

PRELIMINARY COURSE OVERVIEW

Drug discovery			
Nr.	Title	Teacher(s)	Duration
1	Genetic code reprogramming	Seino Jongkees Ivana Drienovksa	1 day
2	Introduction to NMR spectroscopy in drug discovery	Andrea Sartori	1 day
3	Metabolomics and Beyond	Rawi Ramautar Ahmed Ali Charlie Clark Nicolas Drouin Alida Kindt	1 day
4	Barriers of the CNS and their Impact on Brain Drug Disposition	Irena Loryan Elizabeth de Lange Frida Bällgren	1 day
5	Discovery and structural characterization of novel peptides - application of mass spectrometry, transcriptome mining, and NMR	Blazej Slazak Sunithi Gunasekera	1 day
6	Basic concepts in medicinal chemistry	Iwan de Esch	1 day
7	Modern medicinal chemistry	Daan van der Es Laura Heitman	1 day
8	Emerging concepts of GPCR structure and function	Martine Smit Chris Schafer Marco Siderius Raimond Heukers	1 day
9	Advances in the study of medicinal plants: analytical methods and pre-clinical testing for chemical complexity	Marco Biagi	1 day
10	Computational Design and Synthesis of Small-molecule Modulators for Biological Targets	Barbara Zarzycka Maikel Wijtmans	2 days
11	A hands-on introduction into computational medicinal chemistry	Oscar van Linden Albert Kooistra	1 day

Biologics			
Nr.	Title	Teacher	Duration
12	Formulation of therapeutic proteins	Marco van de Weert Vito Foderà	1 day
13	Extracellular Vesicles (EVs) in health and disease	Marjo Yliperttula Riina Harjumäki	1 day
14	Advanced DNA manipulation: 101 ways to skin that (cloning) cat.	Vitor Pinheiro	1 day
15	An Introduction to Nanomedicine: From Concepts to Therapies	Matthias Barz	1 day

Biomarkers and Therapy

Nr.	Title	Teacher	Duration
16	How to reduce the incidence of cancer in kidney transplant patients?	Teun van Gelder	1 day
17	Gene Therapy: the biotech and viral point of view in 2023	Dorine Bonte Eric Morel	2 days
18	Inhalation route for local and systemic delivery of biological drugs	Annalisa Bianchera Ruggero Bettini	1 day
19	Viral vectors and gene therapy: turning infectious viruses into efficient vehicles to halt and cure genetic disorders	Rik Gijsbers	1 day
20	Therapeutic antibodies : From the Concept to the Clinic	Isabelle Turbica Philippe Billiald	1 day

Drug development

Nr.	Title	Teacher	Duration
21	New pharmacological strategies in cardiovascular prevention: small molecules and biotechnological approaches	Francesca Zimetti Bianca Papotti	1 day
22	Size matters: Advanced characterisation and concepts in colloidal drug delivery	Ben Boyd Anette Mullertz	1 day
23	Ex vivo ocular models for drug delivery studies	Sara Nicoli	1 day
24	Light-responsive nanosystems: design and applications	Ali Makky	0,5-1 day
25	Quality by Design (QbD) in Drug Development	Jukka Rantanen Clare Strachan	1 day
26	Improved solubility by drug nanocrystals, cocrystals and coamorphous systems	Leena Peltonen	1 day
27	Development, characterisation and regulation of information medicines	Gerrit Borchard Ines Nikolic	1 day
28	Prefomulation: pharmaceutical and biopharmaceutical profiling	Guy van den Mooter	1 day
29	Post-marketing research into the safety of drugs using big data and target trial emulation	Li Wei Ruth Brauer	1 day
30	Model-informed clinical drug development (MIDD): from big data to digital twins	Oscar Della Pasqua Alessandro di Deo Umberto Villani	1 day
31	Modern tools for pharmaceutical analysis – sample preparation and separation formats	Jörg Kutter Deirdre Cabooter	1 day

Artificial Intelligence

Nr.	Title	Teacher	Duration
32	Fundamentals of drug utilization research using real-world data	Maurizio Sessa Björn Wettermark	2 days
33	Global Mental Health	Ruth Brauer Oksane Pyzik	1 day
34	Structural modelling of proteins, peptides, and their complexes: Computational biophysics and artificial intelligence approaches	Tâp Ha-Duong Liuba Mazzanti	1 day

General skills

Nr.	Title	Teacher	Duration
35	Getting off to a flying start for a great finish to your PhD	Ben Boyd Thomas Rades	1 day

36	From Idea to Innovation: Design Your Own Startup	Willem Jaspers	1 day
37	Intro Science Teaching	Jacqueline van Muijlwijk-Koezen Isabel Braadbaart	1 day
38	Programming with R	Laura Zwep	1 day