Corso di DOTTORATO DI RICERCA in
*Scienze del Farmaco, delle Biomolecole e dei Prodotti per la Salute*

Ph.D. Course in
*Drugs, Biomolecules and Health Products*

XXXII Cycle
(Nov 1st 2016 - Oct 31st 2019)

Carta del Dottorato

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1. Objectives of the Course

The "Corso di Dottorato di Ricerca" in "Scienze del Farmaco, delle Biomolecole e dei Prodotti per la Salute" (Ph.D. Course in Drugs, Biomolecules and Health Products) is organized by the Department of Pharmacy, University of Parma. It consists of a research project and complementary activities (courses, seminars and teaching); it is concluded with the preparation and defense of a PhD thesis.

The Course program generally takes three years, during which changes of scientific environment are strongly encouraged. It is aimed at the preparation of "Dottori di Ricerca" having scientific bases and research experience in the design, discovery, development, production and control of drugs and health products, as well as in the investigation of mechanisms of action for drugs and biomolecules. The Board of teaching provides a supervisor and offers courses and seminars in different scientific areas, with particular focus on medicinal chemistry, pharmaceutical chemistry, pharmacology and biochemistry. Contributions from different areas are also included, which can be relevant for the world of drugs, biomolecules and health products.

The research project of Ph.D. students has to be consistent with a research line included in one of the four major areas (curricula) covered by the program: design and synthesis of bioactive compounds; biopharmaceutics and pharmacokinetics; experimental pharmacology and toxicology; biochemistry, biophysics and molecular biology.

Ph.D. work must be considered as an exclusive full-time employment. [Art.12 c.1 DM 45/2013].

This document contains information about the organization of the Course and represents an agreement among the parts involved in the Course; it requires that all the parts are aware of Italian laws and internal rules about the Dottorato di ricerca.

2. Definitions, rights and responsibilities

2.1. Studente di dottorato, Dottorando or Ph.D. Student

1. Ph.D. students have the right to have their views represented in the development of policies that govern the Ph.D. Course.

2. Ph.D. students have the right to education, supervision and training. This includes access to supervisor's lab and research facilities at the Department of Pharmacy.

3. Ph.D. students have the right to receive evaluation of their progress and to be informed of the criteria upon which the evaluation is based. Students should also be provided with opportunities to discuss such evaluations with their Supervisors. Reasonable warning should be provided in advance of dismissal based on failure to make satisfactory academic progress.

4. Ph.D. students have the right to appropriate recognition for their contributions to research and scholarship. This will require discussion between the student, supervisor and other relevant parties regarding expectations for student contributions and the nature of the recognition.

1. Ph.D. students have the responsibility to be informed of the requirements of their programs and to dedicate appropriate effort and time to meeting the requirements of their programs.

2. Ph.D. students have the responsibility to uphold the ethical responsibilities of their profession and discipline.
3. Ph.D. students have the responsibility to understand and fulfill their role in developing and maintaining a professional relationship with their supervisor. This includes the responsibility for communicating regularly with him, maintaining a mutually agreed schedule of meetings, and informing supervisor of such things as: the current status of their work; any expected deviations from the agreed upon program of studies; and any unanticipated absences.

4. Ph.D. students have the responsibility to fulfill their research and complementary commitments and duties in a responsible manner.

5. Ph.D. students have the responsibility for the appropriate use of university resources and equipment.

6. Ph.D. students have the responsibility to recognize the contributions to their research results made by their supervisor and other colleagues. This includes to maintain confidentiality until results have been published, and to agree with the supervisor any kind of disclosure before publication. The results of research work made under the Ph.D. program are owned by University of Parma, which acknowledges to the Ph.D. student his/her part of the intellectual property. Participation in the intellectual property developed within the Ph.D. program is stated by the Teachers Board, after evaluation of reports from the Ph.D. student and the supervisor.

7. The Ph.D. student has the responsibility to collect documents attesting his/her participation to complementary activities, and to report to the Teachers Board. **Within the end of each academic year (October 31st), the Ph.D. students must present to the Teachers Board a written report describing the research and complementary activities performed during the year.**

8. At the end of the third year, the Ph.D. student proposes to the Teachers Board two external evaluators for his/her research work.

9. For five years after the end of the Course, the former Ph.D. students agree to fill inform the Teachers Board about his/her professional career.

### 2.2. Supervisor (Relatore di tesi) and Advisor (Tutore)

At the beginning of the Course, a supervisor is assigned to each Ph.D. student by the Teachers Board. A supervisor must be a member of the Teachers Board; for activities that the Ph.D. student performs outside University of Parma, an external advisor can support the supervisor.

The supervisor has the responsibility to agree with the Ph.D. student an affordable research plan, to follow his/her progress and to agree with him the schedule of his/her complementary activities.

The supervisor has the responsibility to guarantee the conditions that allow research work to be regularly performed. This includes access to equipment, facilities, material and documentation necessary for the research work.

The supervisor discusses with the Teachers Board about the progress of research work and of complementary activity. His/her opinion is evaluated by the Teachers Board to admit the Ph.D. student to the following year of the Course and to the final examination.

When the fruitful collaboration between a Ph.D. student and his/her supervisor is hampered for any reason, each of them can ask for a re-assignment. The Teachers Board evaluates the reasons presented by the two parts and can re-assign the Ph.D. student to a different supervisor, provided that a member of the Board is available to take the position.

### 2.3. Teachers Board (Collegio dei Docenti)

The Teachers Board takes care of:
- stating the requirements of research work and complementary activity;
- authorizing secondment of Ph.D. students in foreign countries for defined periods of time;
- approving, at the end of every academic year, the Ph.D. student's research work and complementary activity, admitting him, in case of positive response, to the next year:
- approving, at the end of the last academic year, the Ph.D. student's research work and complementary activity, admitting him, in case of positive response, to the final evaluation:
- assigning thesis evaluators and proposing the Commission for final evaluation to the Magnifico Rettore.

The members of Teachers Board must participate to formative and complementary activities, teaching, dedicated courses and seminars. They must produce relevant research results in the scientific fields object of the Ph.D. Course.

The list of Teachers Board is updated every year and is published on the Course website.

### 2.4. Course Coordinator (Coordinatore del Dottorato di Ricerca)

The Coordinator of the Course:
- updates the composition of the Teachers Board and summons its meetings;
- organizes complementary activities on general skills, scientific reporting and foreign language;
- authorizes Ph.D. students to teaching activity;
- fills the form to prepare the call for new Ph.D. students;
- evaluates the novelty and relevance of the research plan;
- authorizes Ph.D. candidate to deposit his/her thesis;
- informs Ph.D. students about the professional career of former Ph.D. students.
- takes relationships with Institutes and Companies to favor Ph.D. employment.

For temporary vacation, these roles are assigned to a vice-Coordinator.

### 2.5. Director of the Department (Direttore di Dipartimento)

The Director of the department guarantees that the conditions of learning, teaching and research that are appropriate and reasonable for their discipline. This includes financial support for research work, participation in complementary activity and travelling, provided that the relative items of expenditure are funded.

It is responsibility of the Director to inform the Ph.D. student about lab safety rules.

### 3. Requirements of the Course

#### 3.1. Granting

The number of Ph.D. students admitted each year, and of Grants available, is published in the call for Ph.D. positions.

For regulation of granting by Italian Law, see Art. 9 DM 45/2013:

*Le borse di studio hanno durata annuale e sono rinnovate a condizione che il dottorando abbia completato il programma delle attività previste per l’anno precedente (...).*

*L’importo della borsa di studio (…) è incrementato nella misura massima del 50 per cento per l’eventuale soggiorno all’estero per attività di ricerca, per un periodo complessivamente non superiore a 18 mesi, previa autorizzazione del Consiglio di Amministrazione del periodo di*
permanenza all’estero e del riconoscimento della relativa maggiorazione della borsa, su proposta
del Collegio dei docenti.

A decorrere dal secondo anno a ciascun dottorando è assicurato, in aggiunta alla borsa e
nell’ambito delle risorse finanziarie esistenti nel bilancio dei soggetti accreditati a legislazione
vigente, un budget per l’attività di ricerca in Italia e all’estero adeguato rispetto alla tipologia di
corso e comunque di importo non inferiore al 10% dell’importo della borsa medesima.

3.2. Course organization

The Course takes three years. It requires the completion of a research work and
accomplishment of complementary activities. These include formation and seminars, both in
disciplinary and multi-disciplinary areas related to the science of drugs, biomolecules and health
products, and development of general skills in informatics, foreign languages, knowledge of EU
research system, technology transfer and intellectual property.

The Ph.D. student agrees with the supervisor both a research plan and a scheduling of
complementary activity, fulfilling the requirements stated by the Teachers Board.

Under specific agreements between different University of Parma and a partner university, it is
possible to follow a joint Ph.D. Program.

3.3. Research work and research plan

After the beginning of the Course, Ph.D. students will present to the Teachers Board a written
research plan, approved by their supervisors, where they describe how the research project will be
managed.

The research plan will include:
- a brief description of the state of the art;
- the specific objectives and methods of the project;
- phases and milestones;
- expected results;
- a detailed description of first year work.

The Ph.D. student will present, in a seminar, his/her research plan to other students and to the
members of the Teachers Board, discussing its strength and weaknesses.

The Ph.D. student will continuously interact with his/her supervisor to check research progress,
analyze results and discuss possible modifications to the plan.

At the end of every academic year, Ph.D. students present to the Teachers Board a written report
about research progress and possible plan modifications. Admittance to the next year of the Course
depends on a positive evaluation of this report.

At least a draft for a publication or patent application must be presented to the supervisor within
the end of the second year.
3.4. Complementary activities

Every year the Ph.D. student must present, to other students and to the Teachers Board, at least two seminars in English, one regarding the research plan or research progress, and the second describing a scientific issue related to his/her research activity or field of interest.

The mandatory seminars will follow this approximate scheduling:
- *Research plan* (beginning of 1st year): December-January
- *Scientific topic*: June-July
- *Research progress* (end of 1st and 2nd year): September-November
- *Research results* (end of 3rd year): December-January

All Ph.D. students should attend seminars presented by other students and participate to the discussion. They should also attend courses and seminars offered by the University, by the members of the Teaching Board or by invited teachers.

Participation to international schools and congresses is strongly encouraged. Participation to ULLA Summer school is highly recommended.

Ph.D. students can, after authorization by the Coordinator, perform tutoring or teaching activity. This can consist of:
- complementary teaching in institutional courses, within 40 hours per year;
- participation to exam commissions;
- tutoring of students for their graduation thesis.

Teaching is not mandatory and does not constitute any obligation for the University.

All these activities are mandatory for Ph.D. student's formation and concur to the acquisition of the credits (ECTS) necessary to complete the Course. One ECTS point can be acquired by 5 hours of course, lessons and seminars, or by participation to 1 day of school.

Considering that one ECTS also corresponds to 25 hours of research work, the following table presents an example of study and research requirements for the Course.

<table>
<thead>
<tr>
<th>Activity</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
</tr>
</thead>
<tbody>
<tr>
<td>University courses or teacher seminars</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ph.D. student's seminars</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>National or international schools</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Research work</td>
<td>54</td>
<td>52</td>
<td>53</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>
A secondment in an distinguished external institution, possibly in a foreign Country, for a period of time of 3-18 months, is strongly encouraged. Ph.D. student's mobility can be related to ULLA mobility program, Erasmus+ mobility program or other programs organized by the University. Ph.D. student has to ask an authorization to the Teachers Board for periods of secondment higher than 1 month.

3.5. Final commitments

At the end of the third year, the Ph.D. student presents to the Teachers Board a report describing:
- all the research work performed and the main results achieved;
- all the complementary activities performed and attended;
- a list of publications, congress reports and acknowledgments.
On the basis of this report, and of Supervisor's advice, the Teachers Board will express a judgment that will be presented to the Commission of the final evaluation.
The Ph.D. student will produce a written thesis with the results of research work.

3.6. Course evaluation

At the end of the Course, Ph.D. students have to compile an anonymous evaluation form.
After the end, another form with questions about professional career will be sent to the "Dottori di Ricerca" for 5 years after their title achievement.

3.7. Acquisition of the title

The thesis, an abstract and a report form the Ph.D. student, describing his/her research work and publications, has to be evaluated by two external evaluators, who express a written judgment. The evaluators can accept the thesis, allowing its presentation for the final evaluation or delay it for no more than six months, asking for integrations or amendments. In the last case, the thesis is forwarded to final examination with an additional judgment of the evaluators about integrations and amendments.
Final evaluation is public and made by a Commission appointed following University rules. At the end of the evaluation, the thesis may be approved or rejected. (See Art. 8 c. 6 DM 45/2013).

Under application by the Ph.D. candidate and favorable opinion by the Teachers Board, University of Parma can emit the Certificate of “Doctor Europaeus”, as defined by the European University Association, when:
1) Ph.D. thesis reports also results achieved during a secondment of at least three months in a foreign EU Country;
2) the Ph.D. student presents two positive judgments by two Professors fro universities in foreign EU Countries;
3) the Commission for the final evaluation includes at least one member from a foreign EU Country;
4) during the final evaluation, thesis is discussed in Italian and in another language of a foreign EU Country.
4. Agreement


The Ph.D. student, .................................................................................................................................
email: ........................................................................................................................................................
Date ....................... Sign here: ..............................................................................................................

The Supervisor, Prof. ............................................................................................................................
Date ....................... Sign here: ..............................................................................................................

The Advisor, ...........................................................................................................................................
Date ....................... Sign here: ..............................................................................................................

The Coordinator, Prof. Marco Mor
Date ....................... Sign here: ..............................................................................................................

The Director of the Department of Pharmacy, Prof. Patrizia Santi
Date ....................... Sign here: ..............................................................................................................