Czech market for more than 20 years. They offer complex laboratory services for general practitioners, outpatient center specialists, inpatient hospital wards and veterinaries. They newly implemented a diagnosis of ZIKA virus or diagnosis of cervical carcinoma risk on the base of methylation of tumor supression genes.

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Technologies:

0100 - Bioengineering  
0102 - Biomedicine  
0105 - Equipment for bioengineering  
0108 - Molecular biology

Branches:

73 - Research and development  
85 - Health and social work

Subject:

**weXelerate**

Country:

Austria

Type of cooperation:

other

Description: weXelerate is the biggest start-up and innovation hub in the area of Central and Eastern Europe based in Vienna. They associate big companies and start-ups as well as investors with an interest in new digital business models. Every year they support 100 the most innovative start-ups from all over the world, that are focused on energy, infrastructure, Industry 4.0, media, insurance and banking as well as cross-industry technologies as IoT, AI, mobility, chatbots, blockchain and cyber security.

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