Curriculum Vitae

Personal information

Hrvoje Rimac

Work experience

06/2025 - present
Employer: Agency for Medicinal Products and Medical Devices (HALMED)
Position: Assessor for European Affairs
Activities: assessment of pharmacology and PK studies in centralised procedures and assessment of bioequivalence studies and biowaivers in national, decentralised and centralised procedures, as well as providing scientific advice for central marketing authorisation procedures.
Country: Croatia

05/2024 - 05/2025
Employer: Agency for Medicinal Products and Medical Devices (HALMED)
Position: Associate for Non-Clinical and Clinical Assessment
Activities: assessment of pharmacology and PK studies in centralised procedures and assessment of bioequivalence studies and biowaivers in national, decentralised and centralised procedures, as well as providing scientific advice for central marketing authorisation procedures.
Country: Croatia

01/2023 - 02/2024
Employer: Selvita Ltd
Position: Senior Scientist II (In vitro Pharmacology Department)
Activities: Providing scientific and experimental support in preclinical research for external stakeholders. Ensuring input for proposal preparation, performing in vitro assays, and delivering project reports.
Country: Croatia

12/2021 – 01/2023
Employer: Faculty of Pharmacy and Biochemistry, University of Zagreb, Department of Medicinal Chemistry
Position: Assistant Professor
Activities: Course leader of a mandatory graduate level course "Drug Metabolism". Collaborator in a mandatory graduate level course "Medicinal Chemistry 1". Course leader of elective graduate level courses "Biochemical Basis of Toxicity of Endobiotics and Xenobiotics", "Medicinal Chemistry". Collaborator in an elective graduate level course „Drug Design". Research interest: in vitro drug metabolism, cytochrome P450 enzymes, protein-ligand interactions, computational chemistry, quantitative structure-activity relationship (statistical modelling)
Country: Croatia

09/2017 – 12/2021
Employer: Faculty of Pharmacy and Biochemistry, University of Zagreb, Department of Medicinal Chemistry
Position: Postdoctoral Researcher/Assistant
Country: Croatia

01/2012 – 09/2017
Employer: Faculty of Pharmacy and Biochemistry, University of Zagreb, Department of Medicinal Chemistry
Position: Teaching and Research Assistant
Country: Croatia

Education and training

10/2014 – 01/2022
Degree: University Specialist of Drug Development (univ. spec. pharm.)
Institution: Faculty of Pharmacy and Biochemistry, University of Zagreb
Country: Croatia

10/2013 – 09/2017
Degree: Doctor of Pharmaceutical Sciences (PhD)
Institution: Faculty of Pharmacy and Biochemistry, University of Zagreb
Country: Croatia

10/2011 – 09/2013
Degree: Master of Engineering in Molecular Biotechnology (mag. ing. mol. biotechn.)
Institution: Faculty of Food Technology and Biotechnology, University of Zagreb
Country: Croatia

10/2006 – 09/2011
Degree: Master of Pharmacy (mag. pharm.)
Institution: Faculty of Food Technology and Biotechnology, University of Zagreb
Country: Croatia

Additional information

Publications

1. CYP3A4-Mediated Metabolism and Drug–Drug Interaction Potential of Abemaciclib and Letrozole in vitro; M. Kondža, L. Turković, H. Rimac, M. Sertić; Chem Biodiversity, 2026, 23:e02344. https://doi.org/10.1002/cbdv.202502344
2. Design, synthesis and antiplasmodial evaluation of new amide-, carbamate-, and ureido-type harmicines.

M. Marinović, H. Rimac, L. Pessanha de Carvalho, C. Rôla, S. Santana, K. Pavić, J. Held, M. Prudêncio, Z. Rajić; Bioorg. Med. Chem, 2023, 94, 117468. https://doi.org/10.1016/j.bmc.2023.117468
3. Cyclodextrin-Based Displacement Strategy of Sterigmatocystin from Serum Albumin as a Novel Approach for Acute Poisoning Detoxification; D. Jakšić, M. Šegvić Klarić, H. Rimac, R. Kerep, I. Piantanida; Int J Mol Sci, 2023, 24, 4485. https://doi.org/10.3390/ijms24054485
4. Exploring the Potential and Identifying Withania somnifera Alkaloids as Novel Dihydrofolate Reductase (DHFR) Inhibitors by the AlteQ method; G. Krishnamoorthy, H. Rimac, N. Palko, M. Grishina; J Biomol Struct Dyn, 2023, 10, 1-14. https://doi.org/10.1080/07391102.2023.2175727
5. AlteQ: A New Complementarity Principle-Centered Method for the Evaluation of Docking Poses; S. Kandagalla, M. Grishina, J. Novak, H. Rimac, B.S. Sharath, V. Potemkin; J Biomol Struct Dyn, 2023, 11, 1-15. https://doi.org/10.1080/07391102.2023.2166120
6. Determination of Naphthoquinones in Invasive Alien Plants Impatiens glandulifera Royle and I. balfourii Hook.f. from Croatia; Ž. Maleš, A.-M. Domijan, I. Duka, T. Marić, M. Bojić, H. Rimac, B. Mitić, D. Hruševar, K. Barišić, D. Verbanac; Croat Chem Acta, 2022, 95, 1, 1-5. https://doi.org/10.5562/cca3911
7. In Silico Screening of Quorum Sensing Inhibitor Candidates Obtained by Chemical Similarity Search; S.B. Shekarappa, H. Rimac, J. Lee; Molecules, 2022, 27, 15, 4887. https://doi.org/10.3390/molecules27154887
8. Withasomniferol C, a New Potential SARS-CoV-2 Main Protease Inhibitor from the Withania somnifera Plant Proposed by In Silico Approaches; S. Kandagalla, H. Rimac, G. Krishnamoorthy, J. Novak, M. Grishina, V. Potemkin; PeerJ, 2022, 10, e13374, 26. https://doi.org/10.7717/peerj.13374
9. Synthesis of Arylmethylene-bis(3-hydroxy-5,5-dimethylcyclohex-2-en-1-one) Derivatives and Their Effect on Tyrosinase Activity; E. Veljović, H. Rimac, M. Salihović, S. Špirtović-Halilović, A. Osmanović, N. Kovač, E. Kiršek, E. Članjak-Kudra, D. Špirtović, M. Bojić; Croat Chem Acta, 2021, 94, 3, 1-9. https://doi.org/10.5562/cca3857
10. Antibacterial Fractions from Erodium cicutarium Exposed – Clinical Strains of Staphylococcus aureus in Focus; V. Ljoljić Bilić, U.M. Gašić, D. Milojković-Opsenica, H. Rimac, J. Vuković Rodriguez, J. Vlainić, D. Brlek-Gorski, I. Kosalec; Antibiotics, 2022, 11, 492. https://doi.org/10.3390/antibiotics11040492
11. COVID-19 Infection and Neurodegeneration: Computational Evidence for Interactions between the SARS-CoV-2 Spike Protein and Monoamine Oxidase Enzymes; L. Hok, H. Rimac, J. Mavri, R. Vianello; Comput Struct Biotechnol J, 2022, 20, 1254-1263. https://doi.org/10.1016/j.csbj.2022.02.020
12. A Triterpene Glochidon from Phyllanthus debilis: Isolation, Computational Studies, and Antidiabetic Activity Evaluation; A. Verma, P. Pathak, H. Rimac, H. Khalilullah, V. Kumar, M. Grishina, V. Potemkin, B. Ahmed; Biocatal Agric Biotechnol, 2021, 36, 102138. https://doi.org/10.1016/j.bcab.2021.102138
13. Proposition of a New Allosteric Binding Site for Potential SARS-CoV-2 3CL Protease Inhibitors by Utilizing Molecular Dynamics Simulations and Ensemble Docking; J. Novak, H. Rimac, S. Kandagalla, P. Pathak, V. Naumovich, M. Grishina, V. Potemkin; J Biomol Struct Dyn, 2022, 40, 19, 9347-9360. https://doi.org/10.1080/07391102.2021.1927845
14. Complementarity Principle in Terms of Electron Density for the Study of EGFR Complexes; S. Kandagalla, H. Rimac, V.A. Potemkin, M.A. Grishina; Future Med Chem, 2021, 13, 10, 863-875. https://doi.org/10.4155/fmc-2020-0265
15. Use of the Complementarity Principle in Docking Procedures: A New Approach for Evaluating the Correctness of Binding Poses; H. Rimac, M. Grishina, V. Potemkin; J Chem Inf Model, 2021, 61, 1801−1813. https://doi.org/10.1021%2Facs.jcim.0c01382
16. Investigation of the Newly Characterized Baimantuoluoamide A and Baimantuoluoamide B Alkaloids as Potential Cyclin-Dependent Kinase 4 (CDK4) Inhibitors Using Molecular Docking and Molecular Dynamics Simulations; G. Krishnamurti, H. Rimac, V. Potemkin, M. Grishina; J Mol Struct, 2021, 1230, 129925. https://doi.org/10.1016/j.molstruc.2021.129925
17. Can Natural Products Stop the SARS-CoV-2 virus? A Docking and Molecular Dynamics Study of a Natural Product Database; J. Novak, H. Rimac, S. Kandagalla, M.A. Grishina, V.A. Potemkin; Future Med Chem, 2021, 30, 4, 363-378. https://doi.org/10.4155/fmc-2020-0248
18. Computational Insights into the Binding Mode of Curcumin Analogues against EP300 HAT Domain as Potent Acetyltransferase Inhibitors; S. Kandagalla, B.S. Sharath, H. Rimac, M.A. Grishina, V.A. Potemkin, M. Hanumanthappa; J Mol Graph Model, 2020, 101, 107756. https://doi.org/10.1016/j.jmgm.2020.107756
19. Hybrid Quinazoline 1,3,5-Triazines as Epidermal Growth Factor Receptor (EGFR) Inhibitors with Anticancer Activity: Design, Synthesis, and Computational Study; P. Pathak, H. Rimac, M. Grishina, A. Verma, V. Potemkin; ChemMedChem, 2021, 16, 5, 822-838. https://doi.org/10.1002/cmdc.202000646
20. Pathway Enrichment Analysis of Virus-Host Interactome and Prioritization of Novel Compounds Targeting the Spike Glycoprotein Receptor Binding Domain-Human Angiotensin-Converting Enzyme 2 Interface to Combat SARS-CoV-2; G. Pavan, B.S. Sharath, H. Rimac, P. Patil, S. Kumari Nalilu, S. Kandagalla, P. Shetty; J Biomol Struct Dyn, 2022, 40, 6, 2701-2714. https://doi.org/10.1080/07391102.2020.1841681
21. Attenuation of Hepatic and Breast Cancer Cells by Polygonatum verticillatum Embedded Silver Nanoparticles; M. Pathak, P. Pathak, H. Rimac, M. Grishina, U. Bagale, V. Kumar, R. Majee, V. Potemkin, A. Verma; Biocatal Agric Biotechnol, 2020, 30101863. https://doi.org/10.1016/j.bcab.2020.101863
22. Inhibitory Effect of Acacetin, Apigenin, Chrysin and Pinocembrin on Human Cytochrome P450 3A4; M. Kondža, H. Rimac, Ž. Maleš, P. Turčić, I. Čavar, M. Bojić; Croat Chem Acta, 2020, 93, 1, 1-7. https://doi.org/10.5562/cca3652
23. Electron Density Analysis of CDK Complexes Using the AlteQ Method; H. Rimac, M.A. Grishina, V.A. Potemkin; Future Med Chem, 2020, 12, 15, 1387-1397. https://doi.org/10.4155/fmc-2020-0076
24. Indomethacin Increases Quercetin Affinity for Human Serum Albumin: A Combined Experimental and Computational Study and its Broader Implications; H. Rimac, T. Tandarić, R. Vianello, M. Bojić; Int J Mol Sci, 2020, 21, 16, 5740. https://doi.org/10.3390/ijms21165740
25. Influence of Flavonoids' Lipophilicity on Platelet Aggregation; I. Babić, M. Bojić, Ž. Maleš, R. Zadro, K. Gojčeta, I. Duka, H. Rimac, I. Jukić; Acta pharm, 2019, 69, 4, 607-619. https://doi.org/10.2478/acph-2019-0040
26. The Effect of Flavonoid Aglycones on the CYP1A2, CYP2A6, CYP2C8 and CYP2D6 Enzymes Activity; M. Bojić, M. Kondža, H. Rimac, G. Benković, Ž. Maleš; Molecules, 2019, 24, 17, 3174. https://doi.org/10.3390/molecules24173174
27. Characterization of O-demethylations and Aromatic Hydroxylations Mediated by Cytochromes P450 in the Metabolism of Flavonoid Aglycons; G. Benković, H. Rimac, Ž. Maleš, S. Tomić, Z. Lončar, M. Bojić; Croat Chem Acta, 2019, 92, 1, 115-123. https://doi.org/10.5562/cca3528
28. Primaquine Hybrids as Promising Antimycobacterial and Antimalarial Agents; K. Pavić, I. Perković, Š. Pospišilova, M. Machado, D. Fontinha, M. Prudencio, J. Jampilek, A. Coffey, L. Endersen, H. Rimac, B. Zorc; Eur J Med Chem, 2018, 143, 769-779. https://doi.org/10.1016/j.ejmech.2017.11.083
29. Warfarin and Flavonoids do not Share the Same Binding Region in Binding to the IIA Subdomain of Human Serum Albumin; H. Rimac, C. Dufour, Ž. Debeljak, B. Zorc, M. Bojić; Molecules, 2017, 22, 7, 1153-1. https://doi.org/10.3390/molecules22071153
30. Displacement of Drugs from Human Serum Albumin: From Molecular Interactions to Clinical Significance; H. Rimac, Ž. Debeljak, M. Bojić, L. Miller; Curr Med Chem, 2017, 24, 18, 1930-1947. https://doi.org/10.2174/0929867324666170202152134
31. Structural and Electronic Determinants of Flavonoid Binding to Human Serum Albumin: An Extensive Ligand-Based Study; H. Rimac, Ž. Debeljak, D. Šakić, T. Weitner, M. Gabričević, V. Vrček, B. Zorc, M. Bojić; RSC Adv, 2016, 6, 79, 75014-75022. https://doi.org/10.1039/C6RA17796D

Projects

1. „Development of green analytical methods for identifying factors of interindividual pharmacokinetic variability of targeted anticancer drugs" (2025 – 2028), funded by Croatian Science Foundation
2. „Novel bioanalytical solutions in personalized breast cancer treatment" (2020 – 2025), funded by Croatian

Science Foundation
3. „Harmine derivatives as potential antimalarics“ (2018 – 2023), funded by Croatian Science Foundation
4. „Metabolism and interactions of biologically active compounds and QSAR“ (2015 – 2018), funded by Croatian Science Foundation
5. “Structural basis of flavonoids responsible for metabolic and distribution interactions, and antiaggregatory effect” (2013 – 2014), funded by the University of Zagreb
6. “Biologically actives compounds, metabolites, and QSAR” (2007 – 2013), funded by the Ministry of Science, Education and Sport of the Republic of Croatia

Memberships

1. The Best Young Scientist Award in the field of pharmaceutical and medicinal chemistry (The Croatian Chemical Society, 2021)
2. The Best Young Scientist Award (Faculty of Pharmacy and Biochemistry, University of Zagreb, 2020)

Other Relevant Information