

Curriculum Vitae

PERSONAL INFORMATION

Name and surname **OLIVER VUGREK**
Academic title PhD
Year and institution of PhD obtained 1995 PhD (*magna cum laude*) in Biology at the Rupprechts Karl University of Heidelberg, Germany
Address Bijenička 54, 10000 Zagreb, Croatia
Phone +385-(0)1- 4571381 (W); Mob: +385-91-4680778
Fax +385-(0)1- 4561010 (W)
E-mail ovugrek@irb.hr;
web page <https://www.irb.hr/Zavodi/Zavod-za-molekularnu-medicinu/Laboratorij-za-naprednu-genomiku>
Citizenship croatian
Date and place of birth 29. 09. 1965; Zagreb
ORCID <https://orcid.org/0000-0002-8482-8889>

WORK EXPERIENCE

Date (from – until) 2016 - present
Institution Rudjer Boskovic Institute, Division of Molecular Medicine, Zagreb, Croatia
Position Head, Laboratory for advanced genomics
Date (from – until) 2012 - 2015
Institution Rudjer Boskovic Institute, Division of Molecular Medicine, Zagreb, Croatia
Position Head, Division of Molecular Medicine
Work field Biomedicine and Health
Date (from – until) 2009 - 2012
Institution Rudjer Boskovic Institute, Division of Molecular Medicine, Zagreb, Croatia
Position Research associate, Head of Translational Medicine Group
Work field Molecular and Cell Biology
Date (from – until) 2006-2008:
Institution Rudjer Boskovic Institute, Division of Molecular Medicine, Zagreb, Croatia
Position Research associate, Head of Molecular Pathology Laboratory
Work field Molecular and Cell Biology
Date (from – until) 1999-2005
Institution Rudjer Boskovic Institute, Division of Molecular Medicine, Zagreb, Croatia
Position Senior assistant
Work field Molecular and Cell Biology
Date (from – until) 1997-1998
Institution Australian National University, Research School of Biological Sciences, Canberra, Australia.
Position Postdoctoral research scientist
Work field Molecular and Cell Biology
Date (from – until) 1996.
Institution Max-Planck-Institute for Cell Biology, Ladenburg, Germany.
Position Postdoctoral fellow

Work field Molecular and Cell Biology
 Date (from – until) 1992-1995
 Institution Max-Planck-Institute for Cell Biology, Ladenburg, Germany.
 Position Doctoral fellow
 Work field Molecular and Cell Biology

EDUCATION

Date 1995
 Place Heidelberg, Germany.
 Institution Ruprechts Karl University of Heidelberg, Germany
 Title of qualification awarded PhD (magna cum laude) in Biology
 Date 1992
 Place Ulm, Germany.
 Institution Albert Einstein University of Ulm, Germany.
 Title of qualification awarded Degree (Diploma) in Biology
 Date 1985
 Place Marbach, Germany
 Institution Friedrich-Schiller-Gymnasium Marbach
 Title of qualification awarded Final exam (Abitur)

TRAINING

Year 2012
 Place Karlsruhe, Germany
 Institution Agilent Technologies
 Subject and skills covered Certificate of Achievement za 'Cytogenomics Software familiarization, introduction to algorithms and application to clinical cases interpretation'
 Year 2011
 Place Vienna, Austria
 Institution IAEA-WIPO (World Intellectual Property Organization)
 Subject and skills covered Certificate for advanced Innovation, Technology Transfer and Successful Technology Licensing in Research & Development Institutions
 Year 2010
 Place Vienna, Austria
 Institution IAEA-WIPO (World Intellectual Property Organization)
 Subject and skills covered Certificate for Innovation Promotion, Technology Transfer and Successful Technology Licensing
 Year 1997-1998
 Place Canberra, Australia
 Institution Australian National University, RSBS, Canberra, Australia
 Subject and skills covered Genetics, molecular and cell biology, biochemistry, recombinant DNA technology; microscopy
 Year 1996
 Place Ladenburg, Germany
 Institution Max-Planck-Institute for Cell Biology
 Subject and skills covered Genetics, molecular and cell biology, biochemistry, recombinant DNA technology, microscopy
 Year 1992-1995.
 Place Ladenburg, Germany
 Institution Max-Planck-Institute for Cell Biology
 Subject and skills covered molecular and cell biology, recombinant DNA technology, microscopy

LANGUAGES

MOTHER TONGUE	Croatian
ENGLISH LANGUAGE	
Speaking	Very good
Writing	Very good
Reading	Very good

OTHER FOREIGN LANGUAGES

Language	German
Speaking	Excellent (mother tongue)
Writing	Excellent (mother tongue)
Reading	Excellent (mother tongue)

RESEARCH AND OTHER PROJECTS

(LEADER AND ASSOCIATES; FUNDING SOURCE)

2025-2028: EASIGEN-DS Design study for a European infrastructure on advanced genomics technologies (Proposal ID 101187908). HORIZON-INFRA-2024-DEV-01. Budget 3M EUR (IRB 70.000,00 EUR). Project start 02/2025.

2024-2028: GOE - Genome of Europe. DIGITAL-2023-CLOUD-AI-04-GENOME (ID: 101168231). 01.10.2024 - 01.04.2028). Budget 40M EUR (IRB 610.000,00 EUR).

2024-2025: NPOO 'Dokazivanje inovativnog koncepta - Drugi Poziv', C3.2.R3-I1.05 projekt "Dokazivanje inovativnog koncepta za karakterizaciju genskih varijanti nepoznatog značaja (VUS)". Budget 66.000,00 EUR.

2022-2026: GDI - Genomic Data Infrastructure, funded from the European Union's Digital Europe Programme under grant agreement number 101081813; 40 million EUR, Principal investigator

2019-2023: HRZZ IP IP-2018-01-5632: Molecular aspects of pathogenic processes in AHCY deficiency (Croatian Science Foundation); 985.340,48 HRK; Principal investigator

2019-2022: Centre of competence in molecular diagnostics (CEKOM); 2.204.739,05 HRK (**PI:** Oliver Vugrek).

2018-2020: Integrated test for identification of genetic changes linked to infertility (Genom-IGT)" ; collaborator 928.819,30 HRK.

2013-2016: FP7-REGPOT-2012-2013-1 **Project Coordinator** - Enhancement of the Innovation Potential in SEE through new Molecular Solutions in Research and Development. Grant agreement no: 316289 (Project start 1.6.2013; EUR 4,738,978).

2013: FP7 PRIME-XS-consortium project grant: SILAC analysis of human S-Adenosyl homocysteine hydrolase deficiency (**PI:** Oliver Vugrek).

2012-2013: DAAD bilateral grant. Research Project 'SAHH deficiency: Epigenetic characterization of a novel human methylation disorder' (**PI's:** Dr. Oliver Vugrek and Dr. Ulrich Zechner (Johannes Gutenberg University Mainz, Germany). (project granted: URBROJ: 533-06-12-0002).

2010-2012: **Project leader** for grant of IPA Regional Development Component in Croatia between Institute Rudjer Boškovic and Medical Faculty Zagreb (EUR 491,485): 'Creation of research related infrastructure for Translational Medicine and Applied Genomics.

2010-2011: DAAD bilateral grant. Research Project 'AHCY deficiency: Proteomics of a new methylation disorder in human' (**PI's:** Dr. Oliver Vugrek and Dr. Gerhard Mittler (Max-Planck-Institute for Immunobiology, Freiburg, Germany).

2009-2010: CROATIA-ISRAEL JOINT RESEARCH PROGRAM (USD 100,000 for 2 years; 03-1209/1-2009); Research project 'Molecular dynamics of S-Adenosylhomocysteine hydrolase (AHCY) and its role in regulation of gene expression' (**PI's:** Dr. Oliver Vugrek and Dr. Yaron Shav-Tal (Bar-Ilan University, Ramat Gan, Israel).

2007-2012: **Project leader** Croatian Ministry of Science and Technology project 098-0000000-2463 (EUR 15,000/year); Research Project: 'S-Adenosylhomocysteine hydrolase (AHCY) deficiency: Molecular Mechanisms of a new human disease' (**PI** Dr. Oliver Vugrek).

2009: **Project leader** Croatia - France bilateral grant (2 month staff exchange; 15.10 - 15. 12. 2009) for the project: S-Adenosylhomocysteine hydrolase (AHCY) and its role in methylation.

2002-2007: **Project leader** Competitive grant from from the Croatian Ministry of Sciences (Grant 0098086; 10,000 EUR per year).

TEACHING

(UNDERGRADUATE, GRADUATE , POSTGRADUATE STUDY PROGRAMMES)

since 2003: Leader of courses 'From disease to gene – from gene to function: Role of recombinant proteins in functional genomics, and Translational Medicine – From disease to gene (Postgraduate lecturer at the Medical Faculty Zagreb)

since 2008: Leader of course 'omics' methods: Application in research of new disorders (Postgraduate lecturer at the Natural Sciences and Mathematics Faculty Zagreb)

MENTORSHIP OF DEFENDED DOCTORAL AND MASTER DISSERTATIONS

AND TRAINING OF YOUNG RESEARCHERS AND SCIENTISTS

Doctoral dissertations:

Ivana Tlak Gajger: PhD obtained 26. 02. 2010

Robert Belužić: PhD obtained 24. 05. 2010.

Lucija Kovačević: PhD obtained 12.6.2017

Filip Rokić: PhD obtained 19.06.2024.

Ivana Pavičić: PhD obtained 26.6.2024.

Masters dissertations

Ivana Mijić 02. 11. 2006

Maja Regović; 21. 12. 2007

Atiđa Selmani; 21. 12. 2007

Mirjana Polović: 12. 02. 2013

Filip Rokić: 29.2.2016

Martina Sajfert: 23. 02. 2018

Ena Šimunić: 17.02.2020

AWARDS AND RECOGNITIONS

Award by director of Rudjer Boskovic Institute of for exceptional contribution to research at RBI in 2010

ORGANIZATIONAL SKILLS AND COMPETENCES

(ORGANIZATION OF HOME AND INTERNATIONAL SCIENCE EVENTS)

Organizer of International Conference 'Game of Epigenomics, April 24 - 28, 2016, Dubrovnik, Croatia.

Co-organizer of the 3rd Croatian Microscopy Congress with international participation April 26 - 29, 2015, Zadar, Croatia.

Organizer of workshops and minisymposia at Ruđer Bošković Institute, Zagreb, Croatia (100 participants each):

- Proteomics Workshop, April 7-9, 2014

- Bioimaging Workshop: October 20-22, 2014.

- Molecular Interactions Workshop, June 1-3, 2015.

- Genomics & Bioinformatics Workshop, November 16-18, 2015

- New Platforms for Molecular Solutions in Research and Development: May 11-12, 2016

Minisymposium:

- 'Opening of the Next Generation Sequencing Facility', March 26, 2016

- INTERNATIONAL MEDICAL SUMMER SCHOOL IN MOLECULAR MEDICINE, SIGNAL

TRANSDUCTION, COURSE No. 5; Dubrovnik, Croatia, 28. 05.- 02. 06.2000

MEMBERSHIP IN SCIENCE ORGANIZATIONS AND BODIES

(CHRONOLOGICALLY; HOME AND INTERNATIONAL ORGANIZATIONS AND BODIES)

2005 Croatian Society of Biochemistry and Molecular Biology

2008 Croatian Society of Human Genetics

COMMISSIONS, COMMITTEES, BOARDS AND WORK GROUPS

(CHRONOLOGICALLY; HOME AND INTERNATIONAL)

2010- Committee for intellectual property of the Rudjer Bošković Institute

2012-2021 Member of the evaluation committee for institutional support for projects, University of Rijeka
 2014-2016 Member of the board of the Croatian Science Foundation for project evaluation
 2016- Board member of the Croatian Science Foundation for monitoring projects in the field of natural sciences.
 2017 – member of the FEBS Fellowships Committee (until 12/2020)
 2020 - member of the Commission for the implementation of the declaration on cooperation towards obtaining at least one million sequenced genomes of the EU by 2022.
 2020 - National representative of the special group 'Signatories of the Declaration of cooperation 'Towards access to at least 1 million sequenced genomes in the EU by 2022'.
 2021 – National representative of the Republic of Croatia in the working group 1+MG WG12 The Genome of Europe (GoE) at the European Commission.

SCIENTIFIC PAPERS

1. Menzel D, Vugrek O, Frank S, Elsner-Menzel C: Protein phosphatase 2A, a potential regulator of actin dynamics and organelle motility in the green alga *Acetabularia*. *European Journal of Cell Biology* 1995, 67: 179-187. (IF 3.31; Q3; Citations 11)
2. Whittington A T, Vugrek O, Wei K, Hasenbein N G, Sugimoto K, Rashbrooke M C, Wasteneys G O: MOR1 is essential for organizing cortical microtubules in plants. *Nature* 2001, 411: 610-613. (IF 34.48; Q1; Citations=238).
3. **Vugrek O**, Moepps B: Hamy3, a novel type 100kD myosin from sunflower. *Journal of Experimental Botany* 2002, 53: 769-771. (IF 4.27; Q1; Citations=4).
4. **Vugrek O**, Menzel D and Frank S: Suppressor tRNA mediated bacterial expression system for *Acetabularia* genes containing UAA and UAG glutamine codons. *Phycologia* 2002, 41: 590-593. (IF 1.22; Q2; Citations=1).
5. **Vugrek O*** (2003). Ten years of plant myosin genetics. Review. *Periodicum Biologorum* 105 (3): 229-236
6. **Vugrek O***, Moepps B and Schraudolf H (2003). Poly(A)-binding proteins from the fern *Anemia phyllitidis*. *Periodicum Biologorum* 105 (3): 251-256.
7. **Vugrek O**, Sawitzky H, Menzel D: Class XIII myosins from the green alga *Acetabularia*: Driving force in organelle transport and tip growth? *Journal of Muscle Research and Cell Motility* 2003, 24 (1): 87-97. (IF 1.66; Q4; Citations=8).
8. Barić I, Fumić K, Glenn B, Čuk M, Schulze A, Finkelstein J D, Jill James S, Mejaški-Bošnjak V, Pažanin L, Pogribny I P, Radoš M, Sarnavka V, Šćukanec-Špoljar M, Allen R H, Stabler S, Uzelac L, Vugrek O, Wagner C, Zeisel S, Mudd H: S-adenosylhomocysteine hydrolase deficiency in a human: A genetic disorder of methionine metabolism. *PNAS USA* 2004, 101(12): 4234-4239. (IF 9.73; Q1; Citations=82).
9. Barić I, Čuk M, Fumić K, Vugrek O, Allen RH, Glenn B, Maradin M, Pazanin L, Pogribny I, Rados M, Sarnavka V, Schulze A, Stabler S, Wagner C, Zeisel SH, and Mudd SH: S-Adenosylhomocysteine hydrolase deficiency: A second patient, the younger brother of the index patient, and outcomes during therapy. *Journal of Inherited Metabolic Disease* 2005, 28(6): 885 – 902. (IF 4.07; Q1; Citations=35).
10. Buist NRM, Glenn B, Vugrek O, Wagner C, Stabler S, Allen RH, Pogribny I, Schulze A, Zeisel SH, Barić I, and Mudd SH: S-Adenosylhomocysteine hydrolase deficiency in a 26-year-old man. *Journal of Inherited Metabolic Disease* 2006; 29: 538-545. (IF 4.07; Q1; Citations=28).
11. Belužić R, Čuk M, Pavkov T, Fumić K, Barić I, Mudd SH, Jurak I, **Vugrek O**: A single mutation at tyrosine 143 of human S-adenosylhomocysteine hydrolase renders the enzyme thermosensitive and effects the oxidation state of bound co-factor NAD. *Biochemical Journal* 2006: 400: 245-253. (IF 5.16; Q1; Citations=9).
12. Fumić K, Belužić R, Čuk M, Pavkov T, Kloor D, Barić I, Mijić I, **Vugrek O**: Functional analysis of human S-adenosylhomocysteine hydrolase isoforms SAHH-2 and SAHH-3. *European Journal of Human Genetics* 2007: 15, 347-351. (IF 4.319; Q1; Citations=4).
13. Beluzic R, Cuk M, Pavkov T, Barić I, and **Vugrek O**: S-Adenosylhomocysteine hydrolase (AdoHcyase) deficiency: Enzymatic capabilities of human AdoHcyase are highly effected by changes to codon 89 and its surrounding residues. *Biochemical and Biophysical Research Communications* 2008, 368: 30-36. (IF 2.6; Q3; Citations=5).
14. Tlak Gajger I, Vugrek O, Pinter Lj, Petrinc Z (2009): „Nozevit patties“ treatment of honeybees (*Apis mellifera*) for the control of Nosema disease. *American Bee Journal*, 149, 11; 1053-1056

15. Vugrek O, Belužić R, Nakić N, Mudd SH: S-Adenosylhomocysteine hydrolase (AHCY) deficiency: Two novel mutations with lethal outcome. *Human Mutation*, 2009: 30 (4): E555-E565. (IF 6.89; Q1; Citations=8).
16. Grubbs R, Vugrek O, Deisch J, Wagner C, Stabler S, Allen R, Barić I, Rados M, Mudd SH: S-Adenosylhomocysteine hydrolase deficiency: two siblings with fetal hydrops and fatal outcomes. *Journal of Inherited Metabolic Disease* 2010, 33 (6):705-13. (IF 4.07; Q1; Citations=6).
17. Tlak Gajger I, Vugrek O, Petrinc Z, D Grilec and Z Tomljanović (2010). Detection of *Nosema ceranae* in honey bees from Croatia. *Journal of Apicultural Research and Bee World* 49, 2010 (4): 340-341.
18. Tlak Gajger I, Vugrek O, D. Grilec, Z. Petrinc (2010). Prevalence and distribution of *Nosema ceranae* in Croatian honeybee colonies. *Veterinarni Medicina* 55, 2010 (9): 457-462.
19. Honzik T; Magner M; Krijt J; Sokolova J; Vugrek O; Beluzic R; Baric I; Hansikova H; Elleder M; Vesela K; Bauerova L; Ondruskova N; Jesina P; Zeman J; Kozich V: Clinical picture of S-adenosylhomocysteine hydrolase deficiency resembles phosphomannomutase 2 deficiency. *Molecular Genetics and Metabolism* (2012); 107 (3), 611–613. doi:10.1016/j.ymgme.2012.08.014. (IF 3.193; Q2; Citations=1).
20. Crnolatac I, Tumir LM, Lesev NY, Vasilev AA, Deligeorgiev TG, Mišković K, Glavaš-Obrovac Lj, Vugrek O, Piantanida I: Probing the Structural Properties of DNA/RNA Grooves with Sterically Restricted Phosphonium Dyes: Screening of Dye Cytotoxicity and Uptake. *ChemMedChem* 2013; DOI:10.1002/cmdc.201300085. (IF 2.835; Q2; Citations=0).
21. Perin N, Martin-Kleiner I, Nhili R, Laine W, David-Cordonnier M-H, Vugrek O, Karminski-Zamola G, Kralj M, Hranjec M (2013) Biological activity and DNA binding studies of 2-substituted benzimidazo[1,2-a]quinolines bearing different amino side chains. *Medicinal Chemistry Communication* (IF: 2.72). 09/2013; 4:1537–1550. doi:10.1039/c3md00193h
22. Geyer H, Hartung E, Mages H W, Weise C, Beluzic R, Vugrek O, Jonjic S, Kroczeck R A, Voigt S (2013). Cytomegalovirus expresses the chemokine homologue vXCL1 capable of attracting XCR1+CD4- dendritic cells. *Journal of Virology* (IF: 5.08; Q1). 10/2013; DOI:10.1128/JVI.02330-13.
23. Strauss KA, Ferreira C, Bottiglieri T, Zhao X, Arning E, Zhang S, Zeisel SH, Escolar ML, Presnick N, Puffenberger EG, Vugrek O, Kovacevic L, Wagner C, Mazariegos GV, Mudd SH, Soltys K. Liver transplantation for treatment of severe S-adenosylhomocysteine hydrolase deficiency. *Mol Gen and Metabolism* 116 (2015), 44-52. doi:10.1016/j.ymgme.2015.06.005
24. Motzek A, Knežević J, Switzeny OJ, Barić I, Belužić R, Strauss KA, Puffenberger EG, Mudd SH, **Vugrek O**, Zechner U (2016). Abnormal hypermethylation at imprinting control regions in patients with S-adenosylhomocysteine hydrolase (AHCY) deficiency, *PLoS ONE* 11 (3):e0151261. <https://doi.org/10.1371/journal.pone.0151261>. Q1
25. Muñoz-Torres P M, Rokić F, Belužić R, Grbeša I, **Vugrek O** (2016). msBiodat analysis tool, big data analysis for high-throughput experiments. *BioData Mining* (2016) 9:26. DOI 10.1186/s13040-016-0104-6.
26. Lepur A, Kovačević L, Belužić R, **Vugrek O** (2016). Combining Unique Multiplex Gateway Cloning and Bimolecular Fluorescence Complementation (BiFC) for High-Throughput Screening of Protein–Protein Interactions. *Journal of Biomolecular Screening*, 21 (10), 1100-1111. DOI: 10.1177/1087057116659438
27. Adela Štimac, Jelena Trmčić Cvitaš, Leo Frkanec, Oliver Vugrek, Ruža Frkanec (2016). Design and syntheses of mono and multivalent mannosyl-lipoconjugates for targeted liposomal drug delivery. *International Journal of Pharmaceutics*, DOI: 10.1016/j.ijpharm.2016.06.123.
28. Grbeša I, Kalo A, Belužić R, Kovačević L, Lepur A, Rokić F, Hochberg H, Kanter I, Simunović V, Muñoz-Torres PM, Shav-Tal Y, **Vugrek O** (2017). Mutations in S-adenosylhomocysteine hydrolase (AHCY) effect its nucleocytoplasmic distribution and capabilities for interaction with S-adenosylhomocysteine hydrolase-like 1 protein. *European Journal of Cell Biology*, 96(6):579-590. doi: 10.1016/j.ejcb.2017.05.002.
29. Teofilović Knežević N., Bihi, M, Stojković Radić M, Tumir L, Ester K, Kralj M, Majhen D, Oršolić N, Lepur A, Vrbanec D, Markotić A, Dembić Z, Weber A N R, Piantanida I, Vugrek O, Diken M, Knežević J (2017). 1-ethyl-3-(6-methylphenanthridine-8-il) urea modulates TLR3/9 activation and induces selective pro-inflammatory cytokine expression in vitro.

- Bioorganic & Medicinal Chemistry Letters, 27(7), 1530–1537.
<http://doi.org/10.1016/j.bmcl.2017.02.048>
30. Mikačić I, Belužić R, Vugrek O, and Plavljanić Đ (2018). A Proximity Extension Assay (PEA)-based method for quantification of bevacizumab. *J. Pharma. Tox. Meth.*; 92, 20–23.
<https://doi.org/10.1016/j.vascn.2018.02.008>
 31. Cokarić Brdovčak, M., Zubković, A., Ferenčić, A., Šoša, I., Stemberga, V., Cuculić, D., Rokić F, Vugrek O, Hackenberg M, Jurak, I. (2018). Herpes simplex virus 1 miRNA sequence variations in latently infected human trigeminal ganglia. *Virus Research*, 256, 90–95. <https://doi.org/10.1016/j.virusres.2018.08.002>;
 32. Belužić, L., Grbeša, I., Belužić, R., Park, J. H., Kong, H. K., Kopjar, N., ... Vugrek, O*. (2018). Knock-down of AHCY and depletion of adenosine induces DNA damage and cell cycle arrest. *Scientific Reports*, 8(1), 14012. <http://doi.org/10.1038/s41598-018-32356-8>).
 33. Oroz M, Begovac J, Planinic A, Rokic F, Lunar MM, Zorec TM, Beluzic R, Korac P, **Vugrek O**, Poljak M, Lepej SZ (2019). Analysis of HIV-1 diversity, primary drug resistance and transmission networks in Croatia. *Scientific Reports* 9:17307. DOI: 10.1038/s41598-019-53520-8.
 34. Ozretic P, da Silva Filho MI, Catalano C, Sokolovic I, Vukic-Dugac A, Šutic M, Kurtovic M, Bubanovic G, Popovic-Grle S, Skrinjaric-Cincar S, **Vugrek O**, Jukic I, Rumora L, Bosnar M, Samaržija M, Bals R, Jakopovic M, Försti A, and Knežević J (2019). Association of NLRP1 Coding Polymorphism with Lung Function and Serum IL-1 Concentration in Patients Diagnosed with Chronic Obstructive Pulmonary Disease(COPD). *Genes* 2019, 10, 783; doi:10.3390/genes10100783.
 35. Jurak I, Rukavina T, Vugrek O (2020). Successful sequencing of the first SARS-CoV-2 genomes from Croatian patients. *Croatian Med. J.* doi: [10.3325/cmj.2020.61.302](https://doi.org/10.3325/cmj.2020.61.302)
 36. Geographical and temporal distribution of SARS-CoV-2 clades in the WHO European Region, January to June 2020. *Eurosurveillance Euro Surveill.* 2020;25(32); <https://doi.org/10.2807/1560-7917.ES.2020.25.32.2001410>.
 37. Katja K. Dumic, Darko Anticevic, Jelena Petrinovic-Doresic, Tamara Zigman, Kamelija Zarković, Filip Rokic, Oliver Vugrek (2020). Lowe syndrome – Old and new evidence of secondary mitochondrial dysfunction. *European Journal of Medical Genetics* 63 (2020) 104022. <https://doi.org/10.1016/j.ejmg.2020.104022>.
 38. Vlainić J, Jović O, Kosalec I, Vugrek O, Což-Rakovac R, Šmuc T (2021). In Vitro Confirmation of Siramesine as a Novel Antifungal Agent with In Silico Lead Proposals of Structurally Related Antifungals. *Molecules* 2021, 26, 3504. <https://doi.org/10.3390/molecules26123504>.
 39. Rokić F, Trgovec-Greif L, Sučić N, Čemeljić N, Cekinović Grbeša Đ, Svedružić Ž, Rukavina T, Vugrek O, Jurak I (2021). Diverse SARS-CoV-2 variants preceded the initial COVID-19 outbreak in Croatia. *Archives of Virology* (2021) 166:1735–1739. <https://doi.org/10.1007/s00705-021-05029-7>.

Other papers:

- 1 Menzel D, **Vugrek O** (1997). Muskelproteine in Pflanzenzellen. *Biologie in unserer Zeit* 27. Jahrg. 1997, Nr. 3: 195-203.
- 2 Barić, I; Ćuk, M; Glenn, B.; Maradin, M; Sarnavka, V; Radoš, M; **Vugrek O**; Pažanin, L; Mudd, S H; Fumić, K; Manjak S-adenozilhomocistein hidrolaze - novootkrivena nasljedna bolest kao uzrok kongenitalne miopatije. *Neurologia Croatica*. 53 (2004) 3; 110.
- 3 Belužić R, **Vugrek O***: S-adenosylhomocysteine hydrolase (AHCY) deficiency: A natural model system for methylation research. *Rad 508. Medical Sciences* 35(2010): 77-92.
- 4 Taki, H; Gomi, T; Knuckley, B; Thompson, RP; **Vugrek, O**; Hirata, K; Miyahara, T; Shinoda, K; Hounoki, H; Sugiyama, E; Usui, I; Urakaze, M; Tobe, K; Ishimoto, T; Inoue, R; Tanaka, A; Mano, H; Ogawa, H; Mori, H. Purification of enzymatically inactive peptidylarginine deiminase type 6 from mouse ovary that reveals hexameric structure different from other dimeric isoforms. *Advances in Bioscience and Biotechnology*. 2 (2011); 304-310.
- 5 Barić I, Erdol S, Saglam H, Lovrić M, Belužić R, Vugrek O, Blom HJ, Fumić K (2016). Glycine N-methyltransferase deficiency-a member of dysmethylating liver disorders? Book series *JIMD Reports*, Vol 31, 101-106. DOI: 10.1007/8904_2016_543
- 6 Vugrek O (2017) Exploring new avenues of innovation. *Impact* 4: 6-8. <https://doi.org/10.21820/23987073.2017.4.6>

- 7 Lepur A, Vugrek O. (2018). Bimolecular Fluorescence Complementation to Visualize Protein-Protein Interactions in Human Cells Based on Gateway Cloning Technology. *Methods Mol Biol.* 2018;1794:259-267. doi: 10.1007/978-1-4939-7871-7_17.

OTHER RESEARCH ACTIVITIES

(CHIEF EDITOR OR EDITOR OF RESEARCH BOOK, HOME AND INTERNATIONAL RESEARCH JOURNALS, HOME AND INTERNATIONAL CONFERENCE PROCEEDINGS AND OTHER)

Reviewer of several international scientific journals:

- Journal of Human Genetics
- Cellular Physiology and Biochemistry
- Naunyn-Schmiedeberg Archives of Pharmacology
- BBA-Proteins and Proteomics

Editorial board member:

- ISRN Genomics
- Current Research in Chemical Sciences

OTHER IMPORTANT SKILLS AND COMPETENCES

Project Management and writing of competitive project grants on international level (FP6, FP7, ESF, HFSP, HHMI etc)

ADDITIONAL INFORMATION AND NOTES

More than 20 invited and selected lectures at international and domestic scientific gatherings, institutions and societies.

Conferences: European Precision Medicine Conference, Barcelona, Spain, 29-30. 6. 2017; Game of Epigenomics, Dubrovnik, 24.-28. 2106; FEBS3+, Opatija 2012; Congress of the Croatian Society for Biochemistry and Molecular Biology (HDBMB); 03 - 07 October 2006, Vodice.

Invited lectures at the University of Dresden, Mainz, Muenchen, Innsbruck, Naples; Wuerzburg in the period 2005-2015); Radioncial lecture: Scienion-Diagnostics 3.0, Berlin 2013). invited lecture at the 19th Health Fair, Vinkovci, 2015; Faculty of Pharmaceutical Biochemistry, University of Zagreb 2013); eStudent Association, 2013.

Active participation in more than 15 international scientific meetings and workshops.

Author of 9 chapters in books (Methods in molecular biology; editor Ambriović Ristov A, et al, 2007).

Citations: 1179 (Scopus)/ 1149 (WoS), h-index 15/15.