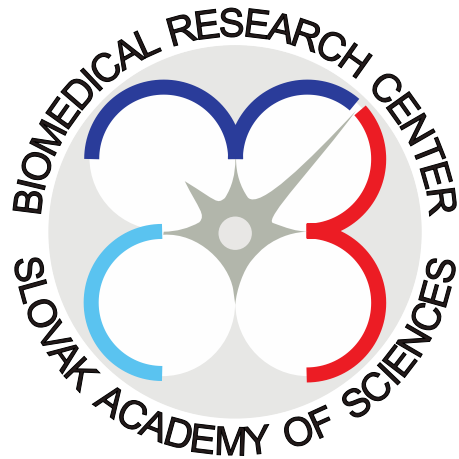


**BIOMEDICAL RESEARCH CENTER
OF THE SLOVAK ACADEMY OF SCIENCES**

BRATISLAVA, SLOVAKIA



Alliance4Life

The BIOMEDICAL RESEARCH CENTER SAS is a multidisciplinary institution devoted to basic and translational research in biomedicine, established through merge of 5 previously independent institutes of the SAS:

on January 1st, 2016

**The Cancer Research Institute
The Institute of Experimental
Endocrinology**

**The Institute of Clinical and
Translational Research**

The Institute of Virology

all in Bratislava



on January 1st, 2018

**The Institute of Neurobiology
in Košice**



RESEARCH FOCUS:

molecular and physiological mechanisms of human diseases and co-morbidities that represent major socio-economic and health-care burden in Slovakia and worldwide, **development of new diagnostic, stratification and/or therapeutic strategies**

MAJOR RESEARCH AREAS:

endocrinology, neurobiology, cancer, genetics, immunology, virology, microbiology

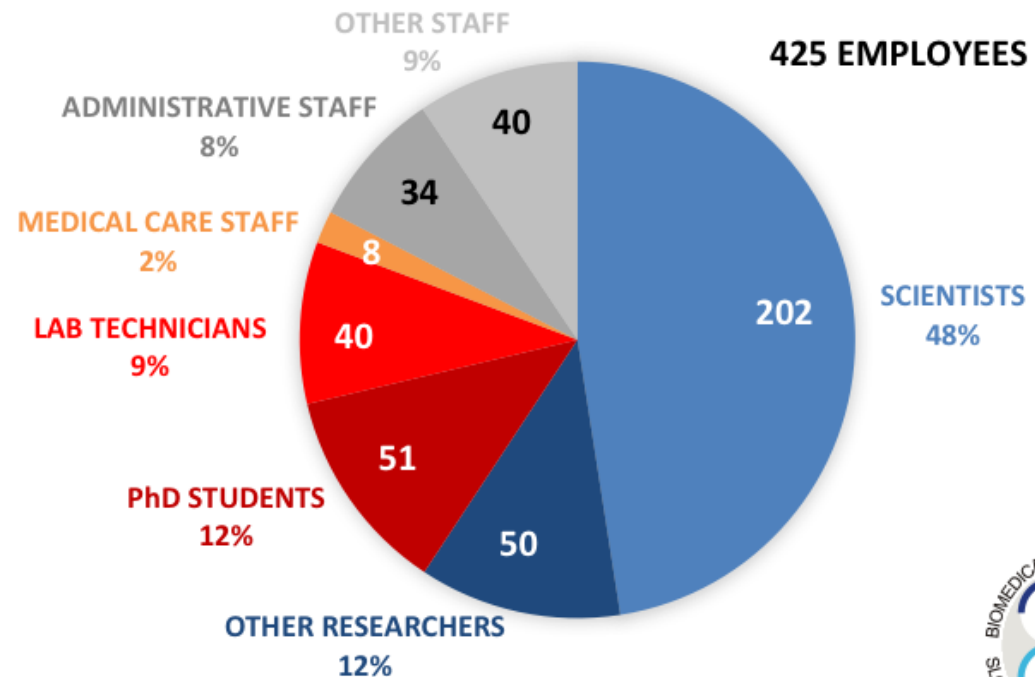
PROJECTS IN PAST 5 YEARS: over 120 VEGA, 85 APVV, 15 FP and H2020, 20 ESIF/ERDF

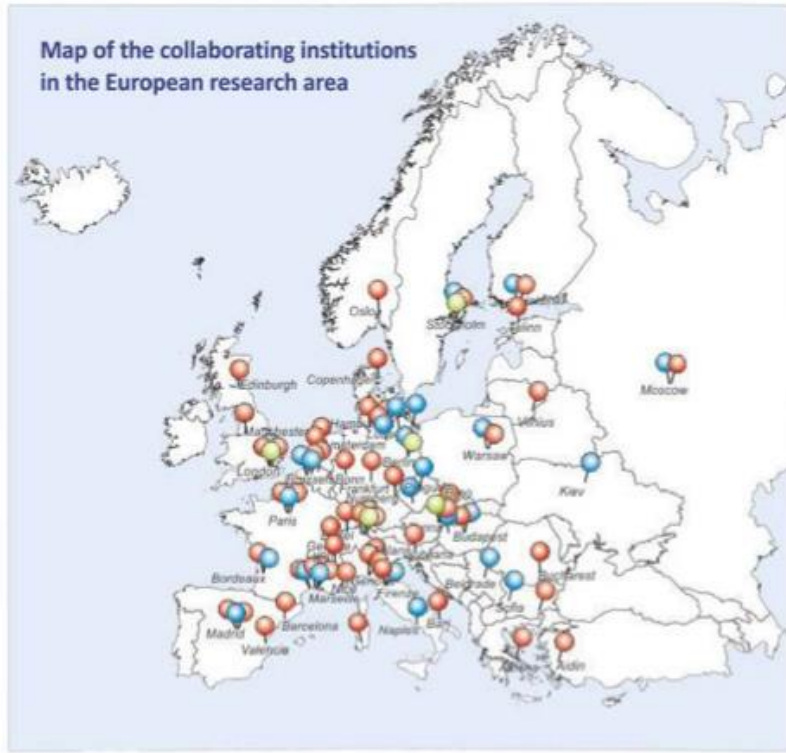
9 PhD PROGRAMS:

molecular biology, oncology, virology, microbiology, genetics, biochemistry, Normal and pathological physiology, animal physiology, neurobiology

EDITORIAL OFFICES:

Neoplasma, Acta virologica, Endocrine regulations

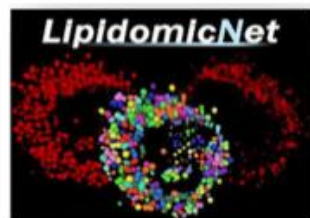




- Partners collaborating within international projects
- Co-authors of common publications
- Commercial partners



3 Trial Sites
UK
France
Slovakia



EU PROJECTS



FP7-INFRASTRUCTURES-228292 (01/2009-03/2015)
European Virus Archive
 H2020-INFRAIA-653316 (04/2015-03/2019)
European Virus Archive Goes Global
<http://www.european-virus-archive.com/>

INNOVATIVE PARTNERSHIP FOR ACTION AGAINST CANCER (iPAAC)





TRANSLATIONAL RESEARCH and APPLICATIONS

- DNA diagnostics of monogenic diabetes, obesity and other hereditary disorders for personalized therapeutic decisions and pre-natal diagnostics. **DIABGENE, DEPT .OF HUMAN GENETICS**
- Prevention and intervention programs of physical activity against obesity, chronic diseases, ageing and cognitive decline to support fitness and quality of life. **RESEARCH CLINIC & CENTER FOR MOBILITY**
- Detection of prognostic and/or predictive biomarkers of cancer, cardiovascular, neuroendocrine and autoimmune diseases for diagnostic and stratification purposes. **CA9 MARKER OF HYPOXIA IN CANCER** (IPR protected)
- Detection of viruses, chlamydiae and rickettsiae for early diagnostics and epidemiology and production of Coxiella burnetii antigen for vaccination against Q fever. **GLP CERTIFICATE**
- New means and procedures for protection, neurogenesis and reparation of trauma in CNS and spine.



TECHNICAL INFRASTRUCTURE

genomics, proteomics, metabolomics,
cytoanalytics, bioimaging,
biotechnologies, animal facilities (BSL3
and ID),

RESEARCH CLINIC

immunologic and metabolic
ambulances

RADIOBIOLOGICAL LABORATORY

BIOTECHNOLOGICAL AND ANALYTICAL LABORATORIES

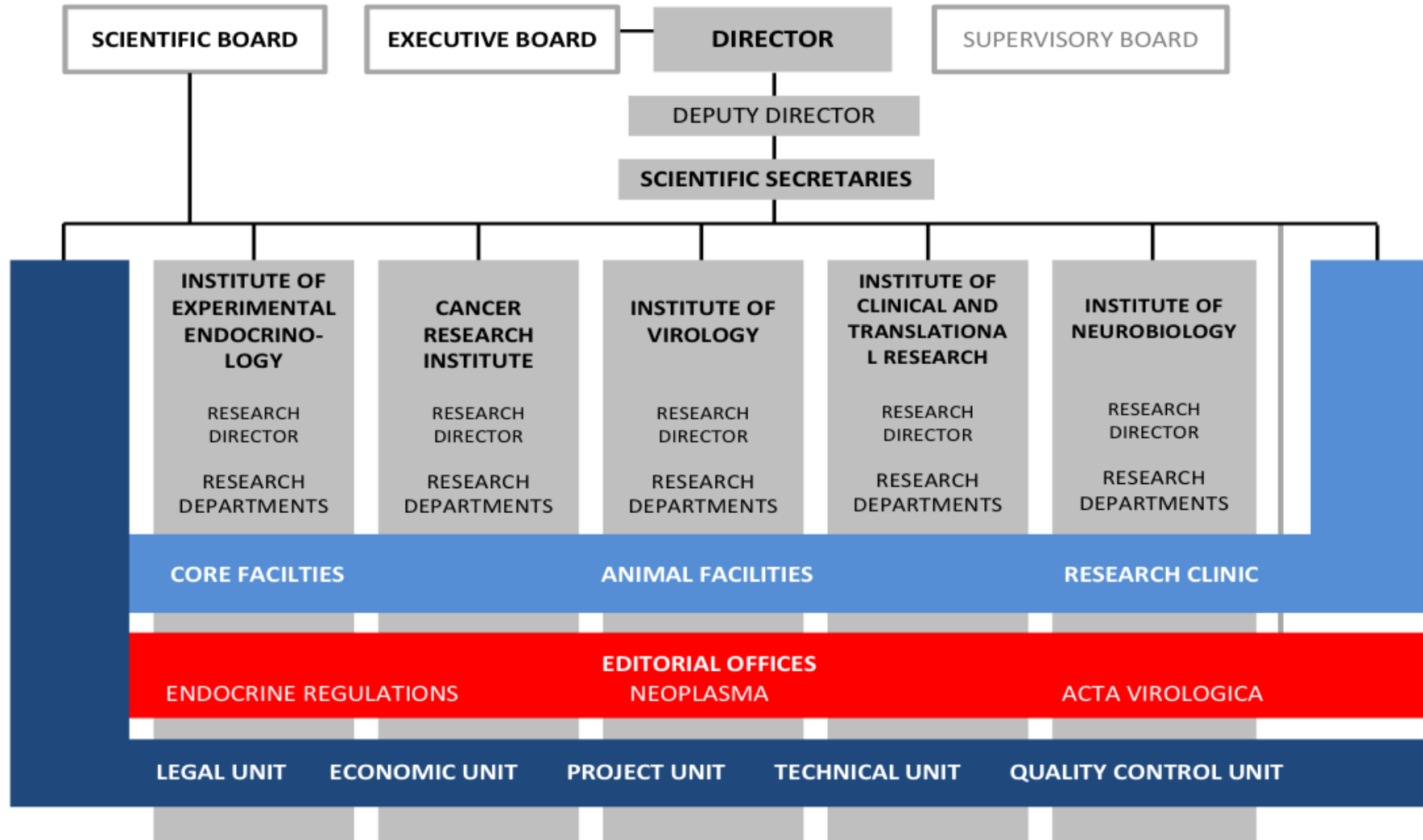


experts with
technical skills
and creative
thinking





From January 2016 – horizontal integration, structure re-design, operational consolidation, building common identity, improving research focus and quality of outcomes, performance evaluation
2017-2026 STRATEGY including visions and implementation plan



PERSONAL PROFILE & ROLE IN THE BMC SAS

Prof. Silvia PASTOREKOVA, DSc.

Director of the BMC SAS

Head of the Department of Tumor Biology

Main Domain of Research: Role of hypoxia and acidosis in tumor development – principal contribution to identification, molecular and functional characterization of carbonic anhydrase IX (CA9), a marker of tumor hypoxia, diagnostic and therapeutic target in clinical development (US patent 5,384,676 from 1995 and >30 related patents)

Education and Titles: 2011 Prof. in Molecular biology, 3003 DSc. in Oncology, 1992 PhD. in Virology

Teaching activities: Comenius University, Faculty of Natural Sciences (courses on Molecular biology of cancer and Gene regulation), 9 PhD students

Memberships: Member of the Pathobiology group, EORTC, from 2004, Delegate of the Slovak Republic in European Molecular Biology Conference (EMBC), from 2006

Contractor of the projects funded by EC:

6th FP, Integrated project EUROXY, (Targeting newly discovered oxygen-sensing cascades), 2004-2009,

6th FP RTN project CELLHECK (On-chip cell handling and analysis), 2007-2011,

7th FP cooperative project METOXIA (Metastatic tumors facilitated by hypoxic tumor micro-environments), 2009-2014,

7th FP ITN project EngCaBra, (Biomedical engineering for cancer and brain disease diagnosis and therapy) 2011-2015

Publications/citations:

Web of Science record (07-01-2017): 270 results, 7079 times cited, H-index 49.



STRATEGY BOARD

STRENGTHS OF THE BMC SAS:

broad scope of research skills and experiences, interdisciplinarity, run-through re-design of the structure of research and supporting units, building common rules of operation, high motivation for improvements, critical mass of experts

CHALLENGES:

Successfully cope with the transformation of BMC SAS to public-research organization in July 2018, according to new legislation, connected with increased administration and new rules of operation

Enhance research quality and focus: implement motivation tools, promote best performing groups, implement performance evaluation and professional development, improve working conditions and performance-based benefits, introduce internal grant system

Limits: restricted budget for salaries and poor opportunities for salary funding from national projects, high proportion of permanent job contracts got from the past and unfavorable law precluding release of non-performing staff, no free resources for internal granting, yearly budget of low flexibility (allocated in monthly portions and bound by rigid accounting categories) no possibility of funds savings and transfer to upcoming year (except resources from foreign projects and contracted research)



STRATEGY BOARD

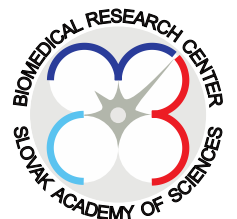
Improve national and international visibility and reputation: expand cooperation with academic, industrial and clinical partners, refresh contacts with international alumni, increase quality of project submissions (preliminary internal project evaluation?), reduce non-profitable projects, increase applications for short-term fellowships to excellent foreign labs, internal travel grants to workshops to gain skills, web page launch and operation, communications with media, create and maintain visual identity of BMC SAS and advertise BMC to media and public, improve contacts with national managing authorities

Limits: dedicated specialized personnel (recently mostly reliance on highly motivated researchers), new positions for project administration and PR (restricted resources for salaries), no funding for HR sustainability

Increase transfer of knowledge

upgrade IP protection and licensing strategy, introduce regular use of MTA, elaborate rule for spin-off activities (possible after transformation to public-research organization), improve attraction of PhD students (both domestic and foreign) and their training program, active participation in strategic bodies and advisory committees, providing expert opinions to state authorities

Limits: limited number of allocated PhD positions, brain-drain, low fellowships not attracting foreign students, poor welcome services



STRATEGY BOARD

Secure sustainability and foster progressive development

Elaborate cost-model and rules for operation of core facilities and other special infrastructure and equipment in order to create a reserve budget for services, repairs, and upgrading, increase the proportion of income from external sources, including research grants, research contracts and IP licensing.

Regularly monitor performance and adjust strategic plan.

Limits:

Budget for institutional operation covering 2-3 month of the year (steadily decreasing), rest secured from funded projects and other sources,

very complicated, long and byrocratic public prosecutions for purchase of research reagents and equipment, limited tradition in applying costs to usage of institutional equipment and in providing contracted services (so far applied only for proteomics, bioimaging and animal house with BSL2 a 3 level)

unstable national research-related economic environment and unpredictable funding opportunities

KEY TO SUCCESS: selection of best researchers and teams, launch of enthusiastic people, implementation of incentives and internal grants, raising of non-budgeted funds

LEARN FROM BEST PRACTICES OF A4L PARTNERS



Biomedical Research Center
Slovak Academy of Sciences
Dubravská cesta 9
84505 Bratislava
Slovakia



Thank you for your attention

BMC SAS – BIOMEDICAL RESEARCH FOR BETTER HEALTH