

Bachelor Degree
in
*Molecular Biology, Medicinal Chemistry
and Computer Science
for Pharmaceutical Applications*



SAPIENZA
UNIVERSITÀ DI ROMA

Polo di Latina - Cersites

FACOLTÀ DI FARMACIA
E MEDICINA



SAPIENZA
UNIVERSITÀ DI ROMA

Professor Cinzia Ingallina

12th May 2025

Degree Programme

Faculty: Interfaculty (Pharmacy and Medicine– Information Engineering, Informatics, and Statistics)

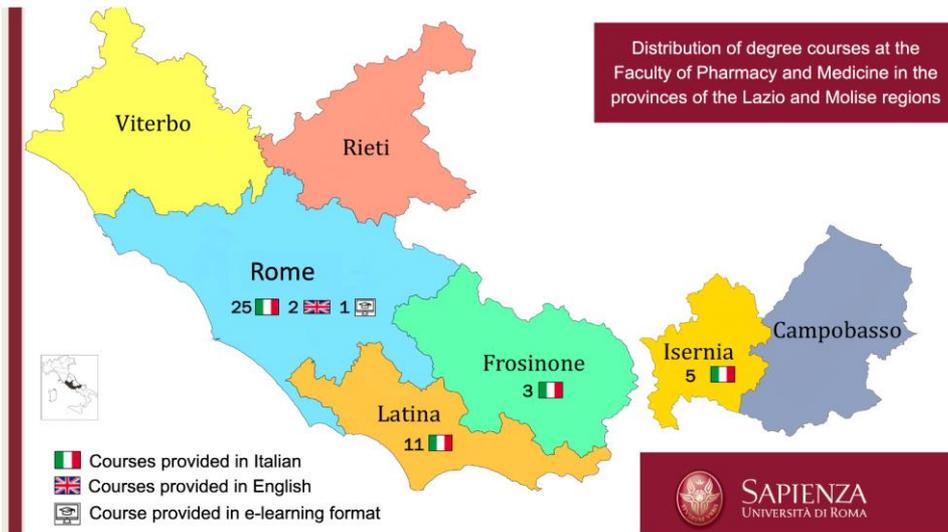
Duration: 3 years

Degree Code: L-29 (Science and Pharmaceutical Technologies)

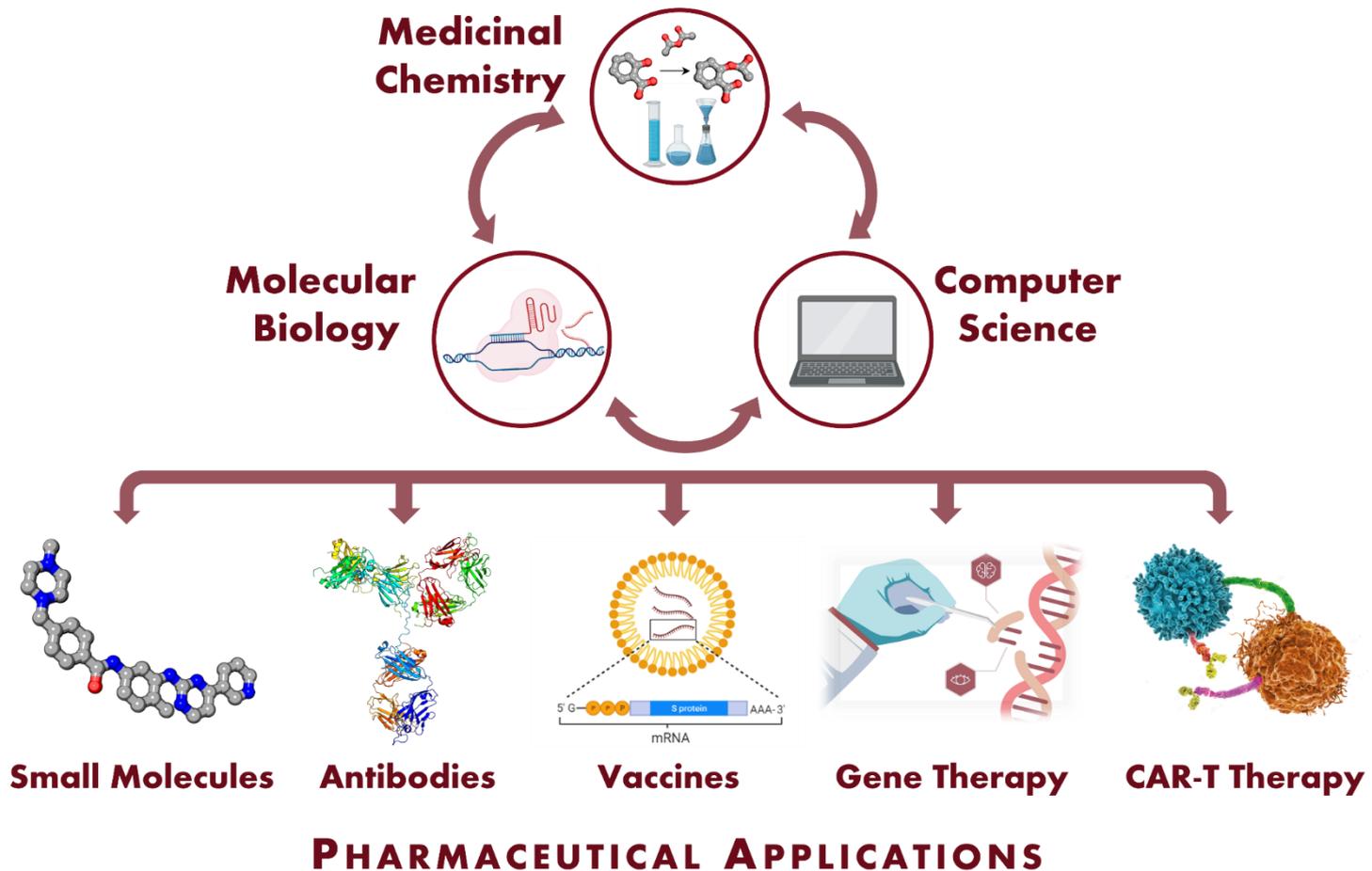
Language: English

Place: Latina

Latina Campus



Modern Drug Discovery



Essential Elements of the Course

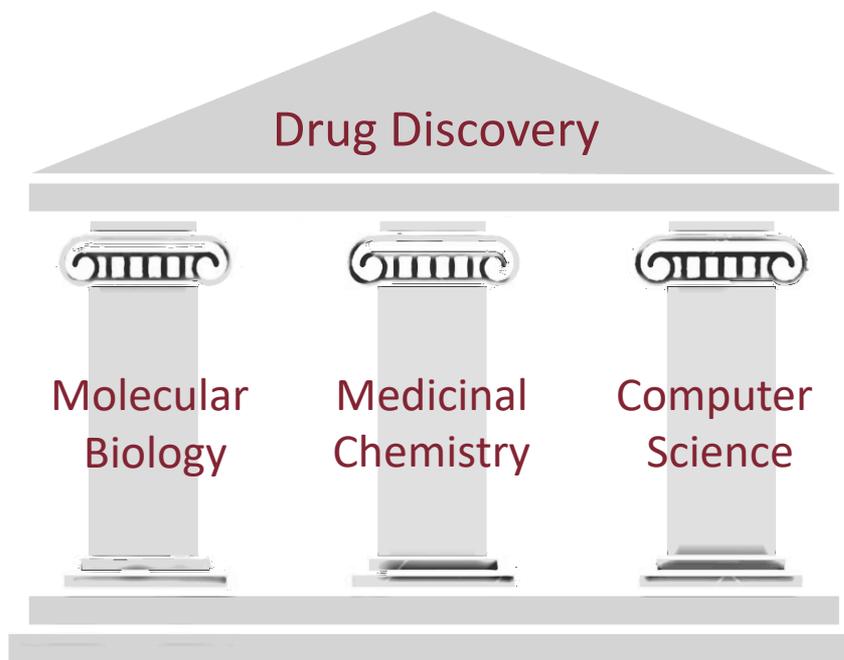
- **Interdisciplinary studies**
 - Molecular Biology
 - Medicinal Chemistry
 - Computer Science

- **First bachelor's degree course in Europe**

- **Internationalization**



Training Objectives and Professional Profiles



*Expert in **biomolecular disciplines**
integrated with **computer science***

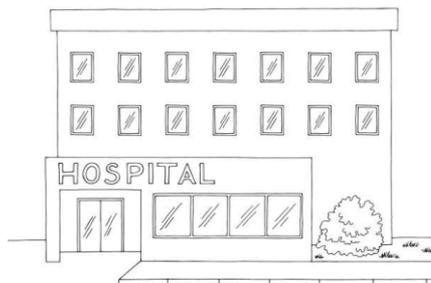
*Expert in **pharmaceutical chemistry disciplines**
integrated with **informatics***

Professional Opportunities

- Research centres, organisations, or industries



- Hospital Centres



- Accademia
(master's degree courses)



The **Study Plan** is structured as follows:

- Basic teaching activities
- Characterising teaching activities
- Related or supplementary teaching activities
- Elective courses

***ATTENDANCE is NOT MANDATORY
BUT STRONGLY RECOMMENDED***

The **180 CFU** necessary for the achievement of the degree, distributed over **3 years** of study, are organised as follows:

- Mandatory** courses involve a **traditional teaching approach** (including numerical exercises and/or laboratory work) for **147 CFU**
- Elective Courses (3)** chosen by the student for **18 CFU (I anno)**
- Mandatory Internship** for **3 CFU** (III year, I semester)
- Eligibility Assessment for *Advanced English Skills (C1)*** for **6 CFU** (III year, I semester)
- Final Graduation Exam** for **6 CFU** (III year, II semester)

18 Mandatory Courses

6 Chemical, Pharmaceutical and Technological Disciplines

- General and Inorganic Chemistry, Organic Chemistry, Chemistry of Food and Natural Compounds, Pharmaceutical Technology (**54 CFU**)

6 Biomedical Disciplines

- Chimica Biological Chemistry, Biochemistry, Molecular Biology, Pathology, Immunology, Human Genetics (**51 CFU**)

6 Mathematical, Physical, Computer and Statistical Sciences

- Introduction to Programming & Laboratory, Design and Analysis of Algorithms, Machine Learning & Computational Biology, Mathematics, Physics, Statistics (**42 CFU**)

3 Elective courses (18 CFU)

First Year

I Semester		
Course	SSD	CFU
Mathematics	MAT/05	6
Introduction to Programming & Laboratory	INF/01	12
Principles of General & Inorganic Chemistry	CHIM/03	6
Physics	FIS/01	6
II Semester		
Organic Chemistry	CHIM/06	6
Statistics	SECS/01	6
Elective Courses (2)		12
Optional Course (1)		6
Fundamentals of Microbiology	MED/07	6
Fundamentals of Pharmacology	BIO/14	6
Fundamentals of Biophysics	FIS/07	6
TOTAL 42 + 18 = 60 CFU		

Second Year

I Semester		
Course	SSD	CFU
Design and Analysis of Algorithms	INF/01	6
General Biochemistry	BIO/10	6
Molecular Biology & Applied Molecular Biology Laboratory	BIO/11	12
Fundamentals of Chemical Biology	BIO/10 CHIM/08	3 + 3
II Semester		
Biochemistry & Clinical Biochemistry	BIO/10 BIO/12	9 + 3
Human Genetics	BIO/18	6
Chemistry of Food & Natural Compounds	CHIM/10 CHIM/06	6 + 6
Principles of Medicinal Chemistry	CHIM/08	6
TOTAL 66 CFU		

Third Year

I Semester		
Course	SSD	CFU
Medicinal Chemistry	CHIM/08	9
Pathology, Immunology & Molecular Biology Techniques	MED/04 MED/46	6 + 6
Internship Activities (Advanced English Skills + Internship Activity)		6 + 3
II Semester		
Machine Learning & Computational Biology	INF/01	6
Bio-active Compound Delivery & Targeting	CHIM/09	12
Final Exam		6
TOTAL 54 CFU		

Final Exam

The final exam consists of a discussion centred on the thesis prepared by the student. This thesis must be **written**, **presented**, and **discussed** in English. It should be independently authored by the student and comprehensively document the subject matter being addressed. Whether it is a **compilation thesis** or an **experimental thesis**, the work should clearly define the research problem being explored; in the case of an experimental thesis, it may also incorporate insights gained during practical training.



*The thesis presents the **individual compilatory** or **experimental work** of the student, which is carried out **under the guidance** of a **professor tutor**.*

Enrollment A.Y. 2025-2026

Degree programme	Places reserved to EU candidates (1)	Places reserved for non-EU candidates residing abroad (2)
Molecular Biology, Medicinal Chemistry and Computer (Latina Campus) L-29 Class	20	30

(1) Italian citizens, EU citizens residing anywhere and non-EU citizens legally residing in Italy as per art. 26 of law no. 189/2002.

(2) Non-EU candidates permanently residing abroad and applying for visa, as well as Chinese candidates participating in “Marco Polo” Project selected for Sapienza.

If the enrolment applications of non-EU students residing abroad are lesser than the number of available places, the vacant places will be assigned to EU students.

Applying to the Degree Programme

- 1. Successfully pass the English TOLC-F assessments** (including the **TOLC@CASA** mode) or the **SAT**, candidates must achieve a total converted score exceeding zero. Attainment of a score on the English TOLC-F, TOLC@CASA, or SAT **necessitates registration and active participation in the respective examinations.**
- 2. For Non-EU Candidates: Pre-acceptance letter** to the degree programme in Molecular Biology, Medicinal Chemistry and Computer Science for Pharmaceutical Applications following **application via the pre-selection platform**, with confirmation by the candidate of the invitation contained therein.
- 3. Online pre-enrolment application** to obtain the “**University enrolment**” **student visa** for the 2025-2026 academic year, to be requested through the **University portal**

Applying to the Degree Programme

- 4. Registration for Selections.** Registration requires signing up for INFOSTUD and paying a contribution of € 10, allowing for inclusion in a ranking formed based on scores.
- 5. Oral interview** 
- 6. Ranking Lists and Enrolment phase for successful applicants** by paying the first instalment of the tuition fees for the 2025-2026 academic year.



MOLECULAR BIOLOGY, MEDICINAL CHEMISTRY AND COMPUTER SCIENCE FOR PHARMACEUTICAL APPLICATIONS

Il Corso di Studio in breve

Il nuovo Corso di Laurea in Biologia Molecolare, Chimica Farmaceutica e Informatica per Applicazioni Farmaceutiche (Molecular Biology, Medicinal Chemistry and Computer Science for Pharmaceutical Applications) è un Corso di Laurea triennale della classe L-29 Scienze e Tecnologie Farmaceutiche interamente erogato in lingua inglese.

L'obiettivo del Corso di Laurea è di formare figure qualificate con una preparazione nell'ambito della ricerca scientifica biomolecolare, farmaceutica e tecnologica avanzata che integri in maniera sinergica

- i) un solido insieme di competenze teoriche nelle discipline culturali di base,
- ii) ampie competenze in ambito biologico-molecolare, chimico-farmaceutico, tecnologico-applicativo e informatico e iii) capacità critica di valutazione scientifica e abilità nell'informazione e nella comunicazione.

Allegati

 Verbale della consultazione con le Parti interessate

 **Regolamento didattico**

https://web.uniroma1.it/dip_ctf/didattica/offerta-formativa/corsi-di-laurea-e-laurea-magistrale/molecular-biology-medicinal-chemistry-computer-science-pharmaceutical-applications

Molecular Biology, Medicinal Chemistry and Computer Science for Pharmaceutical Applications



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Catalogo dei Corsi di studio

<https://corsidilaurea.uniroma1.it/it/corso/2024/31776/home>

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Molecular Biology, Medicinal Chemistry and Computer Science for Pharmaceutical Applications

Bachelors

Degree Programme

- Programme Code: 31776
- Test Code: 14229
- Faculty: Farmacia e Medicina
- Department: CHIMICA E TECNOLOGIE DEL FARMACO
- Duration: 3 years
- Degree Code: L-29
- Degree: Bachelors
- Admission Procedure: Admission Test (S)
- UE Places: 20
- Extra UE places: 30

[View more](#)

Study plan

The "Manifesto" study plan: fundamental, core and elective exams, credits and course language

[View more](#)

Apply

How, where, when. Deadlines and procedures to enrol in the programme

2024/2025

[View more](#)

Attendance

Syllabus and study material, lesson and exam schedules

[View more](#)

Quality Assurance (AQ)

Organization and responsibility of the AQ for the Course

[View more](#)

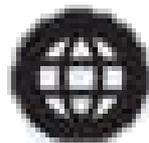




Coordinator of the Degree Programme: Cinzia Ingallina
Teaching Secretariat: Luciana D'Amore



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WAIT FOR 2025-2026
**[https://corsidilaurea.uniroma1.it/
it/corso/2024/31776/home](https://corsidilaurea.uniroma1.it/it/corso/2024/31776/home)**