



"Annex 4" updated on 11th April 2019
(The updates are highlighted in red colour)

ANNEX 4

CALL FOR PHD POSITIONS – 35 cycle
PHD PROGRAMME IN PHARMACEUTICAL AND BIOMOLECULAR SCIENCES

PhD Programme Coordinator	Prof. Gianmario Martra
Department	Chemistry
PhD Programme Length	3 years
PhD web site	http://dott-sfb.campusnet.unito.it/do/home.pl
Course start date	1 st November 2019
Departments involved in PhD programme	Department of Chemistry, Department of Pharmaceutical Science and Technology, Department of Life Science and Systems Biology, Department of Public and Pediatric Health Sciences, Department of Molecular Biotechnology and Health Sciences

Positions offered by the PhD Programme ¹

n. 7 positions with scholarship, of which n. 3 reserved to candidates with international qualifications	Of which: - 7 scholarships funded by the University
n. 2 positions reserved to students selected within specific international mobility programmes or within specific agreements in which the University of Torino is involved: CSC "China Scholarship Council"	
n. 1 apprenticeship contract funded by Green Has Italia S.p.A.. <i>(This scholarship is linked to a specific project.)</i>	

Titles of Research Projects /Research Fields

The list of research projects is available at the end of this sheet. This list may be updated until Call's Deadline.

Calendar of entrance examinations

The calendar with information on dates and venues of entrance examinations shall be published on the websites: <http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca> and <http://en.unito.it/research/phd/phd-programmes> starting from **9th April 2019**.

¹All additional scholarships and apprenticeship contracts (Art. 45 D.lgs 81/), which may become available after the publication of this Call, will be announced on the University websites <<http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca>> e <<http://en.unito.it/research/phd/phd-programmes>>.



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Useful information for applicants

Application fee: €50.00 for each application submitted. Candidates with international qualifications are exempted from paying the application fee.

Application fee deadline: 16th April 2019 (mandatory deadline) Candidates who do not pay the application fee within the deadline will be excluded from the competition.

CALL FOR ORDINARY POSITIONS AND FOR ONE SEPARATE RANKING LIST	
Admission procedure for ordinary positions	
Assessment of qualifications, research project and interview	
Qualifications to be uploaded on the on-line application	
<ul style="list-style-type: none"> • Application form (duly signed and including identification document/passport) • For applicants with international qualifications: submit on-line documentation as specified in Art. 4 of this Call; • For applicants under condition: provision of Bachelor's degree grade, certificate or self-certification with a complete list of academic transcripts concerning the 1st cycle degree (Laurea Triennale) and 2nd cycle degree (Laurea Magistrale) with marks, weighted average and credits. For applicants applying under condition, please also check Art. 5 of the Call. • Research project (max 400 words, references excluded) written in English by the candidate choosing a title within those offered by the PhD Programme; see the following the section "Further information on examination" • Abstract Thesis 2nd Cycle Degree • Publication 	
Assessment criteria for ordinary positions and for one separate ranking lists	maximum score 100 points
Assessment of qualifications:	maximum score 20 points
Final grade of second cycle degree <ul style="list-style-type: none"> • 110 e lode _____ 12 points • 110 _____ 11 points • 107-109 _____ 10 points • 104-106 _____ 9 points • 99-103 _____ 8 points • ≤98 _____ 7 points weighted average of list of examinations taken during the Laurea Magistrale/2nd cycle degree for candidates applying under condition: <ul style="list-style-type: none"> • Average from 29/30 to 30/30 ____ 12 points • Average of 28/30 _____ 11 points • Average from 26/30 to 27/30 ____ 10 points 	maximum score 12 points



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<ul style="list-style-type: none">• Average of 25/30 _____ 9 points• Average of 24/30 _____ 8 points• Average < 24/30 _____ 7 points <p>The average is rounded up if the decimal part is ≥ 5, otherwise it is rounded down (<5).</p>	
Thesis Abstract of 2 nd Cycle Degree	maximum score 3 points
Publications 1 point for each publication (max 3 already published JCR papers will be evaluated, only if relevant to the PhD programme)	maximum score 3 points
Other qualifications: <ul style="list-style-type: none">- Honours for the dissertation ("menzione", "dignità di stampa", awards): 1 point- Second/additional master degree: 2 points- Italian specialising master 1st and 2nd level degree if relevant with PhD Programme: 1 point- Non-university Master : 0.3 point- Post-graduation research periods (supported by an official declaration of the hosting laboratory): 1.2 points per year (and in proportion for shorter periods)- Any other pertinent specialising course: 1 point- Communications to congresses: 0.1 points (max 5 communications) <p>For candidates applying under conditions: 1 point for at least 3 examination passed with laude</p> <p><i>(Titles relating to professional skills, not pertinent with the research activity, will not be evaluated)</i></p>	Maximum score 2 points
<i>Minimum threshold for admission to the next examination</i>	<i>11 points</i>
Research Project (see the section "Further information on examination")	maximum score 20 points
<i>Minimum threshold for admission to the interview</i>	<i>11 points</i>



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Interview	Maximum score: 60 points
<i>Minimum threshold for passing the interview</i>	<i>40 points</i>
Further information on examinations: 1) Knowledge of the English language for scientific purpose is compulsory. 2) Thesis Abstract: max 400 words. The candidate must develop the following points: a) purpose of the thesis; b) methods used; c) results achieved Moreover, the name of the supervisor must be indicated 3) The Research project must be written in English, max 400 words, references excluded. Candidates are required to choose a title from those offered by the PhD Programme. The candidate must develop the following points: a) state of the art of the chosen topic; b) targets of the project; c) research plan over 3 years. The examining board will evaluate the scientific dimension of the project, its feasibility related to the length of the PhD, the target setting, the scientific impact of outcomes. 4) The interview will cover the qualifications and the publications submitted by the candidates, their studiorum and professional curricula, their scientific and cultural interests and will assess the level of basic knowledge of the subjects involved in the PhD Programme. The examination board will focus on: - level of knowledge of the topic and the ability to present it; - level of knowledge of the topic of the research project; - originality and interdisciplinarity of the research proposal. The skill in the use of English will be assessed as well. The interview, on request of the candidate and duly authorised by the examination board, may be taken via Skype (art. 8 of the Call).	

CALL FOR POSITIONS RESERVED TO APPLICANTS WITH INTERNATIONAL QUALIFICATIONS

Assessment procedure for positions reserved to applicants with international qualifications

Assessment of qualifications, research project and interview

Qualifications to be uploaded on the on-line



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<ul style="list-style-type: none"> • Application form (duly signed and including identification document/passport) • For international qualifications: submit on-line documentation as specified in Art. 4 of this Call. For applicants applying under condition, please check Art. 5 • Research project (max. 400 words, references excluded) written in English by the candidate choosing a title within those offered by the PhD Programme; see the section "Further information on examination" • Thesis Abstract • Publications 	
Assessment criteria for positions reserved to students with international qualifications	maximum score 100 points
Assessment of qualifications:	maximum score 50 points
Curriculum studiorum and vitae (see information provided in the APPLICATION FORM)	maximum score 15 points
Thesis Abstract (see the section "Further information on examination")	maximum score 10 points
Research Project (see the section "Further information on examination")	maximum score 20 points
Publications 1 point for each publication (max. 3 already published JCR papers will be evaluated)	maximum score 3 points
Other qualifications: If completed, the following will be assessed: <ul style="list-style-type: none"> - Second/additional master degree: 1 point - Italian specialising master 1st and 2nd level degree if relevant: 1 point - Communications to congresses: 0.1 points (max 5 communications) <i>(Titles relating to professional skills, not pertinent with the research activity, will not be evaluated)</i>	maximum score 2 points
<i>Minimum threshold for admission to the interview</i>	<i>26 points</i>
Interview	maximum score 50 points
<i>Minimum threshold for passing the interview</i>	<i>35 points</i>
Further information on examinations for reserved positions Knowledge of the English language for scientific purpose is compulsory. Thesis Abstract: max 400 words. The candidate must develop the following points: a) purpose of the thesis;	



- b) methods used;
- c) results obtained.

The **Research project** must be written in English, max 400 words, references excluded. Candidates are required to choose a title from those offered by the PhD Programme.

The candidate must develop the following points:

- a) state of the art of the chosen topic;
- b) targets of the project;
- c) research plan over 3 years.

The examining board will evaluate the scientific relevance of the project, its feasibility related to the length of the PhD, the target setting, the scientific impact of outcomes.

The **interview** will be in English and will cover the qualifications and the publications submitted by the candidates, their studiorum and professional curricula, their scientific and cultural interests and will assess the level of basic knowledge of the subjects involved in the PhD Programme. The Board will focus on:

- level of knowledge of the topic and the ability to present it;
- level of knowledge of the topic of the research project;
- originality and interdisciplinary character of the research proposal.

The interview, on request of the candidate and duly authorised by the examining board, may be taken via Skype (art. 8 of the Call).

Courses organized by the PhD Programme will be taught in English.

Titles of research projects PhD Programme in Pharmaceutical and Biomolecular Sciences

Titles of research projects for ordinary positions

- 1) Relaxometric/Structural characterization and preclinical development of MRI contrast agents based on paramagnetic metals (Gd, Fe, Mn). Tutor: Prof.ssa Simonetta Geninatti Crich
- 2) Biological activity of plant extracts: analytical methods and bioassays. Tutor: Prof. Massimo Maffei
- 3) Genomics, metabolomics and transcriptomics of plant mineral nutrition. Tutor: Prof. Massimo Maffei
- 4) Functional and structural characterisation of the DyP-type peroxidase from *A. radioresistens*: biotechnological applications. Tutor: Prof. Gianfranco Gilardi



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- 5) Valutazione biologica della qualità della vita: analisi del profilo infiammatorio e dello status ossidativo e biomolecolare in studi di popolazione / Biological evaluation of quality of life: analysis of the inflammatory profile and oxidative and biomolecular status in population studies.
Tutor: Prof. Roberto Bono

Titles of research projects for PhD positions reserved to candidates graduated at foreign Universities:

- 1) Innovative pharmacological approaches for targeting the inflammatory response in cancer and cardiometabolic diseases. Tutor: Prof. Massimo Collino.
- 2) Characterization of the US12 proteins of the Human Cytomegalovirus: from functions to antiviral intervention. Tutor: Prof. Giorgio Gribaudo.
- 3) Molecules at surfaces: formation, reactivity, assembly of (bio)molecules on external and internal surfaces of nanosized/nanostructured materials. Tutor: Prof. Gianmario Martra

Title of research project for PhD position reserved to apprenticeship contract funded by Green Has Italia S.p.A. (This scholarship is linked to a specific project.)

- 1) Effetti dei biostimolanti sulla crescita e lo sviluppo delle piante in condizioni standard e di stress abiotico /Effects of biostimulants on plant growth and development under standard and abiotic stress conditions (Tutor accademico: Prof.ssa Cinzia Margherita Berteà/ Tutor aziendale: Dr.ssa Valeria Contartese)