

1,000,000,000 CHF investment

7,000,874 hours of work

6,587 experiments

423 researchers

1 medicine



THE MAKING OF AN INNOVATIVE MEDICINE

*Introductory workshops on translational biomedical research and drug discovery
and development*

**Starts SEPTEMBER 22. 2022
4:15 PM ROOM SG 0213**

EPFL

Sciences de la Vie -SV



Pr. Roger G. Clerc

The Making Of An Innovative Medicine – course schedule

Thursday's @ 4-6 PM except 8.12/15.12.22 @2-6 PM



Session 1: **Scope of the course _ general organization _ case study**

22.09.22 *Embracing a career at the heart of biomedical research !?*

Session 2: **Historical perspective: the modern pharmacy**

29.09.22 *Advent of modern medicines - placebo controlled drug development*

Session 3: **Introduction to translational research: crossing the bridge**

06.10.22 *A chasm has opened wide between biomedical research and patients in need*

Session 4: **Therapeutic target identification I & II**

13-20.10.22 *"me too" vs a wealth of innovative targets _ small MW cpds vs biologicals
Early front loading of biomarker identification for cohort stratification*

Session 5: **Structure based drug design _ medicinal chemistry _ low/high throughput**

27.10.22 **screening assays _ multiple parallel parameters optimization MDO**
Setting up screening assays, the robotics, the million cpds libraries

Session 6: **Therapeutic peptides and biologicals: today's - tomorrow's pharmacy**

Challenges (cost of goods - healthcare payers) and opportunities

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Session 7: Personalized Healthcare PHC _ precision medicine

10.11.22 *How PHC started: from a single case to a paradigm change*

Session 8: Pharmacogenetic polymorphisms, Pharmacogenomics

17.11.22 *Interindividual variability toxicity in response to medicines*

Session 9: In vivo pharmacology, investigative toxicology with Dr. Nathalie Brandenberg

24.11.22 *Preclinical research ends up with IDB's, FDA guidelines for FIH*

Session 10: Clinical research _ phase 0, phase I, II, III, IV

1.12.22 *The long and complex experimental procedures with human patients*

Session 11: Health Hackathon – Hacking medicine I with Dr Greg Michielin MD PhD

08.12.22 *Pitches –building teams – hacking problem - 5Ws – brainstorm*

starts @ 2PM !

Session 12: Health Hackathon – Hacking medicine II with Prof D. Trono Prof O. Naveiras, judges

15.12.22 *Building up solutions – make it better - final presentations*

starts @ 2PM !