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Andreja Kovač

Personal information

Nationality: Slovenian

Age: 36

Place of Birth: Murska Sobota, Slovenia (May 4 1979)

Education

- **Doctor of Pharmacy**
- 2009 doctoral thesis in the field of Pharmaceutical Chemistry, University of Ljubljana, Faculty of Pharmacy (»**Discovery of new inhibitors of bacterial ligases by virtual screening and synthesis of substrate analogues**«).
- 2004 diploma degree, University of Ljubljana, Faculty of Pharmacy.

Employment

- 2013-present **Project manager** at Sandoz development center Slovenia
- 2012-13 **Expert Researcher** and **Head of Sandoz Occupational Health Group** at the Toxicology department in Lek Pharmaceutical Company d.d.
- 2010-12 **Researcher** at the Toxicology department in Lek Pharmaceutical Company d.d.
- 2009-10 **Assistant** at the Department of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Ljubljana, Slovenia.
- 2005-09 – **Researcher on European Project EUR-INTAFAR** - Inhibition of New Targets for Fighting Antibiotic Resistance, Department for Pharmaceutical Chemistry, Faculty of Pharmacy, University of Ljubljana, Ljubljana, Slovenia.

Languages

Mother tongue

Slovene

Other languages

English (understanding: proficient, speaking: proficient, writing: proficient)
German (understanding: proficient, speaking: proficient, writing: proficient)

Grants, Fellowships

- 2010, **ERA-NET, PathoGenoMics PhD Award 2010**, Initiative of the European Commission to recognize the most remarkable and outstanding

PhD theses in the field of genome research on human-pathogenic microorganisms

- 2009, **Dean's award** for young researchers for best scientific achievements, Faculty of Pharmacy, University of Ljubljana, Slovenia
- 2009, **Krka Prize** for special research achievements, Krka d.d., Novo mesto, Slovenia
- 2008, a two-week scholarship within the bilateral project **Proteus** at the Enveloppes Bactériennes et Antibiotiques IBBMC, CNRS, Université de Paris-Sud, France
- 2007, a monthly **BSAC** Research Grant (**B**ritish **s**ociety for **a**ntimicrobial **c**hemotherapy), Institute of Molecular and Cellular Biology, Faculty of Biological Sciences, University of Leeds, UK.
- 2006, a monthly grant for scientific project in France from French government, Enveloppes Bactériennes et Antibiotiques IBBMC, CNRS, Université de Paris-Sud, France.
- 2006, a monthly **BSAC** Research Grant (**B**ritish **s**ociety for **a**ntimicrobial **c**hemotherapy), Institute of Molecular and Cellular Biology, Faculty of Biological Sciences, University of Leeds, UK.
- 2005, Scientific project on Mur ligases (Malachite green enzyme assay), Institute of Molecular and Cellular Biology, University of Leeds, Leeds, UK
- 2003, **Krka Prize**, Krka d.d., Novo mesto, Slovenia
- 1994 – 2004, Scholarship for talented students from the Ministry of Education and Sport

Personal Skills

Computer skills

Windows, MS Office (proficient), SciFinder, Derek Nexus, MCASE

Technical skills and competences

Leading projects & people

Toxicology (*In silico* evaluation and prediction of toxicity parameters with different computational tools)

Medicinal chemistry (drug design, bench chemistry, MW assisted chemistry, parallel synthesis)

Biochemistry: expression and purification of proteins, enzyme assays

Analytical methods (NMR, MS, chromatography, spectroscopy)

Social skills and competences

Highly motivated and results driven, problem solving attitude, independent, persistent, creative and dynamic team player with proven capacity to assist teams in working their way through the decision-making process using strong organization, presentation as well as communication skills.

Memberships

Slovenian Society of Toxicology, EFMC – European Federation for Medicinal Chemistry

Bibliography

1.01 Original scientific article

1. HERVÉ, Mireille, KOVAČ, Andreja, CARDOSO, Cécile, PATIN, Delphine, BRUS, Boris, BARRETEAU, Hélène, MENGIN-LECREULX, Dominique, GOBEC, Stanislav, BLANOT, Didier. Synthetic tripeptides as alternate substrates of murein peptide ligase (Mpl). *Biochimie (Paris)*, 2013, vol. 95, issue 6, str. 1120-1126.

2. TOMAŠIĆ, Tihomir, KOVAČ, Andreja, KLEBE, Gerhard, BLANOT, Didier, GOBEC, Stanislav, KIKELJ, Danijel, PETERLIN-MAŠIČ, Lucija. Virtual screening for potential inhibitors of bacterial MurC and MurD ligases. *J. mol. model.*, 2012, vol. 18, no. 3, str. 1063-1072.
<http://www.springerlink.com/content/1610-2940/preprint>, doi: 10.1007/s00894-011-1139-8. [COBISS.SI-ID 3026289]
3. KOŠAK, Urban, KOVAČ, Andreja, GOBEC, Stanislav. One-pot synthesis of β -keto esters and preparation of 3-ketopalmitoyl-CoA. *Synlett*, 2012, vol. 23, no. 11, str. 1609-1612. <https://www.thieme-> 4. FRLAN, Rok, KOVAČ, Andreja, BLANOT, Didier, GOBEC, Stanislav, PEČAR, Slavko, OBREZA, Aleš. Design, synthesis and in vitro biochemical activity of novel amino acid sulfonylhydrazide inhibitors of murC. *Acta chim. slov.* [Tiskana izd.], 2011, vol. 58, no. 2, str. 295-310. <http://acta.chem-soc.si/58/58-2-295.pdf>,
5. VEHAR, Blaž, HRAST, Martina, KOVAČ, Andreja, KONC, Janez, MARINER, Katherine, CHOPRA, Ian, O'NEILL, Alex, JANEŽIČ, Dušanka, GOBEC, Stanislav. Ellipticines and 9-acridinylamines as inhibitors of d-alanine : d-alanine ligase. *Bioorg. med. chem.* [Print ed.], 2011, vol. 19, issue 17, str. 5137-5146, ilustr., doi: 10.1016/j.bmc.2011.07.020. [COBISS.SI-ID 4728346]
6. TOMAŠIĆ, Tihomir, KOVAČ, Andreja, SIMČIČ, Mihael, BLANOT, Didier, GOLIČ GRDADOLNIK, Simona, GOBEC, Stanislav, KIKELJ, Danijel, PETERLIN-MAŠIČ, Lucija. Novel 2-thioxothiazolidin-4-one inhibitors of bacterial MurD ligase targeting d-Glu- and diphosphate-binding site. *Eur. j. med. chem.* [Print ed.], 2011, vol. 46, issue 9, str. 3964-3975.
7. ZIDAR, Nace, TOMAŠIĆ, Tihomir, ŠINK, Roman, KOVAČ, Andreja, PATIN, Delphine, BLANOT, Didier, CONTRERAS-MARTEL, Carlos, DESSEN, Andréa, MÜLLER-PREMRU, Manica, ZEGA, Anamarija, GOBEC, Stanislav, PETERLIN-MAŠIČ, Lucija, KIKELJ, Danijel. New 5-benzylidenethiazolidin-4-one inhibitors of bacterial MurD ligase: design, synthesis, crystal structures, and biological evaluation. *Eur. j. med. chem.* [Print ed.], 2011, vol. 46, issue 11, str. 5512-5523, ilustr.
8. TOMAŠIĆ, Tihomir, ZIDAR, Nace, ŠINK, Roman, KOVAČ, Andreja, BLANOT, Didier, CONTRERAS-MARTEL, Carlos, DESSEN, Andréa, MÜLLER-PREMRU, Manica, ZEGA, Anamarija, GOBEC, Stanislav, KIKELJ, Danijel, PETERLIN-MAŠIČ, Lucija. Structure-based design of a new series of D-Glutamic acid-based inhibitors of bacterial UDP-N-acetylmuramoyl-L-alanine:D-glutamate ligase (MurD). *J. med. chem.*, 2011, vol. 54, no. 13, str. 4600-4610.
9. PATIN, Delphine, BONIFACE, Audrey, KOVAČ, Andreja, HERVÉ, Mireille, DEMENTIN, Sébastien, BARRETEAU, Hélène, MENGIN-LECREULX, Dominique, BLANOT, Didier. Purification and biochemical characterization of Mur ligases from *Staphylococcus aureus*. *Biochimie (Paris)*, 2010, vol. 92, no. 12, str. 1793-1800.
10. TOMAŠIĆ, Tihomir, ZIDAR, Nace, KOVAČ, Andreja, TURK, Samo, SIMČIČ, Mihael, BLANOT, Didier, MÜLLER-PREMRU, Manica, FILIPIČ, Metka, GOLIČ GRDADOLNIK, Simona, ZEGA, Anamarija, ANDERLUH, Marko, GOBEC, Stanislav, KIKELJ, Danijel, PETERLIN-MAŠIČ, Lucija. 5-benzylidenethiazolidin-4-ones as multitarget inhibitors of bacterial Mur ligases. *ChemMedChem*. [Print ed.], 2010, vol. 5, iss. 2, str. 286-295.
11. ZIDAR, Nace, TOMAŠIĆ, Tihomir, ŠINK, Roman, ŠKEDELJ, Veronika, KOVAČ, Andreja, TURK, Samo, PATIN, Delphine, BLANOT, Didier, CONTRERAS MARTEL, Carlos, DESSEN, Andréa, MÜLLER-PREMRU, Manica, ZEGA, Anamarija, GOBEC, Stanislav, PETERLIN-MAŠIČ, Lucija, KIKELJ, Danijel. Discovery of novel 5-benzylidenerhodanine and 5-benzylidenethiazolidine-2,4-dione inhibitors of MurD ligase. *J. med. chem.*, 2010, vol. 53, no. 18, str. 6584-6594.
12. SOVA, Matej, MRAVLJAK, Janez, KOVAČ, Andreja, PEČAR, Slavko, ČASAR, Zdenko, GOBEC, Stanislav. (Z)-5-(4-fluorophenyl)pent-4-enoic acid :

a precursor for convenient and efficient synthesis of the antihypercholesterolemia agent ezetimibe. *Synthesis* (Stuttg.), 2010, vol. 2010, issue 20, str. 3433-3438, doi: 10.1055/s-0030-1258193. [COBISS.SI-ID 1438812]

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14. PERDIH, Andrej, KOVAČ, Andreja, WOLBER, Gerhard, BLANOT, Didier, GOBEC, Stanislav, ŠOLMAJER, Tomaž. Discovery of novel benzene 1, 3-dicarboxylic acid inhibitors of bacterial MurD and MurE ligases by structure-based virtual screening approach. *Bioorg. med. chem. lett.* [Print ed.], 2009, vol. 19, no. 10, str. 2668-2673.

15. TURK, Samo, KOVAČ, Andreja, BONIFACE, Audrey, BOSTOCK, Julieanne M., CHOPRA, Ian, BLANOT, Didier, GOBEC, Stanislav. Discovery of new inhibitors of the bacterial peptidoglycan biosynthesis enzymes MurD and MurF by structure-based virtual screening. *Bioorg. med. chem.* [Print ed.], 2009, no. 5, vol. 17, str. 1884-1889.

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2.23 Patent application

68. MRAVLJAK, Janez, SOVA, Matej, KOVAČ, Andreja, GOBEC, Stanislav, ČASAR, Zdenko. Process for the synthesis ezetimibe and intermediates useful therefor : patent no. WO2010/012775 : Int. Appl. number: PCT/EP2009/059813. Geneva: World Intellectual Property Organization, 4 february 2010. 35 str. [COBISS.SI-ID 2747249]

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2.24 Patent

70. MRAVLJAK, Janez, SOVA, Matej, KOVAČ, Andreja, GOBEC, Stanislav, ČASAR, Zdenko. *Process for synthesis of ezetimibe and intermediates useful therefor* : patent no. CN102112430 (B) - 2014-05-28. [Beijing]: Chinese State Intellectual Property Office, 2014. 23 str. [COBISS.SI-ID [2747249](#)]

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