

Winter Semester 2013-2014 Lecture

## Polymer Therapeutics

(V 21 233 – 3 credits)

First Meeting: Thursday 17.10.2013, 14:00 – 15:00 hs, Room 34.16/17

- Part 1: Thursday 05.12.2013, 14:00 – 17:00 hs, Room 34.16/17
- Part 2: Thursday 12.12.2013, 14:00 – 17:00 hs, Room 34.16/17
- Part 3: Thursday 19.12.2013, 14:00 – 17:00 hs, Room 34.16/17
- Part 4: Thursday 09.01.2014, 14:00 – 17:00 hs, Room 34.16/17
- Part 5: Thursday 16.01.2014, 14:00 – 17:00 hs, Room 34.16/17
- Part 6: Thursday 23.01.2014, 14:00 – 17:00 hs, Room 34.16/17
- Part 7: Thursday 30.01.2014, 14:00 – 17:00 hs, Room 34.16/17
- Part 8: Thursday 06.02.2014, 14:00 – 17:00 hs, Room 34.16/17
- Part 9: Thursday 13.02.2014, 14:00 – 17:00 hs, Room 34.16/17
- Exam: Thursday 20.02.2013, 13:00 – 18:00 hs, Room 34.16/17

### Program:

- Basics on drug classes (modes of action, chemical examples)
- Background on biology and pharmacology (absorption, distribution, metabolism, excretion, toxicity)
- Principles of drug delivery with polymers (drug transport, drug release)
- Chemistry on polymers and macroarchitectures
- Synthesis of bioconjugates (conjugation chemistry, linkers, reactive groups)
- Multivalency /Polyvalency as novel mode of action
- Functional dendritic polymers for biomedical applications
- Nanocomposites
- Basics on pharmaceutical drug development
- Discussion of examples from literature and market

Jr.-Prof. Dr. Marcelo Calderon  
Institut für Chemie und Biochemie

[marcelo.calderon@fu-berlin.de](mailto:marcelo.calderon@fu-berlin.de)

<http://www.bcp.fu-berlin.de/en/chemie/oc/calderon/index.html>