



**BULGARIAN ACADEMY OF SCIENCES
INSTITUTE OF MOLECULAR BIOLOGY
"Roumen Tsanev"**

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The Institute of Molecular Biology (IMB) is the leading national research institution in the area of molecular and cell biology and biochemistry in Bulgaria. During the latest evaluation exercise executed by the European Science Foundation, the Institute received AAA score (for quality/productivity, socio-economic impact and prospects). The main area of expertise at IMB-BAS is molecular and cellular biology of DNA replication, repair, transcription and chromatin dynamics. These are complemented by applied research topics, such as biomedical pharmacology and drug design.

We are seeking to develop collaborative funding proposals with post-doctoral researchers for submission under the Marie Skłodowska-Curie Individual Fellowship programme within the following thematic areas:

1. Proteomics of cardiovascular diseases and metabolic syndrome. Integrative bioinformatics analysis of proteomic data to understand the coronary artery disease pathways
Supervisor: Assoc. Prof. Margarita Apostolova, PhD, e-mail: margo@bio21.bas.bg

2. The nanobiotechnology for development of new drug delivery systems. Drug delivery and nanoparticles: applications, toxicity and hazards
Supervisor: Assoc. Prof. Margarita Apostolova, PhD, e-mail: margo@bio21.bas.bg

3. S-phase checkpoint: adaptation and recovery
Supervisor: Assoc. Prof. Marina Nedelcheva-Veleva, PhD, e-mail: marina@bio21.bas.bg

4. Coordination of the DNA repair pathways
Supervisor: Assoc. Prof. Stoyno Stoynov, PhD, e-mail: stoynov@bio21.bas.bg

5. Chromatin mechanisms maintaining genome integrity
Supervisor: Assoc. Prof. Anastas Gospodinov, e-mail: agg@bio21.bas.bg

6. Rational design, synthesis, analysis, conformations, dynamics and structure-biological activity relationships of biologically active peptides and peptide mimetics
Supervisor: Assoc. Prof. Tamara Pajpanova, PhD, tamara@bio21.bas.bg

7. Exploring the diversity and activity of microorganisms for bioprospecting
Supervisor: Assoc. Prof. Galina Radeva, PhD, gradeva@bio21.bas.bg

8. Advancement and application of modern genetic and molecular biology methods for biomonitoring of the environment
Supervisor: Assoc. Prof. George Miloshev, PhD, e-mail: miloshev@bio21.bas.bg , lab website: www.chromatinepigenetics.com

9. Genetic and epigenetic based research of ageing and age-associated human diseases
Supervisor: Assoc. Prof. George Miloshev, PhD, e-mail: miloshev@bio21.bas.bg , lab website:
www.chromatinepigenetics.com

10. Recombinant inhibitors of endogenous interferon-gamma: A New approach for treatment of autoimmune diseases

Supervisor: Assoc. Prof. Genoveva Nacheva, PhD, e-mail: genoveva@bio21.bas.bg

11. Engineering proteins, fermentation processes and pro- and eukaryotic host cells for the production of efficient and save protein therapeutics. Directed evolution of next-generation biocatalysts (enzymes, ribozymes) for removal of non-native adducts from proteins

Supervisor: Prof. Dr. Roumyana Mironova, e-mail: rumym@bio21.bas.bg

12. Investigation of glycolytic enzymes for secondary functions. Involvement of glucose-6-phosphat isomerase in repair of DNA damaged by reducing sugars

Supervisor: Prof. Dr. Roumyana Mironova, e-mail: rumym@bio21.bas.bg

13. Tumour heterogeneity and Next Generation Sequencing. How genetic heterogeneity and morphological plasticity could influence cancer diagnostics

Supervisor: Assoc. Prof. Iva Ugrinova, e-mail: ugryiva@gmail.com

If you are interested in preparation of project proposal together with IMB- BAS, please contact the supervisor in your thematic area. Expressions of Interest for the H2020-MSCA-IF-2015 Call will be accepted via e-mail until the end of July 2015.