



"Annex 1" updated on 27th May 2020
(The updates and the corrections are highlighted in red colour)

(Annex 1)

CALL FOR PHD POSITIONS – 36th CYCLE

PHD PROGRAMME IN EXPERIMENTAL MEDICINE AND THERAPY

PhD Programme Coordinator	Prof. Pasquale Pagliaro
Department	Clinical and Biological Science
PhD Programme Length	4 years
PhD website	http://dott-mts.campusnet.unito.it/cgi-bin/home.pl
Course start date	1 st October, 2020
Departments involved in PhD programme	Dipartimento di Scienze Cliniche e Biologiche, Dipartimento di Scienze della Vita e Biologia dei Sistemi, Dipartimento di Biotecnologie, Molecolari e Scienze per la Salute, Dipartimento di Oncologia, Dipartimento di Scienze Mediche, Dipartimento di Neuroscienze "Rita Levi Montalcini", Dipartimento di Scienze Chirurgiche

Positions offered¹ by the PhD Programme	
n. 8 positions with scholarship, of which n. 2 reserved to candidates with international qualifications	of which: <ul style="list-style-type: none">- 7 scholarships funded by the University of Torino- 1 scholarship funded by Department of Clinical and Biological Sciences
n. 2 positions without scholarship	

CALL FOR NON-RESERVED/ORDINARY POSITIONS

Admission procedure

Assessment of qualifications and oral examination (interview)

Qualifications to be uploaded on the on-line application:

¹All additional scholarships and apprenticeship contracts (Legislative Decree no. 81/2015 art.45), which may become available after the publication of this Call, will be announced on the University websites [Dottorati di Ricerca](#) and [PhD](#) until Call's deadline.



<ul style="list-style-type: none"> • Research project (max 4000 words, bibliography included, max 3 references) written by the candidate choosing among those listed and offered by the Doctorate • Master Thesis Abstract • Publication (max 3) • Letters of references signed by professors or qualified researchers 	
Assessment criteria	maximum score 100 points
Assessment of qualifications:	maximum score 25 points
Final grade of Laurea/2nd cycle degrees (or list of examinations taken during the Italian Laurea Triennale/1st cycle degree and Laurea Magistrale/2nd cycle degree for candidate applying under condition) 110-110L 6 points Da 107 a 109 5 points Da 104 a 106 3 points Da 100 a 103 2 points =< a 99 1 point	maximum score 6 points
Master Thesis abstract	maximum score 3 points
Publications Max 1 point for each publication. Max 3 already published papers will be assessed, only if relevant to the Programme and with well-recognised scientific dimension.	maximum score 2 points
Other qualifications: <ul style="list-style-type: none"> - Second/additional Master degree: 0.5 points - Italian specialising master 1st and 2nd level degree if relevant: 0.5 points - Specialising courses if relevant: 1 point - Participation to the Erasmus project: 0.5 points - Scholarships: 0,25 points/year Titles or traineeships relating to merely professional skills will not be evaluated	maximum score 3 points
Letters of reference signed by professors or qualified researchers (max 0.5 points for each letter; max 3 letters)	maximum score 1 point
Research project (max 4000 characters, bibliography included) by the candidate choosing the title among those listed by the Doctorate. The project must be organised according to: Rationale, Scientific Bases, Objectives, Methods, Results, References (max. 3)	maximum score 10 points



Minimum threshold for admission to the oral examination	11 points
Oral examination (interview)	Maximum score 75 points
Minimum threshold for passing the interview	50 points
<p>Further information on examinations:</p> <p>The research project (max 4000 words, bibliography included) choosing a title among those offered by the PhD Programme, should be divided in such sections: Rationale, Scientific Bases, Objectives, Methods, Results, References (max 3).</p> <p>The oral examination will deal with presentation and discussion of the research project. During the interview, the candidate must demonstrate a thorough knowledge of the project. Under assessment will be the scientific value of the project, its feasibility during the duration of the Doctorate, the anticipated objectives, the scientific impact of the expected results. Last but not least, the candidate's precedent practical experience in the specific research field will be highly considered.</p> <p>A good knowledge of scientific English is requested.</p>	

CALL FOR POSITIONS RESERVED TO CANDIDATES WITH INTERNATIONAL QUALIFICATIONS	
Admission procedure for positions reserved to candidates with international qualifications	
Assessment of qualifications and research project	
Qualifications to be uploaded on the online application	
<ul style="list-style-type: none"> • Research project (max 4000 words, bibliography included) written by the candidate choosing among those listed and offered by the Doctorate. • Master Thesis Abstract • Publication (max 3.) 	
Assessment criteria for positions reserved to applicants with international qualifications	Maximum score 100 points
Assessment of qualifications	Maximum score 60 points
Curriculum studiorum et vitae (as by the information provided in the online application)	maximum score 40 points



Thesis Abstract	maximum score 10 points
Publications - 2 points for each publication. Max 3 already published papers will be assessed, only if relevant to the Programme and with well-recognised scientific dimension.	maximum score 6 points
Other qualifications: - Second/additional Master degree: 2 points - Italian specialising master 1 st and 2 nd level degree if relevant: 2 points - Scholarships: 0,25 points/year	maximum score 4 points
Research Project	maximum score 40 points
Minimum threshold for admission	65 points

Additional information about the assessment of reserved positions

The **research project** (max 4000 words, bibliography included) written by the candidate choosing a title among those listed and offered by the Doctorate. The project should be divided in such sections: Rationale, Scientific Bases, Objectives, Methods, Results and References. 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. Last but not least, the candidate's precedent practical experience in the specific research field will be highly considered.

Titoli progetti di ricerca
Dottorato di Ricerca in MEDICINA E TERAPIA SPERIMENTALE
Titles of research projects
PhD Programme in EXPERIMENTAL MEDICINE AND THERAPY



UNIVERSITÀ DEGLI STUDI DI TORINO

1. Infiammazione e progressione di malattia. / Inflammation and progression of disease processes. (*supervisor: Biasi Fiorella*)
2. Stress ossidativo in patologia umana. / Oxidative stress in human pathophysiology. (*supervisor: Leonarduzzi Gabriella*)
3. Meccanismi di condizionamento in modelli in vitro e pre-clinici di danno miocardico. / Conditioning mechanisms in vitro and in preclinical models of myocardial injury. (*supervisor: Pagliaro Pasquale*)
4. Meccanismi che determinano la fragilità cardiovascolare legata all'età. / Mechanisms determining cardiovascular age-related frailty. (*supervisor: Pagliaro Pasquale*)
5. Nuove strategie cardioprotettive basate sugli effetti metabolici dei peptidi derivati dalla cromogranina A. / Novel cardioprotective strategies based on metabolic effects of Chromogranin A related peptides. (*supervisor: Gallo Maria Pia*)
6. Controllo della perfusione muscolare a riposo e nell'esercizio. / Control of muscle blood flow at rest and during exercise. (*supervisor: Roatta Silvestro*)
7. Biologia molecolare, farmacologia, farmacogenetica e terapia sperimentale dei tumori emolinfopoietici. / Molecular biology, pharmacology, pharmacogenetics and experimental therapy of hemolymphopoietic tumors. (*supervisor: Saglio Giuseppe*)
8. Biologia molecolare, metabolismo, farmacologia, farmacogenetica e terapia sperimentale di tumori solidi. / Molecular biology, pharmacology, pharmacogenetics and experimental therapy of solid tumors. (*supervisor: Terzolo Massimo*)
9. Biologia molecolare, farmacologia, farmacogenetica e terapia sperimentale di malattie infettive. / Molecular biology, pharmacology, pharmacogenetics and experimental therapy of infectious diseases (*supervisor: Giovanni Di Perri*)
10. Biologia molecolare, farmacologia, farmacogenetica e terapia sperimentale di malattie cardiovascolari e metaboliche. / Molecular biology, pharmacology, pharmacogenetics and experimental therapy of cardiovascular and metabolic diseases. (*supervisor: Giustetto Carla*)
11. Biologia molecolare, metabolismo, farmacologia e terapia sperimentale di malattie degenerative del sistema nervoso, etc. / Molecular biology, pharmacology,



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- pharmacogenetics and experimental therapy of degenerative diseases of brain, etc. (*supervisor: Tamagno Elena*)
12. Meccanismi molecolari di resistenza ai farmaci antitumorali. / Molecular mechanisms of resistance to anticancer drugs. (*supervisor: Muzio Giuliana*)
 13. Infiammazione e cachessia. / Inflammation and cachexia. (*supervisor: Costelli Paola*)
 14. Recenti progressi sulla patogenesi e sul trattamento della cachessia neoplastica. / Recent advances in the pathogenesis and treatment of neoplastic cachexia. (*supervisor: Costelli Paola*)
 15. Nuovi progressi in Medicina Orale. / New advances in Oral Medicine. (*supervisor: Pentenero Monica*)
 16. Nuovi progressi in Oncologia Orale. / New advances in Oral Oncology. (*supervisor: Pentenero Monica*)
 17. Recenti progressi in ortognatodonzia, funzione masticatoria e postura del rachide. / Recent advances in orthognatodontics, masticatory function and spine posture. (*supervisor: Piancino Maria Grazia*)
 18. Trattamenti ortognatodontici conservativi, chirurgici e aspetti biomolecolari. / Orthognathodontics, orthognathic surgical treatments and biomolecular aspects. (*supervisor: Piancino Maria Grazia*)
 19. Impiego dell'ingegneria tissutale nella riparazione del sistema nervoso. / Tissue engineering in neural repair. (*supervisor: Raimondo Stefania*)
 20. Neuro-plasticità e rigenerazione nel sistema nervoso periferico. / Neuroplasticity and re generation in the peripheral nervous system. (*supervisor: Geuna Stefano*)
 21. Modelli di tecnologia avanzata per la somministrazione di farmaci. / Advanced technologies for drug administration. (*supervisor: Barrera Giuseppina*)
 22. Nutrizione e invecchiamento. / Nutrition and aging. (*supervisor: Costelli Paola*)
 23. Ormoni in patofisiologia e oncologia umana. / Hormone-related human pathophysiology and cancer. (*supervisor: Terzolo Massimo*)
 24. Ruolo dei prodotti di glicazione avanzata nelle malattie metaboliche. / Role of glycated end-products in metabolic diseases. (*supervisor: Aragno Manuela*)



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25. Prodotti di ossidazione del colesterolo in fisiopatologia umana. / Cholesterol oxidation products in human pathophysiology. (*supervisor: Biasi Fiorella*)
26. Nuove strategie di Farmacoterapia / New advances in Pharmacotherapeutics. (*supervisor: Berta Giovanni*)
27. Progressi in diagnostica per immagini. / Progress in diagnostic imaging. (*supervisor: Veltri Andrea*)
28. Studio degli eventi cellulari e molecolari e dei meccanismi patogenetici coinvolti nella progressione delle epatopatie croniche in condizioni di steatosi epatica non-alcolica (NAFLD) e steato-epatite non alcolica (NASH) / To investigate cellular and molecular events as well as pathogenic mechanisms involved in the progression of chronic liver disease in condition of non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH) (*supervisor: Parola Maurizio*)
29. Penetrazione dei farmaci immunosoppressivi a livello intracellulare. / Penetration of immunosuppressant drugs at the intracellular level. (*supervisor: D'Avolio Antonio*)
30. Meccanismi fisiopatologici nella sepsi in relazione alle alterazioni cardiovascolari. / Pathophysiological mechanisms in sepsis in relation to cardiovascular alterations. (*supervisor: Montrucchio Giuseppe*)
31. Potenziale ruolo delle vescicole extracellulari nell'alterazione cardiovascolare nella sepsi. / Potential role of extracellular vesicles in cardiovascular alteration in sepsis. (*supervisor: Montrucchio Giuseppe*)
32. Comprensione dei meccanismi molecolari e identificazione di trattamenti sperimentali per la deplezione muscolare indotta da tumori e/o chemioterapia. / Understanding the molecular mechanisms and identification of prospective therapies for tumor- and chemotherapy-induced muscle wasting. (*supervisor: Penna Fabio*)
33. Nuove strategie cardioprotettive con metaboliti bioattivi vegetali. / Novel cardioprotective strategies with plant-derived bioactive metabolites. (*supervisor: Gallo Maria Pia*)
34. Una piattaforma chirurgica preclinica per l'identificazione e la validazione di nuovi bersagli terapeutici nei tumori gastrointestinali. / A surgically-based preclinical platform for discovery and validation of new therapeutic targets in gastrointestinal tumors. (*supervisor: Degiuli Maurizio*)



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35. Epidemiologia eziologica delle malattie multifattoriali. / Aetiological epidemiology of multifactorial diseases. (*supervisor: Ricceri Fulvio*)
36. Fibrillazione atriale e declino cognitivo: meccanismi fisiopatologici. / Atrial fibrillation and cognitive decline: underlying mechanisms. (*supervisor: Anselmino Matteo*)
37. Meccanismi di controllo dello stress ossidativo in cellule tumorali chemioresistenti. / Mechanisms of control of oxidative stress in chemoresistant cancer cells (*supervisor: Barrera Giuseppina*)
38. Alterato metabolismo del colesterolo nella malattia di Alzheimer. / Altered cholesterol metabolism and Alzheimer's disease. / Mechanisms of control of oxidative stress in chemoresistant cancer cells. (*supervisor: Gamba Paola*)
39. Meccanismi molecolari e nuovi biomarcatori nella patogenesi della malattia di Alzheimer. / Molecular mechanisms and new biomarkers in the pathogenesis of Alzheimer's disease. (*supervisor: Gamba Paola*)
40. Ruolo dei prodotti di ossidazione del colesterolo nella patogenesi dell'aterosclerosi. / Role of cholesterol oxidation products in the pathogenesis of atherosclerosis. (*supervisor: Leonarduzzi Gabriella*)
41. Reattività degli astrociti associata alla malattia di Alzheimer. / Astrocyte reactivity associated with Alzheimer's disease. (*supervisor: Leonarduzzi Gabriella*)
42. Biomarcatori di risposta alla terapia nelle malattie autoimmuni sistemiche e nelle allergopatie. / Biomarkers of response to therapy in systemic autoimmune and allergic diseases. (*supervisor: Rolla Giovanni*)
43. Biomarcatori di coinvolgimento polmonare nelle immunodeficienze anticorpali. / Biomarkers of lung involvement in predominantly antibody deficiencies. (*supervisor: Rolla Giovanni*)
44. Nuovo approccio alla diagnosi e alla terapia dell'allergia alimentare. / New approach to the diagnosis and treatment of food allergy. (*supervisor: Rolla Giovanni*)
45. Elaborazione neurobiologica delle emozioni nella Depressione: effetti delle terapie focalizzate sul trauma sulla connessione cuore – cervello. / Neurobiological processing of emotions in Depression: the effect of trauma focused psychotherapy on the brain - heart connection. (*supervisor: Ostacoli Luca*)



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46. Ricerca e sviluppo di molecole antivirali. / Research and development of antiviral molecules. (*supervisor: Lembo David*)
47. *Eziologia delle malattie complesse e ruolo delle dipendenze. (supervisor: prof. Costa)
(research project linked to the scholarship funded by Department of Clinical and Biological Sciences)*