

PHD PROGRAMME TABLE 37TH CYCLE

Section “Available Positions and Scholarship” integrated on 07/06/2021

PROGRAMME'S NAME	BIOTECHNOLOGICAL, BIOCOMPUTATIONAL, PHARMACEUTICAL AND PHARMACOLOGICAL SCIENCES
DURATION	3 years
PROGRAMME START DATE	01/11/2021
LANGUAGE	Italian
MANDATORY STAY ABROAD	6 months
COORDINATOR	Prof. Maria Laura Bolognesi (marialaura.bolognesi@unibo.it)
CURRICULA	N/A
RESEARCH TOPICS	Detailed list at the bottom of the present document
PHD POSITIONS	13
ADMISSION PROCEDURE	Qualifications evaluation Oral examination

Available Positions and Scholarships

Pos. n.	Financial Support	Description	Positions linked to research topics
1	PhD Scholarship	Totally funded by the University of Bologna general budget	
2	PhD Scholarship	Totally funded by the University of Bologna general budget	
3	PhD Scholarship	Totally funded by the University of Bologna general budget	
4	PhD Scholarship	Totally funded by the University of Bologna general budget	
5	PhD Scholarship	Totally funded by the University of Bologna general budget	
6	PhD Scholarship	Totally funded by the University of Bologna general budget under the “Progetti di Sviluppo Strategico dei Dipartimenti (PSSD)” initiative	
7	PhD Scholarship	Funded by the Department of Pharmacy and Biotechnology with funds made available by the project H2020 - QSPainRelief g.a. 848068	Cellular signaling and molecular pathway analysis to identify effective combinational treatment for chronic pain through an innovative QSP approach.
8	Research Grant	Funded by the Department of Pharmacy and Biotechnology together with the Fondazione Istituto Italiano di Tecnologia – IIT (Genova). The research grant will have a duration of 36 months and a gross percipient amount of €20,335.35	Drug discovery
9	Research Grant	Funded by the Department of Pharmacy and Biotechnology together with the Fondazione Istituto Italiano di Tecnologia – IIT (Genova). The research grant will have a duration of 36 months and a gross percipient amount of €20,335.35	Drug discovery
10	Research Grant	Funded by the Department of Pharmacy and Biotechnology together with the Fondazione Istituto Italiano di Tecnologia – IIT (Genova). The research grant will have a duration of 36	Drug discovery

		months and a gross percipient amount of €20,335.35	
11	Apprenticeship	Position with a PhD Apprenticeship contract with SILFRADENT S.r.l. (the successful candidate shall sign the contract by 31/12/2021 and the contract shall remain in force until 31/10/2024, unless the career is officially paused, which will cause a postponement of the legal length of the course. The research activity shall be carried out mainly at SILFRADENT S.r.l. (FC)	Regenerative, Nutraceutical and Lipidomic Medicine
12	PhD Scholarship	Totally funded by the University of Bologna general budget within the project UNA Europa - Linea One Health	One Health
13	PhD Scholarship	Funded within the Research training projects "Big Data per una regione europea più ecologica, digitale e resiliente" (Fondo POR FSE – Resolution n. 752 of 24/05/2021)	BD4AP: BIG Data for Alzheimer's disease Polypharmacology

Admission Exams

	DATE AND TIME	RESULTS
Qualifications evaluation	Applicants' participation is not required	Available from 07/06/2021**
Oral examination	Date: starting from 15/06/2021 - 9.30 a.m. CEST* Place: Remotely, using Microsoft Teams	Available from 09/07/2021**

* In case the oral examination cannot be completed in one day due to the large number of applicants, the oral examination **detailed schedule** shall be made available on the webpage [Studenti Online](#) together with the results of the qualifications evaluation. **During the oral examination applicants may express their interest in one or more positions linked to specific research topics.**

** The **results of the admission exams** will be available on the webpage [Studenti Online](#) (select "summary of the requests in progress" → "see detail" and open the .pdf file at the bottom of the page. **No personal written communication will be sent to applicants concerning the examinations results.**

Required and Supporting Documents to be attached to the application

Only IDs and Degrees Certificates in Italian, English, French, German and Spanish shall be considered as valid and be assessed by the Admission Board. All other documents shall be written in Italian and English.

Only qualifications obtained during the last 5 calendar years shall be taken into consideration, except for the University Degree. The Admission Board will assess the relevance of the supporting documents to the PhD Programme.

REQUIRED DOCUMENTS	
Identity document	Valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae	The Curriculum Vitae must be written following the instructions on the Admission Checklist (see the form at the bottom of this document)
Degrees	Documents attesting the awarding of the first and second cycle degrees, the exams taken and the marks obtained (see Art. 3 of the Call for Applications)
Admission Checklist	The Admission Checklist , attached to this document , must be duly filled with the required information
Thesis abstract	Abstract of the second cycle degree thesis , as detailed in the Admission Checklist . Graduands may submit the draft of their thesis (abstracts cannot exceed 7.000 characters, including spaces and formulas, if present. The above figure does not include: title, outline, images such as graphs, diagrams, tables etc. if present)

Personal Statement	The statement shall include the reasons prompting the applicant to attend the PhD Programme and those relevant experiences and research interests, that make the applicant suitable for the specific PhD Programme (400 words maximum, including spaces). For more instructions see the Admission Checklist attached to this document
SUPPORTING DOCUMENTS	
Publications	List of publications (i.e. monographs, articles on scientific journals, volume chapters), minor publications (conference papers, etc.) and abstracts and posters presented during academic conferences
Other documents	<ul style="list-style-type: none"> - Research activity - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research units - Language proficiency certificates - Periods of study abroad, outside the country of origin (e.g. Erasmus programme or other similar mobility programmes) - Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc)

Evaluation criteria*

Scores will be expressed in points out of 100, as follows.

1. Qualifications evaluation

Minimum score for admission to the oral examination: 30 points, Maximum score: 50 points

Qualifications Evaluation	University degree Weighted Average Mark (WAM)	20 points max
	Publications	5 points max
	Personal statement	8 points max
	Thesis abstract	10 points max
	Research experience	5 points max
	Other qualifications (Study abroad, language proficiency, awards)	2 points max

2. Oral examination

Minimum score for eligibility: 30 points, Maximum score 50 points

English proficiency	5 points max
General knowledge of issues encompassed by the PhD Programme	45 points max

The oral examination aims to assess the suitability of the applicant for scientific research as well as the general knowledge of issues encompassed by the PhD Programme ([see the list of research topics at the bottom of the present document](#)). During the oral examination, English language proficiency shall be assessed. The oral examination is carried out in Italian or in English.

*Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme → “More information”, at the bottom of the page in the section “Notices”.

Final Ranking List and Enrollment

After the publication of the results of the oral examination, the **final ranking list** will be available on the [University website](#), selecting the relevant PhD Programme → “More information”, section “Notices” at the bottom of the page.

Considering the expressions of interest for **topic-specific positions**, the Admission Board will establish if the applicants can be considered eligible for the allocation of the positions linked to specific research topics, taking into account their skills, experience and aptitude.

Following the publication of the final ranking list, successful applicants shall **enroll** on [Studenti Online](#) by the deadline indicated on the [University website](#), selecting the relevant PhD Programme → “More information”.

If a successful applicant withdraws from a position, the following applicant in the ranking list, who is also eligible for the specific position, will be contacted. During the replacement procedure, the new terms of enrollment shall be communicated via e-mail to the chosen applicant.

Research Topics

The doctoral course develops research themes related to the discovery of new therapeutic targets as well as of new drugs with improved efficacy and safety. The discovery of novel drug targets contributing to a specific disease and / or its progression, in fact, is usually followed by the creation of new drugs (small molecules or biologics) up to the development of the medicinal product. An integrated cross training, which spans all the drug development pipeline, is proposed to the Ph.D. students. This will be instrumental for their future employment in pharmaceutical and biotechnology companies.

The topics are multidisciplinary and mainly focused on:

- studies of biological systems at cellular and molecular level, to elucidate complex biological and biochemical processes
- biocomputational approaches to study new therapeutic targets and characterize drug-ligand interactions
- design, synthesis, characterization, analysis, delivery, efficacy and safety of new drugs, including those obtained through biotechnology
- development of pharmacological and toxicological studies on the mechanism of action and toxicological aspects of bioactive molecules
- studies of genetic and epigenetic profiles in response to drug treatments, evaluation of drug effectiveness and safety, and identification of risk factors associated with chronic/degenerative diseases
- development of suitable animal models of diseases for the evaluation of new drugs

Mandatory Admission Checklist – to be uploaded during the application process

Please, also note that uploading this form is mandatory.

Degrees and Transcripts

for the specifics of the documents to upload see the Call for Applications, art 3

Name/Surname: _____

Date of Birth: _____

Bachelor (3-year): _____ Awarding Institution: _____
(e.g., 3-year Bachelor of Biotechnology) (e.g., University of Bologna - Italy)

Final mark: _____

(Please report your mark as well as the minimum pass mark and the maximum mark that can be obtained in your education system; e.g., grade 108; 110 maximum - minimum 66 and, if available, the ECTS conversion)

Master (2-year): _____ Awarding Institution: _____
(e.g., 2-year Master of Pharmaceutical Biotechnology)

Final mark (or weighted average of the exams for Master's Degree graduands): _____

(Please report your mark as well as the minimum pass mark and the maximum mark that can be obtained in your education system; e.g., grade 108; 110 maximum - minimum 66 and, if available, the ECTS conversion)

or

Master (5-year; Single Cycle): _____ Awarding Institution: _____
(e.g., 5-year Master of Pharmacy)

Final mark (or weighted average of the exams for Master's Degree graduands): _____

(Please report your mark as well as the minimum pass mark and the maximum mark that can be obtained in your education system; e.g., grade 108; 110 maximum - minimum 66 and, if available, the ECTS conversion)

Curriculum Vitae

Applicants are requested to upload their CV (max 1 page) containing the following information:

- Current employment and educational record, indicating dates of attendance, technical skills and competences
- List of relevant publications (monographs, articles published on scientific journals, book's chapters) including the respective Journal's Impact factor)
- List of minor publications (conference papers, etc.)
- Research activity of any kind - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research projects.
- Study periods outside their countries of origin (e.g., Erasmus programme or other similar mobility programmes).
- Knowledge of foreign languages
- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc).

Personal Statement

The Personal Statement is your opportunity to make a compelling case that you are a good fit for the PhD program and to describe your research interests.

Applicants are requested to upload a short essay (300-400 words) describing your career goals, including research goals, the questions or topics you wish to explore, your interest in this PhD program, and how your education and experience qualify you for admission.

Please select one (or more) Field of Expertise relevant to your academic studies

- Biotechnology
- bioinformatics
- drug discovery
- drug delivery
- design and synthesis of novel drugs
- biocomputational studies on novel drug targets and on drug-receptor interactions drug analysis
- pharmacological and toxicological studies of bioactive molecules in vivo animal models

Thesis Abstract

Applicants (both those with earned Master's degree and Master's degree candidates) **are requested to upload** a comprehensive Master thesis abstract (max 7000 characters) — this document **should highlight** at the beginning: title of thesis, supervisor(s) and academic subject.