



# Neuroscience in Serbia: Current Status and Perspectives

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# Importance of Neuroscience

- Neuroscience hot topic, decade of the brain
- Brain is still a mystery: how does the brain function in normal and pathological conditions
- Neurological and mental disorders are highly prevalent worldwide:
  - account for almost 11 per cent of disease burden the world
- The extension of life expectancy and the ageing are likely to increase the prevalence of many neurological disorders
- EU priority: **“Research on the brain and related diseases, human development and ageing”**

# Tradition and past experiences

- Over 50 years of tradition:
  - Belgrade School of Neurobiology
- Belgrade School expands from neurophysiology to neurochemistry and molecular neurobiology
- Core centers for basic and clinical research:
  - Institute for Biological Research Sinisa Stankovic, BU
  - Faculty of Biology, Belgrade University (BU)
  - and Institutes for Medical Research, Vinca, Torlak
  - and School of Medicine, Faculty of Pharmacy, Military Academy, etc
  - SASA

# Our current research

- Our Goals:
  - to do neuroscience research
  - to ensure the transfer of knowledge from EU to Serbia
- Main lines of the research in Serbia:
  - Neurobiology of aging
  - Neurobiology and neuroimmunology of neurodegenerative diseases (AD, MS, ALS, PD, etc.)
  - Brain and spinal cord injury
  - Reparative and restorative mechanisms
  - Neurobiology of brain tumors
  - Genetic of neurodegenerative and other neurological diseases

# ...our current research

- Genetic of psychiatric disorders
- Neurophysiology
- Neuroendocrinology (brain response to hormonal disbalance)
- Neuropharmacology
- Adaptive mechanisms in response to various signals
- Preclinical and clinical research:
  - testing of various potential therapeutic substances
  - biomarkers of various neurological diseases
  - neuro-aids
- **Biomedicine**, high priority

# Serbian resources

## Human resources

- High-quality researchers, young and old, with enthusiasm for work
- High-quality academic staff and programs in Neuroscience at BF-BU (BS, MSc, PhD)
- Collaboration among researchers from faculties and institutes

## Material resources

- Relatively well equipped laboratories at institutes for studies at molecular, cellular, system and behavioral levels
- Freedom of research combined with governmental financing

# What obstacles do we face?

- Constraints of NS progress in Serbia are serious:
  - Financial: Serbia is still a developing country
  - Persistence of legacy of “per capita financing”
  - Brain drain
  - Limited cooperation with EU and other international scientific institutions

# Serbian cooperation with EU

- COST actions: B27, B30, etc (highly utilized)
- bilateral collaborative projects
  - Slovenia, Germany, France, Greece, etc.
- FENS, NENS
- FP7 (SSA-WB, RegPot, etc.)
- Serbian Society for Neuroscience- FENS, IBRO

# Quality of cooperation

- Cooperation of Serbian neuroscience with EU is rather limited:
  - Not yet recognized as respectable research partner
  - Insufficient integration in European projects
  - Insufficiency of personal contacts
  - Insufficient participation at international conferences
  - Insufficient trainings for young researchers in EU labs
- Reasons: ours? yours?

# Possible actions

- EU has a mission to support candidate countries
- Serbian neuroscience welcomes enlargement of scientific cooperation and help in every field
- Possible modalities:
  - Easier access to European scientific projects
  - To enhance personal contacts
  - To ease the participation at international scientific conferences
  - To intensify trainings of young researchers in EU labs
  - Networking with Serbian scientist in Diaspora
- We have a lot to do together !!!