



Courtesy translation of D.R. n. 139/2022

*For more details on the selection process, please refer to the Italian version of D.R. n. 139/2022 available at <http://www.hunimed.eu/it/lavora-con-noi/>*

**SELECTION PROCEDURE FOR RESEARCH FELLOWSHIP**

Research Program Title	<b>Advanced diagnostic algorithms for the interpretation of viral genomic data</b>
Tutor	Prof.ssa Valeria CENTO
Scientific Area	06 – Medical Sciences
Gross amount of the fellowship	30.000 Euro
Duration of the fellowship	14 months
Objectives of the research	This project will address an unmet medical need, represented by the lack of accurate genotypic characterization of viruses and bacteria to be used as clinical parameter to guide treatment optimization. The application of next-generation sequencing (NGS) is already applied in several fields of Human Biology, but not yet widespread in Clinical Microbiology nor implemented into standard, routine diagnostic algorithms. Yet, the level and quality of information provided by this technique would allow a much deeper comprehension of phylogenesis, spread and pathogenesis of drug-resistant microorganisms in hospital settings, provided appropriate analysis and interpretation of data. The results of this project will allow to understand if NGS can be routinely used in clinical practice to guide the choice of a therapeutic regimens in patients with bacterial or viral infections.
Activities to be carried out	The candidate will carry out: <ul style="list-style-type: none"><li>- Development and optimization of next-generation sequencing (NGS);</li><li>- phylogenetic analysis of sequences obtained from NGS;</li></ul>

	<ul style="list-style-type: none"> <li>- Interpretation of NGS results, data processing and statistical analysis;</li> <li>- Use of database (e.g. Access);</li> <li>- Presentation of the research results at internal meetings, national and international conferences;</li> <li>- Writing of scientific papers.</li> </ul>
Work place	PIEVE EMANUELE - Milan
Mandatory requirements	Master's Degree in Biology or Biotechnology or Medicine and Surgery; scientific and professional CV suitable to the carrying out of the research activities outlines above.
Selection process	<p>Application for admissions must be submitted at the following link:</p> <p style="text-align: center;"><a href="https://pica.cineca.it/humanitas">https://pica.cineca.it/humanitas</a></p> <p>No hard copy of the application must be sent by post.</p> <p>At first access, applicants need to register by clicking on "Register" and completing the requested data.</p> <p>If applicants already have LOGINMIUR credentials, they do not need to register again. They must access with their LOGINMIUR username and password in the relevant field LOGINMIUR.</p> <p>Applicants must enter all data necessary to produce the application and attach the required documents in PDF format.</p>
Selection criteria	<p>Selection criteria are predetermined by the Selection Committee. As part of the selection process, the Committee will evaluate the curriculum, titles and publications presented by the candidate and will consider, in particular:</p> <ul style="list-style-type: none"> <li>- Documented skills in the biological and/or biotechnological field;</li> <li>- Previous laboratory experience in the microbiological field, in particular in NGS methods;</li> <li>- Previous experiences in development of NGS protocols;</li> <li>- Previous experiences in development of protocols of genetic amplification of pathogenic microorganisms (e.g. PCR, RT-PCR, ddPCR);</li> <li>- Competences in Microsoft Office®, including Access;</li> </ul>

	<ul style="list-style-type: none"><li>- Experience in statistical analysis (with preferential use of STATA and Graphpad)) and database management (e.g. SQL, Access);</li><li>- Research aptitude and ability to manage even complex scientific data;</li><li>- Scientific publication related to the research topics;</li><li>- Ability to work independently, together with a high propensity to interact with other team figures;</li><li>- Excellent knowledge of the English language.</li></ul>
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**FURTHER INFORMATION:**

In the event of any conflict between Job Opening text and Italian D.R. text, the Italian version will prevail.

For more details on the selection process please refer to the **D.R. n. 139/2022** (<http://www.hunimed.eu/it/lavora-con-noi/>) or send an inquiry to [ufficiodocenti@hunimed.eu](mailto:ufficiodocenti@hunimed.eu) or telephone +39 02.8224.5642/5421.