

CV – DR ZORAN VRATNIVA, MSc, Ph.D

I was born on 28th March 1963 in Zagreb, Croatia, former Yugoslavia. I finished elementary and high school in Titograd (now Podgorica). I entered the Faculty of Medicine, University of Zagreb, in school year 1982/83 and graduated in 1988.

I started Specialization in microbiology with parasitology in 1991 in the Institute of Public Health Montenegro, and passed my specialist exam in 1994, at the Institute of Microbiology, Faculty of Medicine, University of Belgrade.

I defended Master's Thesis in the field of microbiology , titled "Intestinal parasitism in the regions of Montenegro," in 2001, Faculty of Medicine, University of Belgrade.

Ph.D. thesis titled "Analysis of bacteria damages caused by treatment with oxygen plasma particles," I defended at the Jozef Stefan International Postgraduate School in Ljubljana, Slovenia, in 2009. Diploma was certified by Ministry of Education and Sport, on 18 October 2011.

WORKING EXPERIENCE

After completion of the Faculty of Medicine, 1990, I started working at the Institute of Public Health, Podgorica. Training period in microbiology with parasitology I started in the same institution and completed it at the Institute of Microbiology, Faculty of Medicine in Belgrade.

After completed specialization in 1994 at the Department of Microbiology (now the Centre for Medical Microbiology), the Institute Public Health of Montenegro, I had been working as a specialist of microbiology with parasitology until 1999. In 1999 I was appointed as a head of the Department of Bacteriology, Parasitology and Virology (now the Centre for Medical Microbiology), and from 2002 to 2005 I was working as a head of the Department of Parasitology and Mycology. Since 2005 I am on the position of Director of the Centre for Medical Microbiology. From 2008 to 2010 I was working as Acting Chief of the Department of Virology and serology, where I perform professional activities.

From 1999 to 2007 - professional associate and Assistant for the Subject Microbiology with Parasitology (now Microbiology and Immunology) at the Faculty of Medicine, University of Montenegro. In the school year 2010/2011 and 2011/2012 I have been engaged as a lecturer for the subject Immunology at the Faculty of Pharmacy

BIBLIOGRAPHY

1. SCIENTIFIC-RESEARCH ACTIVITIES

1.1. Monographs

1.1.4. Study book published in country

1. Bujko M., Mijović G., **Vratnica Z.** Virusi koji se prenose polnim putem i problemi humane reprodukcije u: *Savo Bojović i sar. Humana reprodukcija. Naučna knjiga, Beograd*, str.236-253, 2003. ISBN86-83645-07-X
2. Laušević D, Mugoša B, Terzić N, **Vratnica Z.**: HIV i rizična ponašanja među komercijalnim seksualnim radnicima u Crnoj Gori. *Institut za javno zdravlje, Podgorica* 2008. 40 str., ISBN 978-86-85557-10 1
3. Laušević D, Mugoša B, **Vratnica Z.**, Terzić N, Strahinja R, Labović I.: Istrživanje o rizičnom ponašanju u vezi sa HIV/AIDS-om-seroprevalence HIV-a, HBV i HCV među intravenskim korisnicima droga u Crnoj Gori. *Institut za javno zdravlje, Podgorica* 2008. 35 str., ISBN 978-86-85557-12-5
4. Laušević D, Mugoša B, **Vratnica Z.**, Terzić N, Labović I, Strahinja R.: Istrživanje o rizičnom ponašanju u vezi sa HIV/AIDS-om i seroprevalenci HIV infekcije među seksualnim radnicama u Crnoj Gori. *Institut za javno zdravlje, Podgorica* 2010. 47 str., ISBN 978-86-85557-23-1

1.2. Papers published in journals

1.2.1. Papers published in journals in involved in international database

5. Cvelbar U, Vujošević D, **Vratnica Z** and Mozetič M.: The influence of substrate material on bacteria sterilization in an oxygen plasma glow discharge. *J. Phys. D: Appl.Phys.* 39: 3451- 3456; 2006. ISSN0022-3727
6. Vujošević D, **Vratnica, Z.**, Vesel A, Cvelbar U, Mozetič M, Drenik A, Mozetič T, Kljanšek Gunde M, Haumtjan N.: Oxygen plasma sterilization of bacteria. *Mater. tehnol.* **40**, 227-232. 2006. ISSN1580-2949

7. **Vratnica Z**, Vujošević D, Cvelbar U, Mozetič M.: Degradation of bacteria by weakly ionized highly dissociated radio-frequency oxygen plasma. *IEEE Trans. Plasma Sci.* **36**, 1300, 2008. ISSN0093-3831
8. Werber D, Lausevic D, Mugoša B, **Vratnica Z**, Ivanović –Nikolić Lj, Žižic Lj, Alexandre-Bird A, Fiore L, Ruggeri F.M, Di Bartolio I.: Massive outbreak of viral gastroenteritis associated with consumption of municipal drinking water in a European capital city. *Epidemiology and Infection, Cambridge University Press* **137(12)**: 1713-1720, 2009; ISSN 0950-2688
9. Ciccozzi M, Vujosevic D, Lo Presti A, Mugosa B, **Vratnica Z**, Alessia Lai, Lausevic D, Draskovic N, Marjanovic A, Cella E, Maria M. Santoro, Alteri C, Fabeni L, Ciotti M, Zehender G.: Genetic Diversity of HIV Type 1 in Montenegro. *AIDS Rresearch and Human Rretroviruses*, **27(00)**:1-4, 2011 *Mary Ann Liebert, Inc.* ISSN (Print) 0889-2229, ISSN (Online) 0889-2229
10. Mozetič M, **Vratnica Z.**: Destruction of *Bacillus stearothermophilus* bacteria by weakly ionized low pressure cold oxygen plasma. *Vacuum, Elsevier* **85(12)**:1080-1082, 2011. ISSN0042-207X

1.2.2. Papers published in international journals, involved in database, with regular international distribution and abstract in foreign language

11. Drenik A, Cvelbar U, Vesel A, Mozetič M, **Vratnica Z**, Vujošević D.: Meritve gostote atomov v šibkoionizirani kisikovi plazmi vzdolž zaprte cevi. *Vakuumist*, **25,(1-2)**: 16-19; 2005. ISSN0351-9716
12. **Vratnica Z**, Vujošević D, Bele M, Drenik A, Vesel A, Cvelbar U, Mozetič M.: Preiskave bakterij s sodobnim vrstičnim elektonskim mikroskopom. *Vakuumist*, **25,(1-2)**: 20-23; 2005. ISSN0351-971

1.2.3. Papers published in national journals

13. Andrić B, Prlja V, **Vratnica Z**. Periferna paraliza n. facialis-a kliničkom spektru lajmske neuroborelioze *Medicinski zapisi* **55**: 56-59; 2001 ISSN0419-7747
14. Andrić B, Vučinić N, Medenica M, **Vratnica Z**, Samardžija N, Jovanović J, Vukadinov J. Kardioborelioza – dijagnostika, terapija, prognoza *Medicinski zapisi* **55**: 19-26; 2001. ISSN0419-7747
15. Andrić B, Samardžija N, Vukadinov J, Vučinić N, **Vratnica Z**. Terapija lajmske bolesti *Medicinski zapisi* **56**: 52-55; 2003. ISSN0419-7747

16. Andrić B, Samardžija N, Jovanović J, Vukadinov J, Vučinić N, **Vratnica Z**. Rana dijagnoza lajmske bolesti – značaj aktivnosti serumskih aminotransferaza. *Medicinski zapisi* **56**: 56-62; 2003. ISSN0419-7747
17. Vujošević D, **Vratnica Z**, Bujko M, Cvelbar U, Mozetič M. Sterilizacija plazmom-tehnologija budućnosti ili alternativa klasičnom postupku. *Medicinski zapisi* **59**:5-10; 2004. ISSN0419-7747
18. **Vratnica Z**. Methodes of destruction of bacterial cell *Medicinski zapisi* **62**: 85-104; 2007. ISSN0419-7747

1.3. Papers presented at congresses, symposiums and seminars

1.3.1. International congresses, symposiums and seminars

19. Andrić B, **Vratnica Z**, Andrić A, Mijatović A. Characteristics of Non – Specific Early and Late Lyme Syndrom *9th International Congres of Infectious Deseases – Abstracts*, Buenos Aires, 2000.
20. Andrić B, Lako B, Vučinić N, Dječević J, **Vratnica Z**. Ethiological diagnosis of Lyme syndroma 2. *Macedonian congress of infectious diseases – abstracts*, str.50, Ohrid, 2003.
21. **Vratnica Z**, Vujošević D, Bujko M, Cvelbar U, Mozetič M. SEM investigation of bacteria deposited on aluminium foil. V: *MOZETIČ, Miran (ur.), Šetina, J. (ur.), Kovač, J. (ur.). 10. združena vakuumska konferenca [tudi] 11. srečanje slovenskih in hrvaških vakuumistov [in] 24. slovenski vakuumski simpozij – Program in knjiga povzetkov* str. 94, Portorož, 2004.
22. Cvelbar U, Vujošević D, **Vratnica Z**, Mozetič M. Treatment of bacteria with inductively coupled oxygen plasma : [invited talk]. V: *JVC 11, 11th Joint Vacuum Conference*, Prague, 2006.
23. **Vratnica Z**, Bele M, Hauptman N, Klanjšek Gunde M, Mozetič M, Cvelbar U. Preiskava površine bakterij po obdelavi s plazmo 13. *Međunarodni sastanak Vakuumska znanost i tehnika – Zbornik sažetaka*, str.8, Koprivnica, 2006.
24. Mozetič M, Cvelbar U, Vesel A, Krstulović N, Milošević S, **Vratnica Z**. Characterization of oxygen plasma during degradation of Escherichia coli 16th *International Colloquium on Plasma Processes – Abstracts booklet*, str.158, Toulouse, 2007.
25. Cvelbar U, Vujošević D, Mozetič M, **Vratnica Z**, Krstulović N, Milošević S, Repnik U. Monitoring plasma sterilization efficiency. V: *5th Balkan Congress for*

Microbiology – abstract book, str.63, Budva, 2007.

26. Eleršič K, **Vratnica Z**, Vujošević D, Junkar I, Kovač J, Mozetič M, Cvelbar U. Surface analysis of damages on Escherichia coli caused by oxygen plasma radicals. V: ICOPS 2008, *The 35th IEEE International Conference on Plasma Science – IEEE Conference records - abstracts*. str.1, Karlsruhe 2008.
27. Kovač J, **Vratnica Z**. Cvelbar U, Mozetič M, Zalar A, Filipič T. XPS in AFM preiskava bakterij po obdelavi s kisikovo plazmo 15. *Međunarodni sastanak Vakuumska znanost i tehnika – Zbornik sažetaka*, str.20, Varaždin, 2008.
28. Krstulović N, Vujošević D, **Vratnica Z**, Milošević S, Cvelbar U, Eleršič K, Junkar I, Drenik A, Vrlinič T, Mozetič M.: Optical emission spectroscopy characterization of oxygen plasma during degradation of bacteria 16th *International Scientific Meeting on Vacuum Science and Technique – Book of abstracts*, str. 27, Bohinj, 2009.
29. Cvelbar U, Drenik, A, Eleršič K, Primc G, Junkar I, Vesel A, Zaplotnik R, **Vratnica Z**, Vujošević D, Kregar Z, Bišćan M, Krstulović N, Glavan Vukelić N, Milošević S, Mozetič M. Karakterizacija nizekotlačne plazme : od katalitičnih sond do optične emisijske spektroskopije 17. *Međunarodni sastanak Vakuumska znanost i tehnika – Zbornik sažetaka*, str.18, Terme Tuhelj, 2010.

1.3.2. National congresses, symposiums and seminars

30. Mijović G, **Vratnica Z**. Pouzdanost bacitracin testa *Dani mikrobiologa Jugoslavije 1996.god. – zbornik sažetaka*, str. 20, Herceg Novi.
31. Đurović M, **Vratnica Z**, Ražnatović M, Borović Ž. Mikrobiološka flora faktor liziranja slobodnih kožnih transplantata *Dani mikrobiologa Jugoslavije 1996.god. – zbornik sažetaka*, str. 78, Herceg Novi.
32. Vučinić N, Vujošević N, Mugoša B, **Vratnica Z**, Đečević J, Boljević B. Andrić B, Jusufrić A, Laušević D. Serološko virusološke dijagnostičke dileme kod oboljelih od hemoragične groznice sa bubrežnim sindromom (FHRS). *Dani mikrobiologa Jugoslavije 1996.god. – zbornik sažetaka*, str. 114, Herceg Novi
33. Mijović G, **Vratnica Z**, Matavulj M. Stanje vode Skadarskog jezera na osnovu mikrobioloških pokazatelja *Dani mikrobiologa Jugoslavije 1996.god. – zbornik sažetaka*, str.196, Herceg Novi.
34. Mijović G, **Vratnica Z**, Bujko M. Virusne infekcije neonatusa – mogućnosti serološke dijagnostike VIII kongres mikrobiologa Jugoslavije - kratki sadržaji radova, str. 71, Vrnjačka Banja, 2000.

35. Mijović G, **Vratnica Z**, Bujko M. Anti HAV antitijela u krvi žena i muškaraca ispitanih tokom 1999. god. *IX kongres preventivne medicine Jugoslavije – zbornik sažetaka*, str.272, Tara, 2001.
36. **Vratnica Z**, Kecojević N. Lambliozna kod školske djece u Crnoj Gori *IX kongres ljekara Crne Gore zbornik rezimea*, str.106, Herceg Novi, 2001.
37. Andrić B, Vučinić N, **Vratnica Z**, Lako B, Samardžija N, Vukadinov J. Aktualnost transmisivnih (krpeljskih) zooantroponoza u Crnoj Gori *IX kongres ljekara Crne Gore – zbornik rezimea*, str.112, Herceg Novi, 2001.
38. Andrić B, Lako B, Vučinić N, **Vratnica Z**. Epidemiološki, klinički i imunološki aspekti dijagnoze riketioza u Crnoj Gori *IX kongres ljekara Crne Gore – zbornik rezimea*, str. 113, Herceg Novi, 2001.
39. Damjanović B, Damjanović J, **Vratnica Z**. Antimikrobna aktivnost etarskog ulja žalfije (*Salvia officinalis L.*) *10. jugoslovenski kongres o ishrani – izvodi radova*, str. 64, Beograd, 2002.

1.4.. *Introductory, published plenary lecturing*

1.4.1. **At the meetings with international participation**

40. **Vratnica Z**, Eleršič K, Vesel A, Mozetič M. Characterisation of bacteria degradation in low pressure plasma by AFM and XPS methods. (invited talk) *18. International Scientific meeting on Vacuum Science and Technologies.-Abstract book*. str.25, Bohinjsko jezero, 2011.

3. PEDAGOGICAL ACTIVITIES

3.2.1. **Guidelines, dictionaries, lexicons published in country**

41. Žižić Lj, Laušević D, Mugoša B, **Vratnica Z**, Ljaljević A, Vujošević N: Kako sačuvati zdravlje. Zavod za zdravstvenu zaštitu Podgorica, World Vision International, Podgorica, 2000. 32 str

4. PROFESSIONAL ACTIVITIES

4.1. professional book

4.1.2. In country

42. Žižić Lj, Laušević D, Mugoša B, Vratnica Z, Ljaljević A, Vujošević N.: Udhëzimet për jetë në rrethana të jashtëzakonshme. *Zavod za zdravstvenu zaštitu - Podgorica i UNICEF kancelarija u Podgorici, Podgorica, 1999. 69 str.*
43. Laušević D, Mugoša B, Žižić Lj, Ljaljević A. Vujošević N. Vratnica Z.: Zdravstvene poruke. *Zavod za zdravstvenu zaštitu - Podgorica i UNICEF kancelarija u Podgorici, Podgorica, 2000. 130 str. CIP- 616.9-084*
44. Laušević D, Rakočević B, Mugoša B, Vratnica Z, Ljubić V.: Avijarna influenza i Pandemijska influenza. *Institut za javno zdravlje, Podgorica 2006., 69 str., ISBN 86-85557-01-1*

4.4. Published reviews, reports and expertises

45. Laušević D, Mugoša B, Ljaljević A, Žižić Lj, Vratnica Z, Backović A. Istraživanje stavova i ponašanja školske djece i omladine o bolestima zavisnosti, seksualnosti i ishrani u Republici Crnoj Gori. *Zavod za zdravstvenu zaštitu - Podgorica, Podgorica, 1999. 76 str.*

4.5. Other professional activities

- President of the Society of Microbiology Montenegro
- Delegate at the Balkan Society of Microbiology
- Member of National AIDS Commission,
- Member of Working group for monitoring and coordination of activities on emergence of new virus of influenza H1N1
- Leader of the Project BISLOCG “Investigation of the structure of Microorganisms by using advanced analytical techniques”
- Participant in the Project BISLOCG 2004/05 sterilisation of microorganism by plasma«
- Participant in the Project BISLOCG 1 «Investigation of bacteria damages after interaction with plasma radicals»,
- Participant in the Project FP6 – 2005 – INCO WBC/SSA – 3 “Reinforcement of Serbian Centre for Parasitic Zoonoses”
- Participant in the Project «Support to the implementation of the Strategy for fight against HIV/AIDS in Montenegro», financed by Global Fund for fight against AIDS, Tuberculosis and Malaria

- **Mentor in specialist studies-**
dr Danijela Rajković – specialisation in microbiology with parasitology
dr Željka Zeković - specialisation in microbiology with parasitology,
dr Ljubica Terić- specialisation in microbiology with parasitology