Research Doctorate (Ph.D.) in Chemical Sciences
33rd Cycle – Academic Year 2017/2018

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Project Information

1. **Title:**
Synthesis and biological evaluation of direct-acting and host-targeting agents: broad spectrum drugs for the treatment of (re)emerging, neglected and tropical diseases.

2. **Key words:** Direct-acting antivirals, host-protein inhibitors, stereoselective synthesis, antiviral therapy, neglected diseases

3. **Abstract**
Potent and efficient antivirals are successfully used for the treatment of various infections such as herpesviruses, hepatitis B and C viruses, HIV, and with some success for influenza viruses. However, no selective inhibitors are available for a multitude of medically important viruses, most of which are (re-)emerging or neglected RNA viruses. As it is impossible to develop drugs against each of these viruses, broad-spectrum antiviral agents (BSAA) are a prime strategy to cope with this challenge. The second approach consists in targeting the host proteins or pathways required by multiple viruses for the infection process.
The aim of this project lies in the development of molecular candidates to be evaluated as truly "antivirotics" drugs that, analogously to antibiotics (which are effective only against bacterial infections), can be used to treat viral infections caused by a whole group of different viruses which share common features.