Curriculum Vitae

Personal information

Ana Mikelic

Work experience

- **02/2025 - present**

  Expert adviser in the science and higher education system
  Croatian Veterinary Institute
  Croatia
  Assessment of quality aspects of applications for marketing authorisations and variations for veterinary medicinal products (non-biologicals)

- **01/2024 - 02/2025**

  Senior expert associate in the science and higher education system
  Croatian Veterinary Institute
  Croatia
  Assessment of quality aspects of applications for marketing authorisations and variations for veterinary medicinal products (non-biologicals)

- **06/2019 - 10/2023**

  Doctoral research assistant
  University of Zagreb, Faculty of Science
  Croatia
  Scientific research, teaching and student supervision, and organisation of scientific events

Education and training

Education

- **PhD in Chemistry**

  11/2019 - 05/2024
  University of Zagreb, Faculty of Science
  Croatia
  Physical chemistry with a focus on quantum chemistry and computational drug discovery; application of quantum-mechanical, numerical and statistical methods

- **Mag. chem.**

  10/2016 - 02/2019
  University of Zagreb, Faculty of Science
  Croatia
  Physical chemistry and biochemistry; plant material processing and analysis, nucleic acid and protein extraction and analysis, and related laboratory techniques

- **Univ. bacc. chem.**

  07/2012 - 09/2016
  University of Zagreb, Faculty of Science
  Croatia
  General, inorganic, organic, analytical and physical chemistry, and biochemistry, including theoretical and practical laboratory training

Training

- **Ensuring the Validity of Test Results**

  06/2025
  Croatian Metrology Society
  Croatia
  Statistical validation of test results, assessment of trueness and precision, use of certified reference materials, control charts, and risk assessment

- **Validation and verification of Analytical Methods**

  05/2024
  Croatian Metrology Society
  Croatia
  Analytical method validation and verification, statistical evaluation of validation data, analytical result interpretation, validation/verification reporting, and quality assurance

Additional information

Publications

Articles

1. Arbanasić, Haidi; Medrano-González, Luis; Hrenar, Tomica; Mikelić, Ana; Gomerčić, Tomislav; Svetličić, Ida; Pavlinec, Željko; Đuras, Martina; Galov, Ana
Recent selection created distinctive variability patterns on MHC class II loci in three dolphin species from the Mediterranean Sea // Developmental and comparative immunology, 150 (2024), 0; 105079, 12. doi: 10.1016/j.dci.2023.105079

2. Ramić, Alma; Matošević, Ana; Debanić, Barbara; Mikelić, Ana; Primožič, Ines; Bosak, Anita; Hrenar, Tomica
Synthesis, Biological Evaluation and Machine Learning Prediction Model for Fluorinated *Cinchona* Alkaloid-Based Derivatives as Cholinesterase Inhibitors // Pharmaceuticals, 15 (2022), 10; 1214, 21. doi: 10.3390/ph15101214

3. Ramić, Alma; Skočibušić, Mirjana; Odžak, Renata; Čipak Gašparović, Ana; Milković, Lidija; Mikelić, Ana; Sović, Karlo; Primožič, Ines; Hrenar, Tomica
Antimicrobial activity of quasi-enantiomeric *cinchona* alkaloid derivatives and prediction model developed by machine learning // Antibiotics, 10 (2021), 6; 659, 15. doi: 10.3390/antibiotics10060659

4. Matošević, Ana; Radman Kastelic, Andreja; Mikelić, Ana; Zandona, Antonio; Katalinić, Maja; Primožič, Ines; Bosak, Anita; Hrenar, Tomica
Quinuclidine-Based Carbamates as Potential CNS Active Compounds // Pharmaceutics, 13 (2021), 3; 420, 15. doi: 10.3390/pharmaceutics13030420

Conferences

1. Mikelić, Ana; Primožič, Ines; Hrenar, Tomica
Quantum Chemical Docking of Quinuclidine-Based Carbamates Within the Active Site of Butyrylcholinesterase // 10th Regional Biophysics Conference & 15th International Summer School of Biophysics // poster presentation
Split, Croatia, 2024. pp. 79-79

2. Mikelić, Ana ; Primožič, Ines ; Hrenar, Tomica
Monte Carlo docking of quinuclidine derivatives against cholinesterases // 7th Faculty of Science PhD Students Symposium // poster presentation
Zagreb, Croatia, 2023. pp. 116-116

3. Mikelić, Ana ; Ramić, Alma ; Primožič, Ines ; Hrenar, Tomica
Evolution of Inhibition Models for Fluorinated *Cinchona* Alkaloids by Machine Learning // Computational Chemistry Day 2022 // oral presetnation
Zagreb, Croatia, 2022. pp. 9-9

4. Mikelić, Ana ; Ramić, Alma ; Primožič, Ines ; Hrenar, Tomica
Machine learning determined models of inhibitory activities for fluorinated *Cinchona* alkaloids // 6th Faculty of Science PhD Student Symposium // poster and short oral presentation
Zagreb, Croatia, 2022. pp. 164-165

5. Mikelić, Ana ; Primožič, Ines ; Ramić, Alma ; Odžak, Renata ; Hrenar, Tomica
Multi-target antimicrobial activity model of *Cinchona* alkaloids established by machine learning // Math/Chem/Comp 2021 - 32nd MC2 Conference // oral presetnation
Dubrovnik, Croatia, 2021. pp. 33-33

6. Mikelić, Ana ; Primožič, Ines ; Ramić, Alma ; Odžak, Renata ; Hrenar, Tomica
Machine learning-based prediction of multi-target antimicrobial activity // 5th Faculty of Science PhD Student Symposium // poster presentation
Zagreb, Croatia, 2021. pp. 358-359

7. Mikelić, Ana ; Primožič, Ines ; Hrenar, Tomica
Molecular docking study of quinuclidine derivatives against cholinesterases using machine learning // 27th Croatian Meeting of Chemists and Chemical Engineers // poster presentation
Veli Lošinj, Croatia, 2021. pp. 155-155

8. Mikelić, Ana ; Hrenar, Tomica
Ekstenzivni molekularni doking kvaternih kinuklidinskih derivata u aktivno mjesto butirilkolinesteraze primjenom strojnog učenja // 4th Faculty of Science PhD Student Symposium // poster presentation
Zagreb, Croatia, 2020. pp. 130-130

9. Bakija, Marija ; Mikelić, Ana ; Sović, Karlo ; Hrenar, Tomica
Utjecaj solvatacijskih efekata na potpuni kofnormacijski prostor L-karnitina // Symposium of Chemistry Students (SiSK5 2018) // poster presentation
Zagreb, Croatia, 2018. pp. 56-56

10. Bakija, Marija ; Mikelić, Ana ; Sović, Karlo ; Hrenar, Tomica
Grid search conformational analysis of carnitine and acetylcarnitine // Computational Chemistry Day 2018 // poster presentation
Zagreb, Croatia, 2018. pp. 36-36

Projects

- **2024 – present**

  Management Committee (MC) member
  One Health drugs against parasitic vector borne diseases in Europe and beyond - OneHealthdrugs (CA21111)
  COST Action

- **2019 – 2021**

  Project associate
  Activity and *in silico* guided design of bioactive small molecules – ADESIRE (IP-2016-06-3775)
  Croatian Science Foundation

Memberships

Other Relevant Information