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v Ljubljani

Fakulteta *za kemijo*
in kemijsko tehnologijo

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**VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI**

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z naslovom:

**Bioorganic Synthesis @ the Chemistry &
Biology Interface**

v sredo, 6. aprila 2016 ob 15:00 uri
v predavalnici 1 v 1. nadstropju Fakultete
za kemijo in kemijsko tehnologijo, Večna pot 113

Vljudno vabljeni!

Povzetek

Bioorganic synthetic chemistry represents a border crossing discipline at the cross-roads of chemistry and biology. The combination of biotechnological methods with modern catalysis enables strong synergies towards sustainable technologies. In addition, the molecular understanding of biological processes opens up novel approaches to affect biology per se. Several aspects of this trans-disciplinary field will be addressed in selected case studies within this lecture:

- i) The combination of continuous flow-chemistry and biocatalysis offers a powerful tool to further exploit renewable resources towards sustainable platform chemicals and high-value products.
- ii) Combination of metabolically unrelated biocatalysts provides the prospect of designing artificial metabolic mini-pathways; such cascade processes also overcome equilibrium limitations and circumvent troublesome intermediate work-up.
- iii) Discovery of novel pharmacological tools opens the door towards a fundamental understanding of biological processes; progress within prospective future therapies for diseases related to inflammation as well as certain conditions of the central nervous systems (CNS) such as anti-convulsive/anti-epileptic/anxiolytic effects and drug addiction will be presented by modular design of focused compound libraries.