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Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA



UNIVERSITÀ
DI SIENA 1240

Annex 2

Selection notice for the PhD course of national interest in Innovation or the diagnosis, prevention and treatment of infections at epidemic-pandemic risk

Deadline for applications:

29 October 2024, 14:00 (*Central European Time*)

Schedule with description of typology of positions and modalities of selection

PhD of national interest in	Innovation in the diagnosis, prevention and treatment of infections at epidemic-pandemic risk
Coordinator	Donata Medaglini, donata.medaglini@unisi.it
Department	Biotechnologie Mediche
Attendance	mandatory
Open positions	5
Of which:	

	<i>n.</i>	<i>Funding institution(s)/partner university</i>	<i>Research topic</i>
Positions with scholarships			
A.	4	Università degli Studi di Siena-Fondazione Biotechopolo di Siena	Innovative technologies for vaccines, drugs, diagnostics and immunological biomarkers for pandemic preparedness, Mathematical models to predict the response to vaccination, the development of resistance to antimicrobial drugs, the spread of pathogens, and the economic impact of infections at epidemic/pandemic risk (1-8)
B.	1	Istituto Superiore di Sanità	Biomarkers of the immune response (7)

Tematiche di ricerca
<p>The PhD course offers multidisciplinary training in the field of epidemic-pandemic infections addressing the following research topics:</p> <ol style="list-style-type: none"> 1. Innovative technologies for diagnosis: development of innovative diagnostic techniques for rapid and accurate detection of pathogens, such as viruses, bacteria, fungi and parasites, at epidemic-pandemic risk 2. Vaccine Technologies: design and development of new vaccines, based on innovative technology platforms, against pathogens at epidemic- pandemic risk 3. Technologies for new antimicrobial drugs: research and development of new antimicrobial drugs, including antibiotics, antivirals, antifungals and antiparasitics, for infections at epidemic-pandemic risk. 4. Monoclonal antibodies: design and development of monoclonal antibodies 5. Drug delivery: study and development of advanced drug delivery systems, such as lipid particles, vesicles and other nanoparticles, to improve the efficacy and safety of vaccines and antimicrobial drugs. 6. Strategies to counter the emergence and spread of antibiotic-resistant bacteria at epidemic-pandemic risk 7. Biomarkers of the immune response: discovery and validation of biomarkers of the immune response associated with infections and vaccinations 8. Mathematical models to predict the response to vaccination, the development of resistance to antimicrobial drugs the spread of pathogens, and the economic impact of infections at epidemic-pandemic risk. <p>The PhD program aims to provide in-depth knowledge of the most advanced technologies for the development of diagnostics, vaccines and therapeutics for pandemic preparedness.</p> <p>An important opportunity for the training of doctoral students is offered by the support of the Fondazione Biotechopolo di Siena (https://www.biotechopolo.it/), which co-finances 4 doctoral scholarships and acts as an anti-pandemic hub for research, development and production of vaccines and monoclonal antibodies against epidemic-pandemic infections.</p>

Ranking	Single ranking list for all positions (A-B)
Documents required for evaluation (to be attached during online application)	<ul style="list-style-type: none"> ● Curriculum vitae et studiorum containing a statement of the access title held with the issuing institution in addition to a list of any publications ● Research project (max. 3 pages) in English ● Thesis abstract of Laurea Magistrale/Specialistica/vecchio ordinamento or equivalent foreign degree translated into Italian or English (max. 1 page) ● English language certification, level B2, if available (optional) <p>The candidate may indicate in the research project a priority between the partner universities/funding institutions (positions A-B) and between the research topics (1-8); the</p>

	<p>preferences expressed will not be binding for the purposes of the assignment of positions.</p> <p>Eligibility of foreign degrees (to be translated into Italian, English or French) is ascertained by the selection committee in accordance with relevant regulations and international agreements on the recognition of qualifications for further studies.</p> <p><u>Candidates who achieved (or will achieve by 30 November 2024) the diploma di laurea at an Italian university</u> have to specify, in their curriculum, all the data on the university path and the title of admission, in particular:</p> <ul style="list-style-type: none"> • University issuing the degree • type of <i>laurea – vecchio ordinamento/specialistica/magistrale</i> • degree course name • list of examinations with votes • date of obtaining the title and final vote or expected date of obtaining the title (by 30 November 2024). <p><u>Candidates who achieved (or will achieve by 30 November 2024) their degree at a foreign university</u> (with a duration of at least four years) must specify in their curriculum:</p> <ul style="list-style-type: none"> • University issuing the degree • type of degree (min. duration four years) – <i>Bachelor’s degree/ Master’s degree</i> • date of obtaining the title and final vote or expected date of obtaining the title (by 30 November 2024). <p>Candidates with a foreign degree must attach to the online presentation also the following documentation:</p> <ul style="list-style-type: none"> • transcript – certification of the title with the list of exams and votes – with a translation in Italian or English • Diploma supplement (if available). <p>ATTENTION: candidates with a foreign degree admitted after selection MUST present a copy of the original degree and proof of authenticity of the degree (DOV, CIMEA or diploma supplement) upon matriculation; please carefully read art. 5, paragraph 8 of the selection notice).</p>
Web site for further information	https://phd-dptip.unisi.it/
Selection modalities	<ol style="list-style-type: none"> 1. Evaluation of qualifications 2. Oral examination
Admission requirements	All masters’ degrees (lauree magistrali, specialistiche, a ciclo unico e vecchio ordinamento)
Exam procedures	<p>The minimum score for eligibility is 60/100.</p> <p>Evaluation of qualifications: minimum score 20 points, maximum score 40 points. A minimum of 20 points is required for admission to the oral examination.</p> <p>Oral examination: minimum score 40 points, maximum score 60 points.</p> <p>The examination will consist of the candidate's presentation of his or her research project in English. English language abilities will be assessed during the test. The presentation should ideally be completed in 7 minutes but may last up to a maximum of 10 minutes.</p> <p>The results of each test will be published on the doctoral website: https://phd-dptip.unisi.it/</p>
Dates of evaluation and exam(s)	<p>Oral examinations: 5 November at 15.00 by videoconference (http://meet.google.com/jiw-tjvd-wts).</p> <p>The list of candidates admitted to the interview will be published at the beginning of the exam session.</p>
Selection committee	The composition of the committee will be published after the deadline for application.