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**Institutul Național de C&D
pentru Fizică și Inginerie Nucleară
Horia Hulubei**

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“Horia Hulubei” National Institute for Research and Development in Physics and Nuclear Engineering is hiring a scientific research assistant for a definite duration, until 31st August 2022, full time, within the Department of Life and Environment Sciences.

Requirements to fill the position:

- Master programme student/master graduate/PhD student in chemistry (biochemistry/organic chemistry specialization);
- PC operating skills (word, excel, power point) and specialised programs in the field;
- Foreign languages: English, intermediate level (writing and speaking);
- Knowledge of the topics specified in the announcement.

Skills and abilities: team player, communication skills, working independently

Main responsibilities:

- Acquiring the knowledge required to fulfil position tasks;
- On-going training and honing in the field of the position topics;
- Taking part in the performance of the research activities stipulated in the contract (immunochemical analysis techniques (ELISA, RIA, FIA) and spectrophotometric methods (UV-VIS, FTIR), separating techniques by column chromatography, thin layer, electrophoresis, biochemical analysis, general notions of immunology);
- Attending the work meetings convened by the project manager;
- Taking part in the processing and dissemination of the results obtained within the project;

Applications will contain the following documents:

- Request for competition registration can be found at www.nipne.ro, specifying the name of the department;
- Copies of the study diplomas;
- Curriculum Vitae;
- Certificate indicating the capacity of master/doctoral programme student;
- Copy of the identity document/passport.

The competition will consist of a written test and an interview in the field of the position topics. The interview can be held only by the candidates who have obtained a minimum score of 7 in the written test.

The candidates who have obtained a minimum score of 7 at the interview are declared admitted. The final score is calculated as arithmetic mean of the scores obtained for the written test and the interview and must be at least 7. The candidate who has obtained the highest score among the candidates competing for the same position is considered admitted, provided that they have obtained the minimum necessary score.

For the interview, please prepare a presentation (power point) of a research topic (dissertation, license, research project, etc.), which will be presented to the committee. Time allotted 15 min + 10 min questions and discussions.

The applications will be sent to e-mail address resum@nipne.ro, until 11.10.2021.

The written test and the interview will take place on 12.10.2021, ora 10.00

Further information can be obtained by phone 021/404.61.78 sau 021/404.23.00 int. 5612, 5610.

Topics:

1. Immunochemical techniques: ELISA, RIA, FIA;
2. Spectrophotometric techniques: UV-VIS and FTIR;
3. Chromatographic separation techniques on column, thin layer, electrophoresis;
4. General notions of enzymology;
5. Biochemical analysis techniques;
6. General notions of immunology (antibody, antigen, antibody-antigen reaction);
7. Physical data processing.

Bibliography:

1. Jeremy M. Berg, John L. Tymoczko, Lubert Stryer, Biochemistry, sixth edition, W.H. Freeman and Company, New York, 2007;
2. James G. Speight, Lange's Handbook of chemistry-Sixteenth edition, McGraw-Hill, New York, 2005
3. John R. Crowther, The ELISA guidebook (Methods in molecular biology, vol. 149); Humana press Inc., New Jersey, 2001;
4. David Male, Jonathan Brostoff, David B. Roth, Ivan Roitt, Immunology-Seventh Edition, Mosby Elsevier Limited, Philadelphia, 2006;
5. John E. Coligan, Barbara E. Bierer, David H. Margulies, Ethan M. Shevach, Warren Strober, Short Protocols in Immunology-A compendium of methods from current protocols in immunology, John Wiley & Sons Inc., New Jersey, 2005;
6. Pascal Bailon, George K. Ehrlich, Wen-Jian Fung, Wolfgang Berthold, Affinity chromatography-Methods and Protocols, (Methods in Molecular Biology, vol. 147), Humana Press, New Jersey, 2000.
7. Alejandro G. Marangoni, Enzyme kinetics-A modern approach, Wiley-Interscience, John Wiley & Sons Inc., New Jersey, 2003;
8. Paul Cutler, Protein purification protocols-second edition, (Methods in molecular biology, vol. 244), Humana Press, New Jersey, 2004.