**Curriculum Vitae – IVANA VINKOVIĆ VRČEK**

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| **PERSONAL INFORMATION** |
| *First name/Surname:*  | *Ivana Vinković Vrček* |
| *Scientific Personal Identification Number*  | 264334 |
| *Date and place of birth:*  | *August 14th 1975, Osijek* |
| *Scientific title:*  | *PhD, Scientific Advisor, Private docent* |
| **WORK EXPERIENCE** |
| 2018 – present Scientific advisor, Institute for Medical Research and Occupational Health2012 – 2018 Senior Research Associate, Institute for Medical Research and Occupational Health2008 – 2012 Research Associate, Institute for Medical Research and Occupational Health2003 – 2008 Research Assistant, Faculty of Pharmacy and Biochemistry, University of Zagreb2001 – 2003 Junior Assistant, Faculty of Pharmacy and Biochemistry, University of Zagreb |
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| **PROFESSIONAL FIELD** |
| *Fields of scientific and/or teaching activities* | **Nanomedicine, nanotechnology, nanosafety, physical biochemistry, risk assessment** |
| **EDUCATION AND TRAINING** |
| 2004 – 2007 PhD Degree, University of Zagreb, Faculty of Science, field: Chemistry2000 – 2003 MSc Degree, University of Zagreb, Faculty of Science, field: Chemistry1994 – 1998 Bachelors Degree, University of Zagreb, Faculty of Pharmacy and Biochemistry, field: Medical biochemistry |
| **RESEARCHER ON THE SCIENTIFIC PROJECTS** |
| 2019 – present: scientific project HRZZ-PZS-2019-02-4323 „Safe-by-Design Approach for Development of Nano-Enabled-Delivery Systems to Target the Brain - SENDER“ granted by the European Social Fund (2.087.763,69 HRK) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader 2018 – present: H2020-NMBP-TO-IND-2018-2020 Research and Innovation (RIA) project “SCIENCE-BASED RISK GOVERNANCE OF NANO-TECHNOLOGY [RISKGONE]” (5.000.000,00 EUR) (leader: Maria Dusinska, Norwegian Institute for Air Research), role in the project: partner2018 – present: COST Action CA17140 “Cancer nanomedicine - from the bench to the bedside (Nano2Clinic)“ granted by the Horizon 2020 program; role in the project: Management Committee member and Working group leader2018 – present: bilateral scientific project Germany-Croatia „ Multiplexed characterization platform for nano-bio interface “ granted by DAAD-MZO granting scheme (6.000,00 EUR) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader 2018 – present: bilateral scientific project Austria-Croatia „Pharmacokinetic profiling of silver nanoparticles: the role of biological barriers“ granted by OeAD-MZO granting scheme (6.800,00 EUR) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader2017 – present: scientific project HRZZ-IP-2016-06-2436 “Značaj interakcija metalnih nanočestica sa sumpornim biomolekulama za nano-bio sučelje- NanoFaceS” granted by the Croatian Science Foundation (904.820,00 HRK) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader2016 – 2019: COST Action CM1403 “The European Upconversion Network (UpCON)“ granted by the Horizon 2020 program; role in the project: Management Committee member2016 – present: COST Action CA15114 „Anti-Microbial Coating Innovations to prevent infectious diseases (AMiCI)“; granted by the Horizon 2020 program; role in the project: Management Committee substituate2015 – 2016: COST Action TD1204 MODENA „Modelling Nanomaterial Toxicity“granted by the Horizon 2020 program; role in the project: Management Committee member2015 – 2016: bilateral scientific project Germany-Croatia „Diabetes Mellitus Type 2 in Croatian Population after Chronic Exposure to Arsenic“ granted by DAAD-MZOS granting scheme (8.700,00 eur) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader2012 – 2013: bilateral scientific project Austria-Croatia „ Exposure-related effect of nanosilver: nanoparticles or ions“ granted by OeAD-MZOS granting scheme (5.700,00 eur) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader2010: scientific project „Nanosilver particles versus ionic silver – development of a method for differentiation and quantification“ granted by Unity through Knowledge Fund, program 2A (58.696,14 HRK) (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: project leader2008 – 2013: scientific project 022-0222148-2135 (Ministry of Science, Education and Sport, Republic of Croatia, MZOS) “Exposure to metals and their effects in pregnancy and postnatal period” (Institution: Institute for Medical Research and Occupational Health, Zagreb); role in the project: researcher2008 – 2010: scientific project 006-0061245-0010 (Ministry of Science, Education and Sport, Republic of Croatia, MZOS) „Glutathione S-transferase & superoxide dismutase in the disease etiopathogenesis“ (Institution: Faculty for Pharmacy and Biochemistry, University of Zagreb); role in the project: researcher2007 – 2008: scientific project 006-0061247-0009 (Ministry of Science, Education and Sport, Republic of Croatia, MZOS) “Kinetics and mechanism of Mn porphyrins-based catalytic antioxidant activity” (Institution: Faculty of Pharmacy and Biochemistry, Zagreb); role in the project: researcher2003 – 2007: scientific project 0006441 (Ministry of Science, Education and Sport, Republic of Croatia, MZOS) „Kinetics and mechanism of reactions of hydroxamic acids with metal ions“ (Institution: Faculty of Pharmacy and Biochemistry, Zagreb); role in the project: researcher2000 – 2003: scientific project 0006142 (Ministry of Science, Education and Sport, Republic of Croatia, MZOS) „Interaction of nitroso compounds with important biomedical molecules“ (Institution: Faculty of Pharmacy and Biochemistry, Zagreb); role in the project: researcher  |
| **MEMBERSHIPS IN PROFESSIONAL ASSOCIATIONS** |
| *Professional Societies: Croatian Chemical Society, Society of the University Teachers and Scientists, Croatian Bioethical Society, Croatian Catholic Medical Society* |
| **AWARDS, PROFESSIONAL, SCIENTIFIC AND TEACHING ACTIVITIES** |
| **Awards** | 2018. Honored by Institute for Medical Research and Occupational Health for scientific achievements 2011. Honored by Institute for Medical Research and Occupational Health for scientific achievements 2007. Research grant of Ministry of Science of Republic of Croatia for research stay at the Max Planck Institute for Coal Research, Muelheim a/d Ruhr, Germany 2007. Honored by UNESCO - Lorea’l national award “For women in science” 2001. Honored by the Society of the University Teachers for the scientific work in chemistry  |
| **Professional activities** | Member of Thematic innovation council for health and quality of life of the Ministry of Economy, Entrepreneurship and Crafts of the Republic of CroatiaMember of Working group of Ministry of Health of Republic of Croatia for Regulations of Novel Food Member of Reference group of the Ministry of Science and Education for the field of Nanotechnology, advanced materials, biotechnology, advanced production and processes |
| **Refereeing duties** | REFEREEING DUTIES for research projects funded by Agence nationale de la recherche (ANR), Czech Science Foundation, Bulgarian National Science FundREFEREEING DUTIES in: Scientific Reports, Nanoimpact, Nanoscale Research Letters, Nanotoxicology, Journal of Nanobiotechnology, Journal of Nanoparticle Research, Environmental Science and Technology, International Journal of Environmental Analytical Chemistry, Colloids and Surfaces B: Biointerfaces, Ecotoxicology and Environmental Safety, Environmental Science and Pollution Research, International Journal of Environmental Analytical Chemistry, Journal of Trace Elements in Biology and Medicine, Toxicology in Vitro, British Journal of Nutrition, European Food Research and Technology, Journal of Hazardous Materials, Food Analytical Methods, Food Chemistry, Food and Chemical Toxicology, International Journal of Food Sciences & Nutrition, International Journal of Food Science and Technology, Industrial Crops and Products, Journal of Agricultural and Food Chemistry, Biotechnology and Nutrition, Arhiv za higijenu rada i toksikologiju |
| **Cooperation with academia and business sector** | I.Vinković Vrček collaborates primarily in the field of nanomedicine and nanosafety with the following research groups from academia and business sector:Prof. Walter Goessler and Prof. Eva Roblegg, University of Graz (UNI Graz), AustriaProf. Bernhard Michalke, Helmholtz Zentrum München, GermanyProf. Ruth Prassl, Medical University of Graz, AustriaDr. Maria Dusinska, Norwegian Institute for Air Research (NILU), Oslo, NorwayDr. Johanna Schepper Sigmund, Centro de Investigación Biomédica en Red (CIBER), Barcelona, SpainDr. Wolfgang Fritzsche, Leibniz Institute of Photonic Technology (IPHT), Jena, GermanyDr. Lang Tran, Institute of Occupational Medicine (IOM), Edinburgh, UKDr. Tommaso Serchi, Luxembourg Institute of Science and Technology (LIST), LuxembourgDr. Anne Kahru, National Institute of Chemical Physics and Biophysics (NICPB), Tallin, EstoniaDr. Nazende Günday-Türelli, MJR PharmJet GmbH (MJR), Überherrn, GermanyDr. Helena Oliveira, Centre for Environmental and Marine Studies, University of Aveiro, PortugalHans H. Gorris, University of Regensburg, Regensburg, GermanyProf. Barbara Klajnert-Maculewicz, Department of General Biophysics, University of Lodz, Lodz, PolandProf. Andrew Adamatzky, Director of the Unconventional Computing Centre, UWE, Bristol, UKDr. Alena Gabelova, Biomedical Research Center Slovak Academy of Sciences, Bratislava, Slovakiagroups from Croatia: Prof. Dinko Mitrečić and Doc. Marija Ćurlin, School of Medicine, University of ZagrebDr. Maja Dutour Sikirić, Dr. Robert Vianello, Rudjer Bošković Institute, ZagrebProf. Sanja Dabelić, Prof. Dubravka Vitali, Doc. Petra Turčić, Doc. Tin Weitner, Faculty of Pharmacy and Biochemistry, University of ZagrebDoc. Vatroslav Šerić, Clinical Hospital Osijek |
| **Teaching activities** | Lecturer for the courses “Basics in Medicinal Chemistry and Biochemistry” and “Nutrition and Diet Therapy”, at the University course in nursing at the Croatian Catholic University.Lecturer for the course “Biotransformation: detoxification and bioactivation”, Postgraduate studies at the Faculty of Pharmacy and Biochemistry, University of Zagreb, from 2010-2011. Seminars and laboratory practice for the course “General and Inorganic Chemistry”, Postgraduate studies at the Faculty of Pharmacy and Biochemistry, University of Zagreb, from 2004-2008.; course “Physical Chemistry”, Postgraduate studies at the Faculty of Pharmacy and Biochemistry, University of Zagreb, from 2000-2003.Supervision of four MSc. Thesis in Pharmacy at the Faculty of Pharmacy and Biochemistry, University of Zagreb, in 2016, 2008, 2007 and 2006.Supervision of PhD students:Ivona Capjak (finished doctoral study at the Faculty of Pharmacy and Biochemistry, University of Zagreb) PhD thesis „Effect of size, shape and surface structure of silver nanoparticles on their interaction with model proteins“ (defended in May 2019)Barbara Vuković (title „Immunocompatibility of silver nanoparticles-in vitro analysis of toxic effects on human peripheral blood mononuclear cells“ of PhD thesis accepted by the School of Medicine, University in Osijek) Marija Milić (PhD thesis accepted by the School of Medicine, University in Osijek)Barbara Pem (PhD thesis in preparation, doctoral study at the Faculty of Pharmacy, University of Zagreb)Rinea Barbir (PhD thesis in preparation, doctoral study at the Faculty of Pharmacy, University of Zagreb)Supervision of MSc thesis:Pezo, Anuka, MSc thesis „Karakterizacija nanočestica srebra i njihova interakcija s alfa kiselim glikoproteinom“, Faculty of Pharmacy and Biochemistry, University of Zagreb 2018.Pasariček, Ema. MSc thesis „Učinak stabilizacije nanočestica zlata i srebra tiolnim biomolekulama na njihovu toksičnost u vodenbuhi (Daphnia magna Straus, 1820)“ Ecology at the Department of Biology, Faculty of Science, University of Zagreb 2017Crnković, Tea. MSc thesis „Interakcija albumina s nanočesticama srebra različite površinske funkcionalizacije“ Faculty of Pharmacy and Biochemistry, University of Zagreb 2016.Ivanković, Fran. MSc thesis „Sinteza i karakterizacija tiolno funkcionaliziranih nanočestica srebra i zlata“ Faculty of Pharmacy and Biochemistry, University of Zagreb 2016Pupovac, Vedran. MSc thesis „Kvantno-kemijsko određivanje pKa vrijednosti N-hidroksiuree“ Faculty of Pharmacy and Biochemistry, University of Zagreb 2008.Lolić, Ivan. MSc thesis „Kvantno-kemijsko određivanje pka vrijednosti derivata hidroksamskih kiselina“ Faculty of Pharmacy and Biochemistry, University of Zagreb 2007.Dazgić, Lidija. MSc thesis „Kvantno-kemijski studij kiselosti kompleksa vanadija(v) s derivatima hidroksamskih kiselina“ Faculty of Pharmacy and Biochemistry, University of Zagreb 2006.Supervision of student research work:Tea Crnković, research study “Oksidativni stres u slatkovodnom račiću daphnia magna nakon izlaganja nanočesticama srebra” awarded by the Rector of the University of Zagreb, academic year 2014/2015. |
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| **THE MOST IMPORTANT PUBLICATIONS** |
| **Textbooks, Books and Chapters** |
| 1. Vinković Vrček, Ivana: Selenium Nanoparticles: Biomedical Applications // Selenium / Michalke, Bernhard (ur.).

Berlin, Germany: Springer International Publishing, 2018. str. 393-412 doi:10.1007/978-3-319-95390-8 1. Ljubojević, Marija; Milić, Mirta; Vinković Vrček, Ivana: Chapter 10. Environmental impacts of silver from spent nanosources // Silver Recovery from Assorted Spent Sources - Toxicology of Slver Ions / Sabir, Sayed (ur.). Oxon, United Kingdom: World Scientific Publishing Co. Inc., 2018. str. 303-344 doi:10.1142/9781786344588\_0010
2. Parađiković, Nada; Vinković, Tomislav; Tkalec, Monika; Kraljičak, Jasna; Vinković Vrček, Ivana; Teklić, Tihana; Ćosić, Jasenka; Lončarić, Ružica; Štolfa, Ivna: Uzgoj i njega autohtonog češnjaka (znanost i praksa), Osijek: Poljoprivredni fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2015
3. Vinković Vrček, Ivana: Kemijsko nasilje nad hranom i prava djece // Bioetika i dijete / Čović, Ante ; Radonić, Marija (ur.). Zagreb: Pergamena d.o.o. i Hrvatsko društvo za preventivnu i socijalnu pedijatriju, 2011. str. 245-256
4. Vinković Vrček, Ivana; Lerotić, Dada: Aditivi u hrani. Vodič kroz E-brojeve., Zagreb: Školska knjiga, d. d., 2010
5. Lerotić, Dada; Vinković Vrček, Ivana: Što se krije iza E-brojeva? Aditivi u hrani., Zagreb, Split: Udruga za demokratsko društvo (UDD), 2007
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| 1. **scientific papers relevant to the fields of teaching activities**
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| 1. Pavičić, Ivan; Milić, Mirta; Pongrac, Igor M.; Brkić Ahmed, Lada; Matijević Glavan, Tanja; Ilić, Krunoslav; Zapletal, Emilija; Ćurlin, Marija; Mitrečić, Dinko; Vinković Vrček, Ivana. Neurotoxicity of silver nanoparticles stabilized with different coating agents: In vitro response of neuronal precursor cells // Food and chemical toxicology (2019) doi:10.1016/j.fct.2019.110935
2. Pem, Barbara; Pongrac, Igor M.; Ulm, Lea; Pavičić, Ivan; Vrček, Valerije; Domazet Jurašin, Darija; Ljubojević, Marija; Krivohlavek, Adela; Vinković Vrček, Ivana. Toxicity and safety study of silver and gold nanoparticles functionalized with cysteine and glutathione // Beilstein Journal of Nanotechnology, 10 (2019), 1802-1817
3. Barbir, Rinea; Goessler, Walter; Ćurlin, Marija; Micek, Vedran; Milić, Mirta; Vuković, Barbara; Milić, Marija; Ljubojević, Marija; Domazet Jurašin, Darija; Vinković Vrček, Ivana. Protein Corona Modulates Distribution and Toxicological Effects of Silver Nanoparticles In Vivo // Particle & particle systems characterization, 37 (2019), 1900174, 12
4. Rosenberg, Merilin; Ilić, Krunoslav; Juganson, Katre; Ivask, Angela; Ahonen, Merja; Vinković Vrček, Ivana; Kahru, Anne. Potential ecotoxicological effects of antimicrobial surface coatings: a literature survey backed up by analysis of market reports // PeerJ, 7 (2019), 6315, 34
5. Oliveira, Helena; Bednarkiewicz, Artur; Falk, Andreas; Fröhlich, Eleonore; Lisjak, Darja; Prina-Mello, Adriele; Resch, Susanne; Schimpel, Christa; Vinković Vrček, Ivana; Wysokinska, Edyta; Gorris, Hans H. Critical Considerations on the Clinical Translation of Upconversion Nanoparticles (UCNPs): Recommendations from the European Upconversion Network (COST Action CM1403) // Advanced Healthcare Materials, 8 (2019), - doi:10.1002/adhm.201801233
6. Pem, Barbara; González-Mancebo, Daniel; Moros, Maria; Ocana, Manuel; Becerro, Ana Isabel; Pavičić, Ivan; Selmani, Atidja; Babič, Michal; Horak, Daniel; Vinković Vrček, Ivana. Biocompatibility assessment of up- and down-converting nanoparticles: implications of interferences with in vitro assays // Methods and Applications in Fluorescence, 7 (2019), 1; 014001, 15
7. Vinković, Tomislav; Štolfa Čamagajevac, Ivna; Tkalec, Monika; Goessler, Walter; Domazet Jurašin, Darija; Vinković Vrček, Ivana. Does plant growing condition affects biodistribution and biological effects of silver nanoparticles? // Spanish journal of agricultural research, 16 (2018), 4; e0803, 6
8. Capjak, Ivona; Zebić Avdičević, Maja; Dutour Sikirić, Maja; Domazet Jurašin, Darija; Amela Hozić, Amela; Pajić, Damir; Dobrović, Slaven; Goessler, Walter; Vinkovic Vrcek, Ivana. Behavior of silver nanoparticles in wastewater: systematic investigation on the combined effects of surfactants and electrolytes in the model systems // Environmental Science: Water Research and Technology, 4 (2018), 2146-2159
9. Kubo, Anna-Liisa; Capjak, Ivona; Vinković Vrček, Ivana; Bondarenko, Olesja M.; Kurvet, Imbi; Vija, Heiki; Ivask, Angela; Kasemets, Kaja; Kahru, Anne. Antimicrobial potency of differently coated 10 and 50 nm silver nanoparticles against clinically relevant bacteria Escherichia coli and Staphylococcus aureus // Colloids and surfaces. B, Biointerfaces, 170 (2018), 1 October; 401-410
10. Cvjetko, Petra; Zovko, Mira; Peharec Štefanić, Petra; Biba, Renata; Tkalec, Mirta; Domijan; Ana-Marija; Vinković Vrček, Ivana; Letofsky-Papst, Ilse; Šikić, Sandra; Balen, Biljana. Phytotoxic effects of silver nanoparticles in tobacco plants // Environmental Science and Pollution Research, 25 (2018), 5590-5602
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| **List of all publications** | Link at [CROSBI profil](https://www.bib.irb.hr/pretraga?operators=and|vinkovi%C4%87%20vr%C4%8Dek%20ivana|text|author)e |