Institut für Chemie

Universität Zürich
Institut für Chemie
Winterthurerstrasse 190
CH-8057 Zürich
Telefon +41 44 635 46 54
Telefax +41 44 635 68 03
www.chem.uzh.ch

Synthesis of phosphorylated lipids as additives for functional lipidic cubic phases

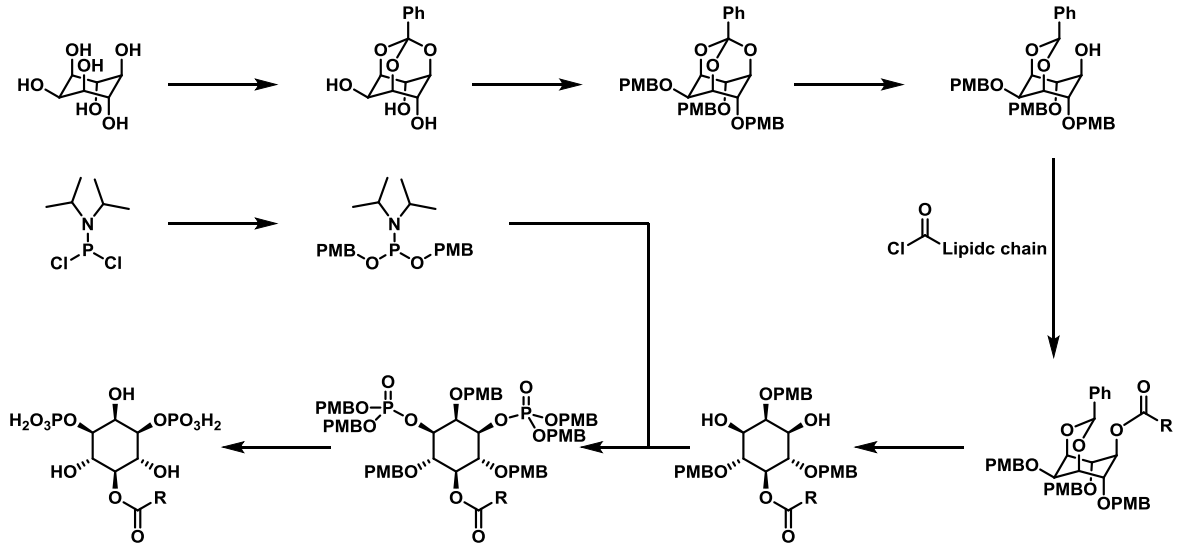
Bachelor thesis or Internship

Supervisor: Prof. Dr. Ehud Landau, ehud.landau@chem.uzh.ch

Contact: Prof. Dr. Ehud Landau / Marco Etter (marco.etter@chem.uzh.ch)

Life as we know it is based on compartmentalization; this process requires a layer which can separate an outer from an inner part. In cellular systems, this separating layer is the bilayer membrane, which consists of various interesting molecules such as phospholipids. These molecules not only have useful and interesting properties, but are also challenging candidates to synthesize.

Our research projects are centred on lipidic cubic phases. We design and synthesize lipids in order to modify the structure and function of such mesophases. One class of lipids that has interesting properties are phospholipids, which are not commercially available and need to be synthetized. The potential student's project involves the synthesis of various novel phospholipids using known reactions.



Basic synthetic scheme of such a project leading to double phosphorylated lipids.

The proposed experiments will be conducted in our laboratories and a PhD candidate in our group will closely supervise the potential student.

For any questions or applications, please contact: Prof. Dr. Ehud Landau (ehud.landau@chem.uzh.ch)
or Marco Etter (marco.etter@chem.uzh.ch)