The making of an innovative medicine

Clerc Roger G.

<table>
<thead>
<tr>
<th>Cursus</th>
<th>Sem.</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approches moléculaires du vivant</td>
<td>Obl.</td>
<td></td>
</tr>
<tr>
<td>Biologie computationnelle et quantitative</td>
<td>Obl.</td>
<td></td>
</tr>
<tr>
<td>Biotechnologie et génie biologique</td>
<td>Obl.</td>
<td></td>
</tr>
</tbody>
</table>

Language: English  
Credits: 2  
Session: Oral presentation  
Exam: Presentation  
Workload: 60h  
Hours: 28  
Lecture: 14  
Exercises: 14  
Number of positions: 25

Frequency  
Every year

Remarque  
Next time Fall 2019

Summary  
To expose participants to translational research (from bench to bedside and back) and drug discovery

Content  
Through a logical series of presentations both from the participants and the lecturer (flipped classroom format, oral presentations, workshops) on the making of an innovative medicine, the entire and complex process starting from the therapeutic target identification up until the clinical development and use in clinical practice of a new molecular entity (NME) will be addressed and discussed.

The course is divided in twelve sections of each 2 periods of 45 minutes:
Section 1  Scope of the course, general organization, case study
Section 2  Historical perspective: the modern pharmacy
Section 3  Introduction to translational research: crossing the bridge
Section 4  Therapeutic target identification I & II
Section 5  Structure based drug design, medicinal chemistry, low/high throughput screening assays, multiple parameters optimization MDO
Section 6  Therapeutic peptides and biologics: today's - tomorrow's pharmacy
Section 7  Personalized Healthcare (PHC) precision medicine
Section 8  Pharmacogenetic polymorphisms, Pharmacogenomics
Section 9  In vivo pharmacology, investigative toxicology
Section 10  Clinical research, phase 0, phase I, II, III, IV
Section 11  Health Hackathon - Hacking medicine I
Section 12  Health Hackathon - Hacking medicine II

Minimum 4 participants  
Maximum 25 participants

Keywords  
Translational biomedical research/Drug discovery

Learning Prerequisites  
Required courses
Basic Molecular Biology, Cellular Signaling, Pharmacology

Resources

Bibliography