

University of Bucharest  
Faculty of Biology  
Research Center ICUB SVMP

Research Center ICUB SVMP is employing a **Research Assistant (position 7** in the project employees list) in the project PN-III-P2-2.1-PED-2021-2115, entitled “ Development of a rapid flow cytometry-based method for testing the effectiveness of disinfectants against bacteria isolated from nosocomial infections” for a limited period, within the project implementation period, 2022-2024.

The workload: 8 hours/day

**Specific requirements necessary to occupy the position:**

- Higher education; status as a doctoral student in the fundamental field of Biology.
- The minimum minimum grade of the undergraduate years of study: 8 and of the master's years of study: 9, doctoral studies admission: 8.5
- Experience: 1 year experience in the microbiology laboratory, knowledge and skills of how to operate a flow cytometer
- Skills: organizational spirit, availability, seriousness in dealing with problems, resistance to effort, communication skills, teamwork.
- Minim 1 communication at a national conference
- Communication: knowledge of English and Romanian, advanced level, written and spoken.
- Computer skills: internet, databases, Microsoft Office - advanced level.
- Job requirements/ Competences - Knowledge in the fields of research methodology: conducting a literature review; data collection through laboratory experiment; conventional microbiology techniques; flow cytometry; Data analysis; Operation of statistical analysis software: SPSS, STATA or R).

**Activities within the project:**

- Participation in the design and implementation of analysis protocols using microbiology and flow cytometry techniques;
- Analyze data using various statistical methods;
- Able to carry out mobilities for research/documentation or for participation in conferences, summer schools, workshops or other scientific events in Romania and/or abroad;
- Able to participate in the organization of a conference;;
- Publication of ISI or BDI indexed articles;

**The content of the application file:**

1. CV (includes: list of scientific papers, research projects)
2. Copy of identity documents
3. Copy of study documents:
  - a. Copy of baccalaureate diploma + transcript
  - b. Copy of bachelor's/master's degree + transcript
4. Certificate certifying the status of PhD student in the field of Biology
5. The PhD supervisor's agreement to participate in the project
6. Motivation letter
7. Letter of recommendation

**Subjects:**

1. Flow cytometry – principle of the method and applications in microbiology.
2. The structure and functions of the bacterial cell
3. Classification of antibiotics, mechanisms of action and mechanisms of resistance to antibiotics
4. Antimicrobial susceptibility testing: selection of antimicrobial agents for testing, classical methods and automated methods of antibiotic susceptibility testing, interpretation of results, detection of main resistance mechanisms by phenotypic and molecular methods, quality control of test methods
5. Qualitative and quantitative testing of the antimicrobial activity of disinfectants used in the medical field.
6. Fluorochroms – types and application in microbiology

**References:**

1. EN 13727 (2015) - Chemical disinfectants and antiseptics. Quantitative suspension test for the evaluation of bactericidal activity in the medical area.
2. EN 14347 Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity in the medical area - Test method and requirements (phase 2, step 1) (includes Amendment A2:2015).
3. SR EN 13727+A2 - Antiseptice și dezinfectante chimice. Încercarea cantitativă a suspensiei pentru evaluarea activității bactericide în domeniul medical. Metodă de încercare și cerințe (fază 2, etapă 1)
4. Citometrie în flux-principii și aplicații clinice, Mihail E. Hinescu, Ed. Viata medicală românească.
5. Microbiologie și virologie medicală. Carmen Chifiriuc, Grigore Mihăescu, Veronica Lazăr. 2015. Editura Universității din București.
6. Antibiotice și substanțe chimioterapeutice antimicrobiene. Carmen Chifiriuc, Grigore Mihăescu. 2007. Editura Academiei Române.

**Selection of the candidates:**

- Interview

**Selection comitee**

President: Luminița Măruțescu

Member: Marcela Popa

Member: Grațiela Grădișteanu

Secretary: Ilda Barbu

**Contestations comitee**

President: Oana Marinaș

Member: Ilda Barbu

Member: Bianca Gălățeanu

Secretary: Ecaterina Sîrbu

Please send your applications to: [luminita.marutescu@bio.unibuc.ro](mailto:luminita.marutescu@bio.unibuc.ro)

Project Manager

Associate Professor Măruțescu Luminița