Kratek opis usposabljanja mladega raziskovalca (*Short description of the Young Researcher's training)*

1. Raziskovalna organizacija (*Research organisation)*:

Univerza v Ljubljani, Fakulteta za farmacijo (University of Ljubljana, Faculty of Pharmacy)

2. Ime, priimek in elektronski naslov mentorja (*Mentor's name, surname and email*):

Anamarija Zega (anamarija.zega@ffa.uni-lj.si)

3. Šifra in naziv raziskovalnega področja (*Research field*):

1.09 Farmacija (Pharmacy)

4. Kratek opis usposabljanja mladega raziskovalca (*Short description of the Young Researcher's training)*:

Navedite tudi morebitne druge zahteve, vezane na usposabljanje mladega raziskovalca (npr. znanje angleškega jezika, izkušnje z laboratorijskim delom, potrebne licence za usposabljanje…).

slo: Ožje področje dela mladega raziskovalca (oziroma raziskovalke) bo načrtovanje in kemijska sinteza novih potencialnih zdravilnih učinkovin. Mladi raziskovalec bo vključen v raziskovalno delo raziskovalne skupine Katedre za farmacevtsko kemijo na Fakulteti za farmacijo, ki se ukvarja z načrtovanjem, sintezo in biološkim vrednotenjem novih zaviralcev DNA giraze B kot novih protibakterijskih učinkovin in načrtovanjem modulatorjev ionskih kanalov kot potencialnih učinkovin za zdravljenje raka.. V okviru raziskovalnega dela sodelujemo tudi s tujimi raziskovalnimi inštitucijami. V skupini nam je že uspelo pripraviti učinkovite zaviralce DNA giraze B aktivne proti številnim gram pozitivnim in gram negativnim sevom. Mladi raziskovalec se bo vključil v raziskovalno delo, kjer imamo cilj optimizirati obstoječe zaviralce DNA giraze B s stališča fizikalno-kemijskih in farmakokinetičnih parametrov. Na področju razvoja modulatorjev ionskih kanalov bo raziskovalec vključen v začetne faze razvoja, v načrtovanje in sintezo novih spojin z delovanjem na ionske kanale. Pri načrtovanju bo uporabljal informacije o strukturi potencialnih vezavnih mest na makromolekuli in računalniške metode. Načrtovane spojine bo sintetiziral z uporabo sodobnih sinteznih pristopov ter spojine vrednotil z uporabo spektroskopskih in separacijskih analiznih metod. Od mladega raziskovalca pričakujemo, da ima že izkušnje z raziskovalnim delom, še zlasti s sintezo organskih spojin in dobro znanje angleškega jezika.

eng: The narrower field of work of a young researcher will be the design and chemical synthesis of new potential active substances. Based on the structure of biological target macromolecules, the researcher will design potential target modulators. In planning, he will use information on the structure of potential binding sites on the macromolecule and

The field of work of the young researcher (including female researchers) will be the design and chemical synthesis of new biologically active substances. The young researcher will be included in the research work in the research group at the Faculty of pharmacy, Department of medicinal chemistry. The goal of the project is to design, synthesize and biologically evaluate new biologically active substances in two areas: DNA gyrase B inhibitors as potential new antibacterial agents and modulators of ion channels as potential anticancer agents. In the group, we have already discovered new potent inhibitors of DNA gyrase B effective against several Gram-positive and Gram-negative strains. As part of the research work, we also collaborate with foreign research institutions. A young researcher will be involved in the aforementioned research work, where we aim to optimize existing DNA gyrase B inhibitors in terms of physico-chemical and pharmacokinetic properties. In the field of development of modulators of ion channels the young researcher will be involved in the first steps of new drug development, in the design and synthesis of new compounds. In a design, he will use information from the structure of potential binding sites on the target macromolecule and computer-based methods. The planned compounds will be synthesized using modern synthetic approaches and their structure and purity will be evaluated using spectroscopic and separation analysis methods.
The expectation of a young researcher is to already have experience in research work, especially with the synthesis of organic compounds and good knowledge of the English language.