



UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

DRUG DISCOVERY AND DRUG DEVELOPMENT

Anno immatricolazione	2019/2020
Anno offerta	2021/2022
Normativa	DM270
SSD	BIO/14 (FARMACOLOGIA)
Dipartimento	DIPARTIMENTO DI MEDICINA MOLECOLARE
Corso di studio	MEDICINA E CHIRURGIA (IN LINGUA INGLESE)
Curriculum	PERCORSO COMUNE
Anno di corso	3°
Periodo didattico	Primo Semestre (04/10/2021 - 14/01/2022)
Crediti	1
Ore	8 ore di attività frontale
Lingua insegnamento	English
Tipo esame	SCRITTO
Docente	FRANCO VALENTINA - 1 CFU
Prerequisiti	Adequate understanding of principles of chemistry, biology, anatomy and physiology
Obiettivi formativi	<p>At completion of the course, students must be able to:</p> <ul style="list-style-type: none">a) describe the scientific, health-related and economic factors involved in drug discovery and development;b) describe strategies currently used for drug discovery;c) describe regulatory requirements for clinical and preclinical development;d) describe ethical aspects related to drug development;e) describe the requirements, methodology and procedures used in preclinical drug development;f) describe the requirements, methodology and procedures used in the four phases of clinical development;g) interpret critically methodology and results of clinical trials;

h) design rationally studies for drug evaluation

Programma e contenuti

The topics addressed in the course include: scientific, health-related and economic forces driving drug discovery and development; different strategies used for drug discovery; procedures for selection of leading candidates compounds; regulatory aspects covering drug development; ethics in drug development, including those related to the use of placebo and suboptimal controls; in vitro and in vivo testing for screening candidate compounds; methods used to determine general and special pharmacology and preclinical toxicology; the 4 phases of drug development; methodology for clinical drug assessment with special reference to the limitations of uncontrolled trials and the methodological aspects of randomized controlled trials; seeding trials, interpretative pitfalls in assessing clinical trials, repurposing of approved medications; ghost authorship and publication bias in drug studies.

Metodi didattici

The course includes formal and interactive lectures. Faculty members are available at times reserved for student visits to provide clarifications about topics included in the course.

Testi di riferimento

Hill RG, Rang HP, Drug Discovery and Development, 2nd Edition, Churchill Livingstone, 2012
Ng R, Drugs: from Discovery to Approval, third edition, Wiley, 2015
Blass BE, Basic Principles of Drug Discovery and Approval, Associated Press, 2015

Modalità verifica apprendimento

The examination consists in an oral evaluation addressing the topics included in the course. Students must demonstrate that they achieved the learning objectives of the course.

Altre informazioni

Obiettivi Agenda 2030 per lo sviluppo sostenibile

[\\$lbl legenda sviluppo sostenibile](#)