

**The University of Bucharest**

**Faculty of Biology**

**MICROGEN Research Center**

**Post title: Scientific research assistant, vacant, position in the list of functions no. 9**

**The MICROGEN Research Center is hiring a Scientific Research Assistant within the TE 112/2022 project (PN-III-P1-1.1-TE-2021-1515), entitled "Insights into the resistome, mobilome and virulome of multi-drug resistant *Acinetobacter baumannii* nosocomial and aquatic isolates from Romania - TITANIA" during the implementation of the project 05/13/2022 - 05/12/2024.**

**Exam topics:**

- The structure of nucleic acids
- Nucleic acid sequencing techniques
- New generation sequencing platforms, laboratory principles and stages (wet-lab) and bioinformatics processing (dry-lab)
- Amplification techniques of nucleic acids in molecular diagnostics
- The bacterial genome: the chromosome and extra chromosomal elements
- Molecular phylogeny techniques: the main steps taken to generate a phylogenetic tree and demonstrate the phylogenetic relationships

**Bibliography:**

\* Chifiriuc M.C., Miheăscu G., Lazăr V., 2015. Medical Microbiology and Virology, 2nd Ed. Bucharest University Publishing House. 415 pages

\*Gheorghe-Ioan Mihailaș Anca Tudor, Sorin Paralescu. Bioinformatics. Victor Babeș Publishing House, 2011. ISBN 978-606-8054-33-9

\*Vrâncianu, C.O., Gheorghe, I\*, Dobre, E.-G., Barbu, I.C., Cristian R.E., Popa M., Lee S.H., Limban C., Vlad I.M., Chifiriuc M.C. Emerging Strategies to Combat  $\beta$ -Lactamase Producing ESKAPE Pathogens. Int. J. Mol. Sci. 2020, 21, 8527.

\*Gheorghe I., Czobor Barbu I., Surleac M., Sârbu I., Popa L.I., Paraschiv S, Feng Y., Lazăr V., Chifiriuc M.C.C., Oțelea D., Zhiyong Z. 2021. Subtypes, resistance and virulence platforms in extended-drug resistant *Acinetobacter baumannii* Romanian isolates. Scientific Reports. Scientific reports 11 (1), 1-12.

\*Gheorghe-Barbu, I., Barbu, I.C., Popa, L.I. et al. 2022. Temporo-spatial variations in resistance determinants and clonality of *Acinetobacter baumannii* and *Pseudomonas aeruginosa* strains from Romanian hospitals and wastewaters. Antimicrob Resist Infect Control 11, 115.

\*Molecular Microbiology. Diagnostic principles and practice. David H. Persing, Fred C. Tenover, et al. ASM Press, 2004.

\*The phylogenetic handbook, second edition. P. Lemey, M. Salemi and A-M Vandamme, Cambridge 2009

**The requirements for the scientific research assistant vacancy are:**

- PhD title in Biology
- isolation of nucleic acids
- 2nd and 3rd generation sequencing, preparation of the sequencing library
- analysis and interpretation of 2nd and 3rd generation sequencing data
- investigating the epidemiological support of antibiotic resistance in selected strains of *A. baumannii*

**The competition will have a written test and an interview.**

**Evaluation committee**

**Chief of evaluation committee: Assoc. Prof. PhD Gheorghe –Barbu Irina**

**Member: University lecturer PhD Barbu Ilda**

**Member: SR PhD Gradisteanu Gratiela**

**Secretary: SRIII Popa Marcela**

**Appeal committee**

**Chief of appeal committee: Assoc. Prof. PhD Gheorghe-Barbu Irina**

**Member: Prof. Univ. PhD Chifiriuc Mariana Carmen**

**Member: Assoc. Prof. PhD Marutescu Luminita**

**Secretary: PhD student Grigore Georgiana Alexandra**

**The intention to participate will be submitted by email: [iryna\\_84@yahoo.com](mailto:iryna_84@yahoo.com)  
along with an updated CV**

**Project director:**

**Assoc. Prof. PhD Gheorghe-Barbu Irina**