

**MEDICINSKI
FAKULTET**

Adresa: Kruševac bb
81000 PODGORICA
CRNA GORA
Tel: +382 20 246 651
Fax: +382 20 243 842
url: www.ucg.ac.me/medf
E-mail: infomedf@ac.me



**MEDICAL
FACULTY**

Address: Krusevac bb
81000 PODGORICA
MONTENEGRO
Phone: +382 20 246 651
Fax: +382 20 243 842
url: www.ucg.ac.me/medf
E-mail: infomedf@ac.me

Broj: 1923/14-1
Podgorica, 12.12.2023. godine

**Univerzitet Crne Gore
Odbor za doktorske studije
n/r predsjedniku – prof. dr Borisu Vukićeviću**

Poštovani,



U skladu sa članom 41 i 55 Pravila doktorskih studija, i tačkom 3.8. Vodiča za doktorske studije, u prilogu akta dostavljamo obrazac D2 uz Predlog Odluke Vijeća o imenovanju Komisije za ocjenu doktorske disertacije dr med Maje Raičević, pod nazivom „Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata“ sa pratećom dokumentacijom.

S poštovanjem.

**MEDICINSKI FAKULTET
DEKAN,
Prof. dr Miodrag Radunović**

ISPUNJENOST USLOVA DOKTORANDA

OPŠTI PODACI O DOKTORANDU			
Titula, ime, ime roditelja, prezime	Dr med Maja (Ranko) Raičević		
Fakultet	Medicinski fakultet		
Studijski program	Medicina		
Broj indeksa	9/14		
NAZIV DOKTORSKE DISERTACIJE			
Na službenom jeziku	Dijabetes melitus tip1 kod djece u Crnoj Gori:trend incidence,regionalne karakteristike i kvalitet života pacijenata		
Na engleskom jeziku	Type 1 diabetes mellitus in children in Montenegro:incidence trends,regional characteristics and quality of life		
Naučna oblast	Pedijatrija /endokrinologija		
MENTOR/MENTORI			
Prvi mentor	Prof. dr Mira Samardžić	Medicinski fakultet Univerziteta Crne Gore	Pedijatrijska endokrinologija
Drugi mentor			
KOMISIJA ZA PREGLED I OCJENU DOKTORSKE DISERTACIJE			
Prof. dr Vesna Miranović,	Medicinski Univerziteta Gore	fakultet Crne	Pedijatrija kardiologija -
Prof. dr Mira Samardžić	Medicinski Univerziteta Gore	fakultet Crne	Pedijatrija endokrinologija -
Prof. dr Dragan Laušević	Medicinski Univerziteta Gore	fakultet Crne	Epidemiologija
Prof. dr Vera Zdravković	Medicinski Univerziteta Beogradu	fakultet u	Pedijatrija endokrinologija -
Doc. dr Lidija Banjac	Medicinski Univerziteta Gore	fakultet Crne	Pedijatrija
Datum značajni za ocjenu doktorske disertacije			
Sjednica Senata na kojoj je data saglasnost na ocjenu temu i kandidata	20.07.2021. godine		
Dostavljanja doktorske disertacije organizacionoj jedinici i saglasnost mentora	15.11.2023. godine		
Sjednica Vijeća organizacione jedinice na kojoj je dat predlog za imenovanje komisija za pregled i ocjenu doktorske disertacije	07.12.2023. godine		

ISPUNJENOST USLOVA DOKTORANDA
U skladu sa članom 38Pravila doktorskih studija kandidat je dio sopstvenih istraživanja vezanih za doktorsku disertaciju publikovao u časopisu sa (SCI/SCIE)/(SSCI/A&HCI) liste kao prvi autor.
Spisak radova doktoranda iz oblasti doktorskih studija koje je publikovao u časopisima sa SCI /SCIE .
1.Maja Raičević, Mira Samardžić, Ivan Soldatović, Nataša Čurović Popović, Rade Vuković „Frontiers in Endocrinology“06.09.2022. godine; DOI:10.3389/fendo.2022.991533
2. Maja Raičević, Aleksandar Obradović, Mira Samardžić, MarijaRaičević, Nataša Čurović Popović, Sanja PanićZarić.“International Journal of Environmental Research and Public Health”. 11.11.2022. godine; doi: 10.3390/ijerph192214873.
Obrazloženje mentora o korišćenju doktorske disertacije u publikovanim radovima
Iz doktorske disertacije dr Maje Raičević publikovan je dio istraživačkog materijala, kroz dva rada u renomiranim časopisima, indeksiranim na SCI listi. Prvi se odnosi na trend incidence obolijevanja od tipa 1 dijabetesa u Crnoj Gori, objavljen je 2022. godine u časopisu,„Frontiers in Endocrinology“ , sa impakt faktorom 6,05, i do sada je 5 puta citiran. Drugi rad se odnosi na kvalitet života djece sa tipom jedan dijabetesa i publikovan je 2022. godine u časopisu „International Journal of Environmental Research and Public Health“, sa impact faktorom 4,61. Nezavisna, usko specijalizovana recenzentska komisija je ovo istraživanje ocijenila kao veoma aktuelno i od interesa za sveukupnu naučnu javnost, što je potvrda naučnog doprinosa rezultata doktorske disertacije.
Datum i ovjera (pečat i potpis odgovorne osobe)
U Podgorici , 07.12.2023. godine
 MP
DEKAN Prof.dr Miodrag Radunović 

Prilog dokumenta sadrži:

1. Potvrdu o predaji doktorske disertacije organizacionoj jedinici
2. Odluku o imenovanju komisije za pregled i ocjenu doktorske disertacije
3. Kopiju rada publikovanog u časopisu sa odgovarajuće liste
4. Biografiju i bibliografiju kandidata
5. Biografiju i bibliografiju članova komisije za pregled i ocjenu doktorske disertacije sa potvrdom o izboru u odgovarajuće akademsko zvanje i potvrdom da barem jedan član komisije nije u radnom odnosu na Univerzitetu Crne Gore

UNIVERZITET CRNE GORE

MEDICINSKI FAKLTET

Broj: 1848/1

Podgorica 15.11.2023. godine

POTVRDA

Potvrđuje se da je dr med Maja Raičević , predala 7 primjeraka doktorske disertacije, pod nazivom „ **Diabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata** “ dana 15.11.2023. godine .

Potvrda se izdaje u svrhu pregleda i ocjene doktorske disertacije.

ŠEF STUDENTSKE SLUŽBE
Sonja Vukićević
Sonja Vukićević, diplomirani pravnik



UNIVERZITET CRNE GORE
MEDICINSKI FAKULTET
Broj: 1923/14
Podgorica, 07.12.2023. godine

Na osnovu člana 64 stav 1 tačka 9 Statuta Univerziteta Crne Gore, (Bilten UCG br.337/2015 i br 447/2018), člana 41 i 55 Pravila doktorskih studija, inicijalnog predloga Komisije za doktorske studije Medicinskog fakulteta broj: 1848/2 od 30.11.2023 godine i tačke 3.8 Vodiča za doktorske studije Univerziteta Crne Gore, Vijeće Medicinskog fakulteta na sjednici održanoj 07.12.2023. godine, donijelo je

O D L U K U

I

Kandidat dr med Maja Raičević, ispunjava formalne uslove za ocjenu doktorske disertacije: **„Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata“**.

II

Predlaže se Komisija za ocjenu doktorske disertacije dr med Maje Raičević, pod navedenim nazivom: **„Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata“** u sastavu:

1. **Prof. dr Vesna Miranović**, redovna profesorica Medicinskog fakulteta Univerziteta Crne Gore, naučna oblast: pedijatrija - kardiologija;
2. **Prof. dr Mira Samardžić**, redovna profesorica Medicinskog fakulteta Univerziteta Crne Gore, naučna oblast: pedijatrija - endokrinologija;
3. **Prof. dr Dragan Laušević**, redovni profesor Medicinskog fakulteta Univerziteta Crne Gore, naučna oblast: epidemiologija;
4. **Prof. dr Vera Zdravković**, vanredna profesorica Medicinskog fakulteta Univerziteta u Beogradu, naučna oblast: pedijatrija - endokrinologija;
5. **Doc. dr Lidija Banjac**, docentkinja Medicinskog fakulteta Univerziteta Crne Gore; naučna oblast: pedijatrija

III

Komisija za ocjenu doktorske disertacije je dužna da Vijeću Medicinskog fakulteta, podnese izvještaj koji sadrži ocjenu doktorske disertacije.

Obrazloženje

Dr med Maja Raičević je predala doktorsku disertaciju pod nazivom: **„Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata“** dana 15.11.2023. godine.

Vijeće Medicinskog fakulteta je utvrdilo da kandidat ispunjava uslove iz člana 38 Pravila doktorskih studija, da kandidat dr med Maja Raičević ima, kao prvi autor jedan rad sa rezultatima iz teze objavljen u časopisu sa SCI/SCIE liste. Samim tim su se stekli uslovi da se imenuje Komisija za ocjenu pomenute doktorske disertacije. Na osnovu svega navedenog, odlučeno je kao u dispozitivu ove Odluke.

VIJEĆE MEDICINSKOG FAKULTETA
PREDSJEDAVALAČI

Prof. dr Miodrag Radunović, dekan





Article

Quality of Life of Elementary School Students with Type 1 Diabetes in a Developing Country during the COVID Pandemic

Maja Raicevic ^{1,*}, Aleksandar Obradovic ², Mira Samardzic ^{1,3}, Marija Raicevic ², Natasa Curovic Popovic ¹ and Sanja Panic Zaric ⁴

¹ Institute for Children's Diseases, Clinical Centre of Montenegro, 81000 Podgorica, Montenegro

² Institute of Public Health of Montenegro, 81000 Podgorica, Montenegro

³ Faculty of Medicine, University of Montenegro, 81000 Podgorica, Montenegro

⁴ Mother and Child Health Care Institute of Serbia "Dr Vukan Cupic", 11000 Belgrade, Serbia

* Correspondence: majaraicevic89@gmail.com; Tel.: +382-6750-6790

Abstract: Type 1 diabetes (T1D) is a condition that affects all aspects of life, and thus is closely related to the quality of life itself. Dealing with it during the COVID-19 pandemic is a big challenge. A case-control study conducted in Montenegro at the end of 2021 included 87 elementary school students with T1D and 248 of their peers as controls matched by gender. Standardized questionnaires were distributed to participants (Peds-QL Generic core 4.0 questionnaire for all participants and Peds-QL Diabetes Module 3.2 only for cases). Based on them, the results of obtained scores were measured and compared using non-parametric statistical methods in relation to gender, region and type of household. Children with T1D reported lower quality of life comparing to matching controls with lower scores in almost all domains. Differences in the same domains among patients and their classmates were also observed in the different gender subgroups, environment type subgroups and in the central region. Results of the study provide insights to prioritizing actions for children with diabetes care as well as for public healthcare planning.

Keywords: diabetes mellitus; T1D; quality of life; HRQoL; COVID; students

Citation: Raicevic, M.; Obradovic, A.; Samardzic, M.; Raicevic, M.; Curovic Popovic, N.; Panic Zaric S. Quality of Life of Elementary School Students with Type 1 Diabetes in a Developing Country during the COVID Pandemic. *Int. J. Environ. Res. Public Health* **2022**, *19*, 14873. <https://doi.org/10.3390/ijerph192214873>

Academic Editor: Ana Vukovic

Received: 30 September 2022

Accepted: 10 November 2022

Published: 11 November 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

After being diagnosed with type 1 diabetes (T1D) children challenge many difficulties; they have to make corrections in food intake and physical activity, repeatedly check blood glucose during the day and night, get multiple insulin injections, all to target optimal glycemic range and best possible quality of life (QoL).

QoL is acknowledged as an important indicator of diabetes care outcome, but also as an indicator of public health functioning [1,2]. It is influenced by many health-related, environmental and social factors.

Children with type 1 diabetes, in comparison to their healthy peers, are challenged more frequently with depressive and anxiety disorders, which can be insulin-induced and lead to their poor metabolic control and lower quality of life [3,4].

Many research papers suggested that since the SARS-CoV-2 virus has been spread throughout the world, the COVID-19 pandemic significantly negatively impact the health-related quality of life (HRQoL) of children and adolescents [5,6]. It could be due to school closures, social distancing, changes in family environment, sedentary lifestyle, etc [7]. It was previously reported that during COVID-19 pandemic children and adolescents were frequently coping with mental disturbances such as anxiety, depression, stress, loneliness and tension [8].

There are scarce data on the impact of the COVID-19 pandemic on QoL of children with chronic diseases, such as T1D, although awareness about the risk of their disease during COVID-19 pandemic was raised. It is observed that patients with diabetes are in higher risk of severe presentation of COVID-19, the need for mechanical ventilation and mortality [9].

The aim of this study is to evaluate the QoL of elementary school students in Montenegro with T1D and to compare it with QoL of their peers, during the COVID-19 pandemic.

2. Materials and Methods

During November and December 2021, the medical records of all patients diagnosed under the age of 15 with new-onset T1D, between January 1992 and April 2021 in Montenegro, was evaluated. 135 of them were elementary school students at the moment of study, aged 5–15. This study involved 90 of them who had regular check-ups in the endocrinology department of the Institute for Children's Diseases, Clinical Center of Montenegro (where they have appointments every 3–4 months) as cases. They were offered the QoL questionnaires. Three families disagreed to participate in the study (two because of feeling unpleasant to participate and the third one because of being unlettered). A total of 335 elementary school students participated in the study, 87 (26.0%) were cases. A control group was formed of patients' classmates, without diabetes, who were matched by gender with a case–control ratio 1:3. After parent or caregiver signed the consent for participation, questionnaires were distributed to the patients' school for the control group. To reduce bias, controls were elected as the first three of the same gender as their classmate with T1D, encountered in Teacher Diary among ordinal numbers 5 and 15. All participants completed the questionnaires independently.

Participants were divided into groups regarding their place of residence, based on the type of the surrounding (rural/urban) and geographical region. It is an important point of this research, because of the availability of healthcare resources which are lacking in rural areas, especially in the northern part of the country. Differences among regions concern economic resources and life standard, which is highest in the south region and lowest in the north region of Montenegro.

The approvals of the Ethical committee of Clinical Center of Montenegro, Ministry of Education of Montenegro and Bureau for Education of Montenegro were obtained.

The measurement tool was a standardized Peds-QL Generic core 4.0 questionnaire, covering 4 domains: physical health (8 questions), emotional health (5 questions), social functioning (5 questions) and school functioning (5 questions) [10]. Peds-QL Diabetes Module 3.2 is a diabetes-specific pediatric questionnaire authored by Varni et al. and for the purpose of this research, the Montenegrin language version was validated by MAPI Research Trust. It was filled up only by patients with T1D and it covers 5 domains: diabetes (15 questions), barriers to therapy (5 questions), adherence to therapy (6 questions), worry (2 or 3 questions/depending on age), and communication (4 questions) [11]. Each question is graded 0–4 (0-never, 1-almost never, 2-sometimes, 3-often and 4-almost always), then points are added to these values: 0 = 100, 1 = 75, 2 = 50, 3 = 25, 4 = 0. At the end, all points are added together, so the higher score the better the quality of life. Both, children with diabetes and control group filled out the Questionnaire for general data (age, place of residence, education, employment of the parents and their marital status). Data about metabolic control and insulin therapy were taken from the patient's medical records.

EZR (Easy R) plugin (version 1.42) on R Commander (version 2.6–2) was used for descriptive statistics of the collected data and for analytic statistical data processing, to compare patients' with control group reports, primarily for comparing medians with Mann–Whitney U test (due to data lack of normal distribution) and calculating the correlation coefficient (Spearman). The selected significance level was $p < 0.05$.

3. Results

The control group was smaller (248) than planned ($87 \times 3 = 261$) because in some rural areas were not enough students in the same class or even grade. Median of age in years was 12.4. Among participants 61.2% were boys. In the central region of Montenegro lived 48.1%, predominantly in urban surroundings (77.3%) (Table 1).

Table 1. Summary of participants’ socio-demographic characteristics.

	Cases (n = 87)	Controls (n = 248)	Total (n = 335)
Male %	62.1	60.9	61.2
Female %	37.9	39.1	38.8
Urban %	73.6	78.6	77.3
Rural %	26.4	21.4	22.7
Central Region %	48.3	48.0	48.1
North Region %	23.0	21.8	22.1
South Region %	28.7	30.2	29.9
Median of age in years (IQR)	12.41 (10.4–13.4)	12.1 (10.7–13.1)	12.2 (10.6–13.1)

Children with T1D reported lower HRQOL than their matching controls (Table 2). They had significantly lower scores in domain of emotional and school functioning, as well as lower Psychosocial Health Summary Score. Differences in the same domains among patients and their classmates were also observed in the different gender subgroups, environment type subgroups and in the central region. Controls living in the north and south region of the country did not have better emotional functioning comparing to their peers with diabetes.

Table 2. Medians (IQR) of scores by sociodemographic status and by case/control status.

		Physical Functioning	Emotional Functioning	Social Functioning	School Functioning	Psychosocial Health Summary	Physical Health Summary	Total Score
T1D Status	Case	90.6 (81.3–100)	80 (62.5–90)	100 (85–100)	75 (65–85)	81.7 (72.5–90)	90.6 (81.3–100)	85.9 (76.1–91.3)
	Control	93.7 (87.5–100)	85 (75–95)	100 (90–100)	90 (80–100)	90.8 (83.3–96.7)	93.8 (87.5–100)	91.3 (84.8–95.7)
	Test *	W = 9211 (p = 0.039)	W = 7904 (p < 0.001)	W = 9874.5 (p = 0.194)	W = 4711 (p < 0.001)	W = 5835 (p < 0.001)	W = 9307.5 (p = 0.0532)	W = 6653 (p < 0.001)
Male	Case	90.6 (81.3–100)	80 (65–90)	100 (90–100)	70 (60–85)	80.8 (73.3–90)	90.6 (81.3–100)	86.4 (76.1–91.3)
	Control	93.8 (87.5–100)	90 (80–100)	100 (90–100)	90 (85–100)	91.7 (85–96.7)	93.8 (87.5–100)	91.3 (86.4–96.7)
	Test *	W = 3642.5 (p = 0.238)	W = 2908.5 (p = 0.001)	W = 3886 (p = 0.575)	W = 1563 (p < 0.001)	W = 2015.5 (p < 0.001)	W = 3700.5 (p = 0.307)	W = 2411.5 (p < 0.001)
Female	Case	87.5 (81.3–96.9)	80 (60–90)	95 (85–100)	80 (65–85)	85 (71.7–90)	87.5 (81.3–96.9)	85.9 (75–91.3)
	Control	93.8 (87.5–100)	85 (70–95)	100 (90–100)	90 (80–100)	90 (81.7–96.7)	93.8 (87.5–100)	91.3 (82.6–95.7)
	Test *	W = 1267.5 (p = 0.071)	W = 1208 (p = 0.035)	W = 1376.5 (p = 0.183)	W = 860 (p < 0.001)	W = 973 (p < 0.001)	W = 1267.5 (p = 0.071)	W = 1034.5 (p = 0.002)
Urban	Case	87.5 (81.3–100)	80 (60–90)	100 (85–100)	77.5 (65–85)	80.8 (72.9–90)	87.5 (81.3–100)	85.3 (75.8–91.3)
	Control	93.8 (87.5–100)	85 (75–95)	100 (90–100)	90 (80–100)	90 (84.2–96.7)	93.8 (87.5–100)	91.3 (85.3–95.6)
	Test *	W = 5055 (p = 0.021)	W = 4550 (p = 0.001)	W = 5560.5 (p = 0.150)	W = 2752.5 (p < 0.001)	W = 3278.5 (p < 0.001)	W = 5135 (p = 0.031)	W = 3744 (p < 0.001)
Rural	Case	93.8 (84.4–100)	80 (70–90)	100 (92.5–100)	65 (60–82.5)	83.3 (73.3–88.3)	93.8 (84.4–100)	87 (79.3–90.8)
	Control	93.8 (87.5–100)	90 (80–100)	100 (90–100)	90 (80–100)	91.7 (83.3–96.7)	93.8 (87.5–100)	92.4 (82.6–97.8)
	Test *	W = 580.5 (p = 0.742)	W = 431.5 (p = 0.041)	W = 593.5 (p = 0.843)	W = 268.5 (p < 0.001)	W = 367 (p = 0.006)	W = 580.5 (p = 0.742)	W = 412.5 (p = 0.026)
al Region	Case	87.5 (81.3–99.2)	77.5 (60–90)	100 (90–100)	70 (65–85)	80 (71.7–87.9)	87.5 (81.3–99.2)	82.6 (76.1–91.3)
	Control	93.8 (87.5–100)	85 (75–95)	100 (90–100)	90 (80–100)	90 (81.7–96.7)	93.8 (87.5–100)	91.3 (83.7–95.7)

	Test *	W = 2069 (p = 0.093)	W = 1758.5 (p = 0.004)	W = 2322.5 (p = 0.453)	W = 1175 (p < 0.001)	W = 1361.5 (p < 0.001)	W = 2063.5 (p = 0.089)	W = 1498 (p < 0.001)
North Region	Case	93.8 (87.3–100)	90 (68.8–90)	97.5 (85–100)	80 (63.8–86.3)	86.7 (76.7–90)	95.3 (87.5–100)	88.6 (82.3–91.8)
	Control	93.8 (87.5–96.9)	92.5 (80–100)	100 (95–100)	95 (85–100)	94.2 (86.7–96.7)	93.8 (87.5–95.9)	94 (86.4–97.6)
	Test *	W = 555.5 (p = 0.853)	W = 382 (p = 0.052)	W = 424.5 (p = 0.1)	W = 212.5 (p < 0.001)	W = 256.5 (p < 0.001)	W = 581 (p = 0.617)	W = 340 (p = 0.015)
South Region	Case	90.6 (81.3–100)	85 (60–90)	100 (85–100)	80 (65–85)	83.3 (73.3–90)	90.6 (81.3–100)	85.9 (75–91.3)
	Control	93.8 (87.5–100)	85 (75–100)	95 (90–100)	90 (85–100)	90 (85–95)	93.8 (87.5–100)	91.3 (87–95.1)
	Test *	W = 720 (p = 0.078)	W = 728 (p = 0.093)	W = 924.5 (p = 0.915)	W = 372 (p < 0.001)	W = 536 (p = 0.001)	W = 720 (p = 0.078)	W = 579 (p = 0.004)

* Mann-Whitney U test.

The lowest median score was observed in domain of school functioning, in rural area, as well among boys with T1D and in the central region (Table 2).

Regardless the diabetes status, with older age “physical functioning” score slumps (Table 3). This moderate negative correlation is found among girls. It is also present in urban surroundings, but as a weak (Table 3).

Table 3. Correlation between Physical functioning score and age by gender and household type.

	ρ *	p-Value
Total	-0.14	0.009
Male	0.04	0.576
Female	-0.37	p < 0.001
Urban	-0.13	0.031
Rural	-0.16	0.177

* Spearman’s rank correlation coefficient.

According to the children with T1D reports and results of Peds-QL Diabetes Module, their median diabetes-related QoL score was 73.9 (IQR 64.4–82.0). The most important difficulties for patients concerned “worry” (median 58.3, IQR 50.0–75.0), followed by “barriers to therapy” (median 70.0, IQR 60.0–85.0). For only 33.7% has never been hard doing everything they need to care for diabetes, as they reported for the month before the research interview. Almost every third patient (33.7%) also reported, that at least once felt embarrassed about having diabetes during the same period.

Following, only 34.9% of patients reported that never felt weak, 54.7% reported that never had headaches, and majority of them reported feeling hungry, thirsty, “low” or “high” from time to time (Table 4).

Table 4. Patients’ reports on frequency of different diabetes-related problems during the month before the research interview (n = 87).

	Percentage				
	Never	Almost Never	Sometimes	Often	Almost Always
I feel hungry	12.8	10.5	48.8	19.8	8.1
I feel thirsty	23.2	29.1	41.9	5.8	0
I have to go to the bathroom too often	45.3	32.6	17.4	3.5	1.2
I have tummy aches	39.6	29.1	26.7	2.3	2.3
I have headaches	54.7	26.7	14	3.4	1.2
I feel like I need to throw up	73.3	17.4	7	2.3	0
I go “low”	4.7	9.3	67.4	18.6	0
I go “high”	4.7	9.3	67.4	18.6	0
I feel tired	32.5	29.1	29.1	7	2.3
I get shaky	44.2	19.8	20.8	14	1.2

I get sweaty	52.3	23.3	22.1	0	2.3
I feel dizzy	62.8	23.3	10.4	2.3	1.2
I feel weak	34.9	29.1	25.6	8.1	2.3
I have trouble sleeping	70.9	18.6	4.7	2.3	3.5
I get cranky or grumpy	27.9	18.6	40.7	8.1	4.7

4. Discussion

The results of the present study estimated that children with T1D in Montenegro have lower QoL in comparison to their non-diabetic peers. It is not a novel finding [12–14]. A similar research was conducted in Montenegro almost a decade ago, and students with T1D had also lower score in domain of school functioning in comparison to control group, but we have furthermore registered significant differences in their emotional functioning and psychosocial health [13].

The results of our study are consistent with previous reported from the Bekele et al. They have interviewed 379 patients with T1D, 5–18 years old, few months prior than our study was conducted. Their results revealed likewise lower scores in children emotional and school functioning, but adequate social functioning [15]. The highest scores in domain of social functioning in our study could be due to returning to school after COVID-19 lockdown and online teaching, mentioning our study was conducted between two peaks of COVID-19 pandemic in Montenegro in a relatively “stable” epidemiological period and just before the highest number at the end of 2021 and at the beginning of 2022 [16].

Low emotional scores could be the consequence of coping with puberty, trying to become independent and manage their disease, and further being preoccupied with chronic complications of diabetes [12]. Low diabetes-related QoL is probably attributed to demands to maintain optimal metabolic control.

Remarkably low score in the section “worries”, showed that elementary school students with T1D, although very young, are deeply concerned regarding their health. They have problem in school functioning, especially if they live in rural area. All of the above emphasizes the need for psychological support.

Actually, it is already known that children with T1D have significantly impaired school functioning in comparison to their peers, but we have identified that problem is larger in the central region of Montenegro and for children living in rural surroundings [12,14,17].

Furthermore, some actions are needed on raising awareness about diabetes among school staff and patients’ peers, especially in central region of Montenegro and for those living in rural settings, so children with T1D would have positive self-concept. It could be diabetes training organized through workshops for staff and patients’ peers with an aim to fortify their relationship with patients and their parents. During COVID-19 pandemic an online education improved patients’ quality of life, which should be scrutinized as an important action in potential future crises [18].

Contrasting previously reported, our cases did not have more problems with physical functioning. Anyway, it is observed in our study that during COVID-19 pandemic, age have correlated with physical health in girls, which suggests that more attention should be paid to female students of higher grades.

The introduction of modern technologies in diabetes care, significantly improved metabolic control and QoL in patients with T1D, and it can concurrently reduce complaints about feeling “low” or “high”, but it must become available even for patients in developing countries [19,20].

Almost two-thirds of cases in our study reported feeling weak during the month before the interview, but it is not clear if it is the consequence of their chronic disease or it is just a COVID-19 infection symptom, because of unknown COVID status.

One of the rare studies on QoL of children with T1D during COVID-19 pandemic-related lockdown, showed no significant differences in QoL in children and their parents reports comparing periods before and immediately after lockdown [21]. On the other hand, the adults with T1D, 18 months after SARS-CoV2 outbreak, reported worsened lifestyles; gaining weight and worsening quality of sleep [22]. Moreover, Welling et al. investigated the impact of COVID pandemic-related lockdown on eating behaviors, physical activity and QoL in children with severe obesity, and also observed deterioration [23].

Our study has few limitations. According to the lack of QoL assessment just before COVID-19 pandemic in our research, we are unable to appropriately conclude on the effects of pandemic. Having in mind that regular face-to-face check-ups were reduced, and people avoided visiting hospital, it might contribute to unsatisfying QoL scores in T1D patients. Our results would also be more accurate if data on participants' psychological evaluation were available. It is also unknown if controls in our study had other acute or chronic disease at the moment of data gathering, neither their COVID-19 status.

5. Conclusions

Results of our study suggest that, as it was expected, there is a significant difference in QoL between children with T1D and their controls. The lowest QoL scores were observed in the domain of school functioning, in rural area, as well among boys with T1D and in the central region. Children with T1D were deeply concerned regarding their health which emphasizes the need for psychological support. During COVID-19 pandemic, age has correlated with physical health in girls, which suggests that more attention should be paid to female students of higher grades. It is good to be prepared for some future public crisis with an anticipated strong impact on public health, by conducting QoL studies and monitoring quality of life of children with T1D during crisis, because that is the only way to have timely reactions and prevent consequences. Like that, results of our current study provide insights to prioritizing actions for children with diabetes care as well as for public healthcare planning.

Author Contributions: Conceptualization, M.R. (Maja Raicevic) and M.S.; methodology, M.R. (Maja Raicevic) and A.O.; validation, M.R. (Maja Raicevic), M.S. and A.O.; formal analysis, A.O. and M.R. (Marija Raicevic); investigation, M.R. (Maja Raicevic) and N.C.P.; resources, M.R. (Maja Raicevic) and N.C.P.; writing—original draft preparation, M.R. (Maja Raicevic); writing—review and editing, M.R. (Marija Raicevic), S.P.Z. and A.O.; visualization, M.R. (Marija Raicevic), S.P.Z. and A.O.; supervision, M.S.; project administration, M.R. (Maja Raicevic). All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethical committee of Clinical Center of Montenegro (03/01-24708), Ministry of Education of Montenegro (01-603/21-9400/3, 11 November 2021) and Bureau for Education of Montenegro (02/3-041/21-982/2, 4 November 2021).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study (from their parents or caregivers).

Data Availability Statement: Data supporting reported results are available upon request. Ped-sQL™—Pediatric Quality of Life Inventory™ questionnaires, contact information and permission to use from Mapi Research Trust, Lyon, France, <https://eprovide.mapi-trust.org>, (accessed on 21 August 2022).

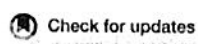
Acknowledgments: We acknowledge research assistance of elementary schools staff.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Golden, M.P. Incorporation of Quality-of-Life Considerations into Intensive Diabetes Management Protocols in Adolescents. *Diabetes Care* **1998**, *21*, 885–886.
- Hennessy, C.H.; Moriarty, D.G.; Zack, M.M.; Scherr, P.A.; Brackbill, R. Measuring health-related quality of life for public health surveillance. *Public Health Rep.* **1994**, *109*, 665–672.
- Zahed, G.; Shakiba, M.; Seifi, K. The Prevalence of Psychological Disorders among Children with Diabetes Aged 5–12 Years Old Referred to the Endocrinology Clinic of Mofid Hospital, Tehran, Iran in 2014–2015. *Iran J. Child Neurol.* **2018**, *12*, 101–112.
- Shen, Y.; Zhu, W.; Lu, L.; Lu, F.; Kan, K.; Bao, Y.; Zhou, J.; Jia, W. Contribution of structured self-monitoring of blood glucose to self-efficacy in poorly controlled diabetes patients in China. *Diabetes Metab. Res. Rev.* **2019**, *35*, e3067. <https://doi.org/10.1002/dmrr.3067>.
- Nobari, H.; Fashi, M.; Eskandari, A.; Villafaina, S.; Murillo-Garcia, Á.; Pérez-Gómez, J. Effect of COVID-19 on Health-Related Quality of Life in Adolescents and Children: A Systematic Review. *Int. J. Environ. Res. Public Health* **2021**, *18*, 4563.
- She, J.; Jiang, J.; Ye, L.; Hu, L.; Bai, C.; Song, Y. 2019 novel coronavirus of pneumonia in Wuhan, China: Emerging attack and management strategies. *Clin. Transl. Med.* **2020**, *9*, 19.
- López-Ruiz, V.-R.; Alfaro-Navarro, J.L.; Huete-Alcocer, N.; Nevado-Peña, D. Psychological and Social Vulnerability in Spaniards: Quality of Life in the Face of COVID-19: Age and Gender Results. *Int. J. Environ. Res. Public Health* **2022**, *19*, 10269.
- Theberath, M.; Bauer, D.; Chen, W.; Salinas, M.; Mohabbat, A.B.; Yang, J.; Chon, T.Y.; Bauer, B.A.; Wahner-Roedler, D.L. Effects of COVID-19 pandemic on mental health of children and adolescents: A systematic review of survey studies. *SAGE Open Med.* **2022**, *10*, 20503121221086712. <https://doi.org/10.1177/20503121221086712>.
- Richardson, S.; Hirsch, J.S.; Narasimhan, M.; Crawford, J.M.; McGinn, T.; Davidson, K.W.; Barnaby, D.P.; Becker, L.B.; Chelico, J.D.; Cohen, S.L.; et al. Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area. *JAMA* **2020**, *323*, 2052–2059.
- Varni, J.W.; Seid, M.; Kurtin, P.S. PedsQL 4.0: Reliability and validity of the Pediatric Quality of Life Inventory version 4.0 generic core scales in healthy and patient populations. *Med. Care* **2001**, *39*, 800–812.
- Varni, J.W.; Delamater, A.M.; Hood, K.K.; Raymond, J.K.; Chang, N.T.; Driscoll, K.A.; Wong, J.C.; Yi-Frazier, J.P.; Grishman, E.K.; Faith, M.A.; et al. PedsQL 3.2 Diabetes Module for Children, Adolescents, and Young Adults: Reliability and Validity in Type 1 Diabetes. *Diabetes Care* **2018**, *41*, 2064–2071.
- Abdul-Rasoul, M.; AlOtaibi, F.; Abdulla, A.; Rahme, Z.; AlShawaf, F. Quality of life of children and adolescents with type 1 diabetes in Kuwait. *Med. Princ. Pract.* **2013**, *22*, 379–384.
- Samardzic, M.; Tahirovic, H.; Popovic, N.; Popovic-Samardzic, M. Health-Related quality of life in children and adolescents with type 1 diabetes mellitus from Montenegro: Relationship to metabolic control. *J. Pediatr. Endocrinol. Metab.* **2016**, *29*, 663–668.
- Kalyva, E.; Malakonaki, E.; Eiser, C.; Mamoulakis, D. Health-Related quality of life (HRQoL) of children with type 1 diabetes mellitus (T1DM): Self and parental perceptions. *Pediatr. Diabetes* **2011**, *12*, 34–40.
- Bekele, B.T.; Demie, T.G.; Worku, F. Health-Related Quality-of-Life and Associated Factors among Children and Adolescents with Type 1 Diabetes Mellitus: A Cross-Sectional Study. *Pediatr. Health Med. Ther.* **2022**, *13*, 243–256.
- Our World in Data. Available online: https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&time=2021-07-01..2022-03-01&facet=none&pickerSort=desc&pickerMetric=new_cases_smoothed_per_million&hideControls=true&Metric=Confirmed+cases&Interval=7-day+rolling+average&Relative+to+Population=true&Color+by+test+positivity=false&country=~MNE (accessed on 23 September 2022).
- Martinovic, M.; Belojevic, G.; Evans, G.W.; Lausevic, D.; Asanin, B.; Samardzic, M.; Terzic, N.; Pantovic, S.; Jaksic, M.; Boljevic, J. Prevalence of and contributing factors for overweight and obesity among Montenegrin schoolchildren. *Eur. J. Public Health* **2015**, *25*, 833–839.
- Rochmah, N.; Faizi, M.; Hisbiyah, Y.; Triastuti, I.W.; Wicaksono, G.; Endaryanto, A.; Soetjipto. Quality of Life Differences in Pre- and Post-Educational Treatment in Type 1 Diabetes Mellitus during COVID-19. *Diabetes Metab. Syndr. Obes.* **2021**, *28*, 2905–2911. <https://doi.org/10.2147/DMSO.S313575>.
- Babiker, A.; Al Aqeel, B.; Marie, S.; Omer, H.; Bahabri, A.; Al Shaikh, A.; Zahrani, N.; Badri, M.; Al Dubayee, M.; Al Alwan, I. Quality of Life and Glycemic Control in Saudi Children with Type 1 Diabetes at Different Developmental Age Groups. *Clin. Med. Insights Endocrinol. Diabetes* **2021**, *14*, 1179551421990678.
- Al Shaikh, A.; Al Zahrani, A.M.; Qari, Y.H.; AbuAlnasr, A.A.; Alhawsawi, W.K.; Alshehri, K.A.; AlShaikh, S.A. Quality of Life in Children with Diabetes Treated with Insulin Pump Compared with Multiple Daily Injections in Tertiary Care Center. *Clin. Med. Insights Endocrinol. Diabetes* **2020**, *13*, 1179551420959077.
- Predieri, B. Health-Related quality of life and metabolic control in young patients with type 1 diabetes and in their parents before and after the COVID-19 lockdown. *Pediatr. Diabetes* **2021**, *22*, 44–45.
- Erthal, I.N.; Alessi, J.; Teixeira, J.B.; Jaeger, E.H.; de Oliveira, G.B.; Scherer, G.; de Carvalho, T.R.; Schaan, B.D.; Telo, G.H. Life-style pattern changes, eating disorders, and sleep quality in diabetes: How are the effects of 18 months of COVID-19 pandemic being felt? *Acta Diabetol.* **2022**, *59*, 1265–1274.

23. Welling, M.S.; Abawi, O.; van den Eynde, E.; van Rossum, E.F.C.; Halberstadt, J.; Brandsma, A.E.; Kleinendorst, L.; van den Akker, E.L.T.; van der Voorn, B. Impact of the COVID-19 Pandemic and Related Lockdown Measures on Lifestyle Behaviors and Well-Being in Children and Adolescents with Severe Obesity. *Obes Facts*. **2022**, *15*, 186–196.



OPEN ACCESS

EDITED BY

Willem Staels,
Vrije Universiteit Brussel (VUB),
Universitair Ziekenhuis Brussel (UZ
Brussel), Belgium

REVIEWED BY

Natasa Bratina,
University Medical Centre Ljubljana,
Slovenia
Stefano Passanisi,
University of Messina, Italy

*CORRESPONDENCE

Maja Raicevic
majaraicevic89@gmail.com

SPECIALTY SECTION

This article was submitted to
Pediatric Endocrinology,
a section of the journal
Frontiers in Endocrinology

RECEIVED 11 July 2022

ACCEPTED 18 August 2022

PUBLISHED 06 September 2022

CITATION

Raicevic M, Samardzic M, Soldatovic I,
Curovic Popovic N and Vukovic R
(2022) Trends in nationwide incidence
of pediatric type 1 diabetes in
Montenegro during the last 30 years.
Front. Endocrinol. 13:991533.
doi: 10.3389/fendo.2022.991533

COPYRIGHT

© 2022 Raicevic, Samardzic, Soldatovic,
Curovic Popovic and Vukovic. This is an
open-access article distributed under
the terms of the Creative Commons
Attribution License (CC BY). The use,
distribution or reproduction in other
forums is permitted, provided the
original author(s) and the copyright
owner(s) are credited and that the
original publication in this journal is
cited, in accordance with accepted
academic practice. No use,
distribution or reproduction is
permitted which does not comply with
these terms.

Trends in nationwide incidence of pediatric type 1 diabetes in Montenegro during the last 30 years

Maja Raicevic^{1*}, Mira Samardzic^{1,2}, Ivan Soldatovic³,
Natasa Curovic Popovic¹ and Rade Vukovic^{4,5}

¹Department of Endocrinology, Institute for Children's Diseases, Clinical Centre of Montenegro, Podgorica, Montenegro, ²Faculty of Medicine, University of Montenegro, Podgorica, Montenegro, ³Institute of Medical Statistics and Informatics, Faculty of Medicine, University of Belgrade, Belgrade, Serbia, ⁴Department of Endocrinology, Mother and Child Health Care Institute of Tuzla, "Dr Vuklan Cupic", Belgrade, Serbia, ⁵School of Medicine, University of Belgrade, 11c grade, Serbia

Significant and unexplained variations in type 1 diabetes (T1D) incidence through the years were observed all around the world. The update on this disorder's incidence is crucial for adequate healthcare resource planning and monitoring of the disease. The aim of this study was to give an update on the current incidence of pediatric T1D in Montenegro and to analyze incidence changes over time and how the exposure to different factors might have affected it. This retrospective cohort study included a total of 582 patients younger than 15 years who were newly diagnosed with T1D during the past 30 years. The average age at diagnosis was 8.4 ± 3.91 years. The mean annual incidence of T1D in the Montenegro population during the whole study period of 30 years was 15.2/100,000 person-years. Slightly higher incidence rates were observed in male compared to female individuals, and the incidence increased with age, with the highest incidence in the 10–14 age group. If the model is observed as one without jointpoints, the annual percentage change (APC) for the total population is 3.1 (1.8–4.4); for male individuals, 3.8 (2.1–5.5); and for female individuals, 2.1 (0.6–3.5). In 2020, the first year of the coronavirus disease of 2019 (COVID-19) pandemic, in comparison to 2019, the incidence rate increased from 19.7/100,000 to 21.5/100,000, with the highest increase in the age group of 5–9 years. This is the first nationwide report on a 30-year period of T1D incidence trend in Montenegro. It suggests that T1D incidence among Montenegrin children is rising again and that there is a short-term influence of COVID-19 on new-onset T1D.

KEYWORDS

diabetes mellitus, T1D, incidence, COVID19, Montenegro (Crna Gora)

Abbreviations: T1D, type 1 diabetes; EURODIAB, a collaboration of European Childhood Diabetes Registers; MODY, maturity onset diabetes of youth; APC, annual percentage change; COVID-19, coronavirus disease of 2019.

Introduction

Significant and unexplained variations in type 1 diabetes (T1D) incidence through the years were observed all around the world. The update on T1D incidence is crucial for unexceptional healthcare resource planning and monitoring of this disease, which is still unpreventable and concerning. Moreover, the incidence of T1D shows an increasing trend in Europe, and it sharply increased since 2019 (1).

North European countries (Finland, Sweden, Norway, the United Kingdom, and Ireland) are at the top of the list among countries with the highest incidence of T1D (27.5–52.2/100,000), but the incidence is also very high in the Italian region of Sardinia (45.0/100,000), which is located in the south-western part of Europe (1, 2).

According to the last census (2011), Montenegro is a south-eastern European country, with an area of 13,812 km² and a population of 620,145, including 118,751 (19%) children younger than 15. Results of prior studies classified Montenegro as a country with a high incidence rate of T1D (18.5/100,000 for the period 2009–2013) (3, 4). However, the last report regarding the incidence of T1D was based on data from almost a decade ago, and analysis of more recent data is needed to gain insight into the current epidemiological situation regarding T1D in Montenegro.

The aim of this study was to give an update on the current incidence of pediatric T1D in Montenegro and to analyze incidence changes over time and how the exposure to different factors might have affected it, which should be useful for further projection of T1D prevalence.

Methods

The study included children younger than 15 years who were newly diagnosed with T1D during the period 1991–2020. The data source was the Diabetes Registry of Montenegro (established according to the EURODIAB Collaborative group propositions) and patients' medical records at the Institute for Children's Diseases, Clinical Center of Montenegro. The Institute for Children's Diseases is the referent diabetes center for Montenegro, the only center where the diagnosis of T1D could be made and where insulin therapy is initially started and prescribed. Study protocol was formally approved by the Ethics Committee of Clinical Center of Montenegro (no. 03/01-24708). Second data source were records from the Institute of Public Health of Montenegro, which provided capture–recapture methodology (5). Children with other types of diabetes, such as type 2 diabetes or maturity-onset diabetes of the youth (MODY) were excluded from the study. The population denominator data were obtained from the 1991, 2003, and 2011 national census data

of the Central Bureau of Statistics (Monstat). Due to long intervals between national censuses, the estimated numbers of habitants were used in order to obtain the number of habitants for each year in the period between 2000 and 2020. In the period from 1991 to 1999, no estimates of population were found, and due to the fact that during these years, there was a conflict in the region and subsequently high population migration, modeling of data was used to obtain estimates of the population in this period. For that purpose, the polynomial regression analysis was used to fit the data and impute the missing values.

Collected variables included gender, date of birth, and date of the onset of T1D. Three types of incidence rates, expressed as new cases per 100,000 persons, were calculated: age specific, age standardized, and crude. Age-specific rates were adjusted to three age groups (0–4, 5–9, and 10–14). Age-adjusted incidence rates were calculated using Segi's World population (6).

The annual percentage change (APC), a number assumed as a constant percentage change of the previous year rate, was determined using jointpoint regression analysis. The jointpoint analysis was performed in Jointpoint Regression Program, v4.9.0.0, March 2021, Statistical Research and Applications Branch, National Cancer Institute.

Results

During the study period (1991–2020), there were a total of 582 children with newly diagnosed T1D, in which 317 were boys and 265 were girls. The average age at diagnosis was 8.4 ± 3.91 years. The mean annual incidence of T1D in the Montenegro population during the whole study period of 30 years was 15.2/100,000 person-years. The age- and sex-category-specific rates for the whole study period are shown in Table 1 and age-standardized incidence rate for 5-year period in Table 2.

Slightly higher incidence rates were observed in male compared to female patients (Figure 1). The incidence increased with age, with the highest incidence in the 10–14 age group (Figure 2). The same trend is observed in the gender stratum (Table 1).

If the model is observed as one without jointpoints, the APC for the total population is 3.1 (1.8–4.4); for male individuals, 3.8 (2.1–5.5); and for female individuals, 2.1 (0.6–3.5). However, in both genders model, one significant jointpoint was obtained; for the period 1991–1995, APC is 40.96, while in the period 1995–2020, APC is 20.06. In female individuals, there is one significant jointpoint as well, and the APC for the period 1991–1995 is 36.76, while for the period 1995–2020, APC is 1.07. Every segment is shown separately in Figure 3.

In 2020, the first year of the COVID-19 pandemic, in comparison to 2019, the incidence rate increased from 19.7/100,000 to 21.5/100,000, with the highest increase in the age

TABLE 1 Number of cases, total person years, means annual incidence, age-specific incidence, and age-standardized incidence of T1D in Montenegro during the period 1991–2020.

	No. of cases	Total person years	Mean annual age spec. incidence (95% CI) per 100,000	Age stand. incidence per 100,000
Total				
All (0–14)	582	3,729,405	15.6 (1.14–4.69)	15.2
0–4	133	1,201,286	11.1 (0.93–1.31)	
5–9	214	1,223,417	17.5 (1.52–2.00)	
10–14	235	1,304,702	18.0 (1.58–2.05)	
Boys				
All (0–14)	317	1,933,557	16.4 (1.46–1.83)	15.9
0–4	70	625,161	11.2 (0.87–1.41)	
5–9	113	633,132	17.9 (1.47–2.15)	
10–14	134	675,261	19.8 (1.66–2.35)	
Girls				
All (0–14)	265	1,795,848	14.8 (1.30–1.66)	14.4
0–4	63	576,122	10.9 (0.84–1.39)	
5–9	101	590,285	17.1 (1.39–2.08)	
10–14	101	629,441	16.1 (1.31–1.95)	

group of 5–9 years (Table 3), with similar variations among age and gender groups also reported at different time points during the past three decades.

Discussion

The results of this nationwide epidemiological study in 0–14-year-old children showed that Montenegro is a country with a high incidence rate of T1D (in the range of 10–19.9/100,000) (7, 8).

The previous report on the incidence of T1D in Montenegro has been published by Patterson et al., in their multicentric study, and our results point out that the incidence is higher since then (3). If we observe only the last 15-year period, the incidence of T1D in Montenegro can be classified as very high in

male individuals younger than 15 (21.6–22.7/100,000). Knowing the data on T1D incidence trend, in the whole 0–14-year-old population and also in different age subgroups, is very important for the monitoring of the disease and for adequate healthcare resource planning and distribution.

In comparison to neighboring countries, T1D incidence in Montenegro is similar to Serbia (14.3/100,000 for the period 2007–2017), Slovenia (16.3/100,000 for the period 2009–2013), and Croatia (17.2/100,000 for the period 2004–2012), but it is significantly higher than in a Former Yugoslavian Republic of Macedonia (7.7/100,000 for the period 2009–2013) and Bosnia and Herzegovina–Tuzla region (6.9/100,000 for the period 1990–1998), which have higher rates of incidence increase in the later period than in previous countries (possibly due to prior underreporting of T1D) (3, 9–11).

TABLE 2 Age-standardized incidence rates of T1D in children aged 0–14 in Montenegro—5-year periods compared.

Age std. inc. rate (per 100,000)	Total	Boys	Girls
1991–1995	7.6	7.1	8.12
1996–2000	12.1	12.1	12.1
2001–2005	14.8	11.1	18.5
2006–2010	18.4	22.7	13.7
2011–2015	20.7	22.5	18.7
2016–2020	19.2	21.6	16.5
Whole period	15.2	15.9	14.4

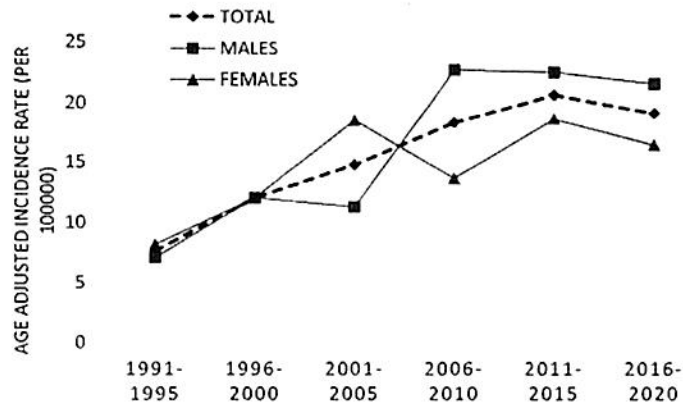


FIGURE 1
Trend of age-adjusted incidence rate (per 100,000) Montenegro, 1991–2020

During the 30 years of follow-up, the incidence increased by approximately 3.1% annually, but in the last years, the increase appears to be slowing down. The suggested slowing in the period 2004–2008 and cyclical 5-year periodicity in incidence pattern were not observed in our country (3).

Similarly across Europe, T1D is predominantly diagnosed in children 10–14 years old, but the average age at the onset of the disease is a bit lower (3, 12, 13). It could be due to the high childhood obesity rate or lower immunization coverage rate, which will be discussed in the following text. Opposite to other studies, we did not observe the highest incidence rate increase in boys younger than 5, but it is less marked in girls aged 0–4 years than in other age/sex subgroups (3, 14). In 2020, the highest incidence rate increase was among 5–9 years old.

Significant variations in T1D incidence through the years are still unexplained. Although, genetics, lifestyle, and socioeconomic factors play important roles in the development of type 1 diabetes, a majority of studies suggest environmental factors as crucial (15–17). The emphasis is on the decrease in infectious diseases frequency, increase in vaccination coverage rate, and changes in the food and supplements intake.

According to the accelerator hypothesis, childhood obesity significantly impacts the development and incidence of all types of diabetes, including T1D (18). In both obesity and type 1 diabetes, leptin, resistin, and β -cell autoimmunity are elevated, but it is not clear yet if obesity accelerates or causes type 1 diabetes (19). It is known that, in 2013, every fourth Montenegrin school-aged child was overweight, and the number of overweight boys was twice

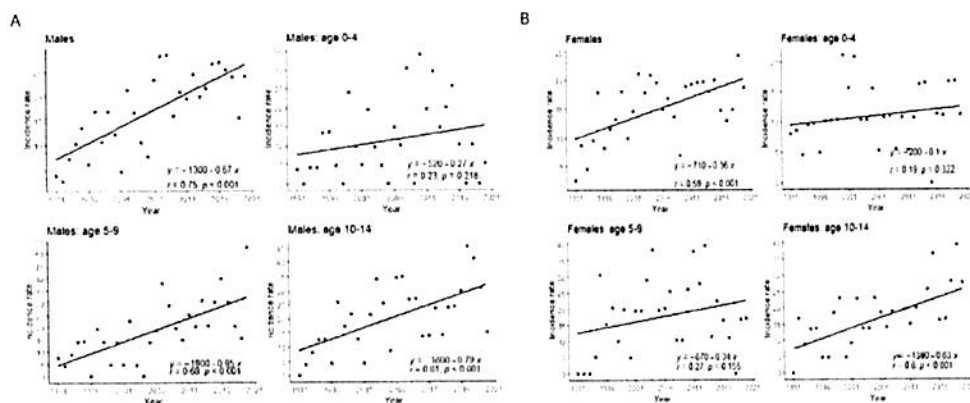


FIGURE 2
Trends of crude incidence rates of T1D in different age groups in (A) boys and (B) girls

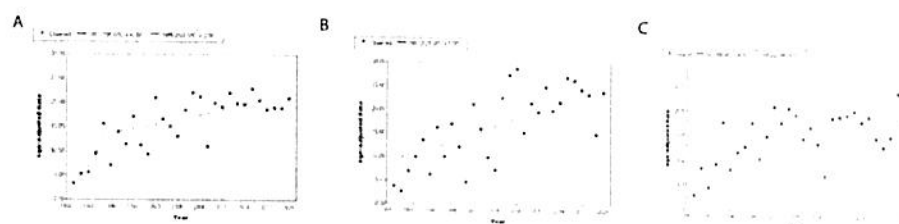


FIGURE 3 Jointpoint regression analysis: trend of standardized incidence rates of T1D in different gender groups, in (A) total, (B) boys, and (C) girls.

higher in comparison to girls (20). Since then, many inhabitants from the rural parts migrated to the urban parts of the country; a lot of people started a sedentary lifestyle with increased intake of high-calorie foods, which is expected to have led to even higher obesity rate and sustained increase in T1D incidence.

Like the rest of the world, Montenegro has been affected by the ongoing worldwide pandemic (COVID-19 pandemic) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus since its first case was confirmed on 17 March 2020. For more than 50 years, viruses are considered potential triggers for autoimmune diseases such as T1D (21, 22). Furthermore, some authors reported an increased incidence of new-onset T1D during the first year of the COVID-19 pandemic (23–25). SARS-CoV-2 tropism to pancreatic β cells is supposed to be due to their angiotensin-converting enzyme 2 (ACE2) receptors and neuropilin 1 (NRP1) receptors, and virus–receptor interactions lead to cell damage and impaired insulin secretion. Moreover, high blood glucose level “stimulates” replication of the virus and damage progress (26–28). Opposed to those findings and in line with our results, Mameli et al. have described the double wave occurrence, with the decrease in T1D incidence in the first wave of the COVID-19 pandemic, as also Kostopoulou reported (29, 30). It could be related to the fact that T1D is manifested a few months after a child’s contact with the trigger, in this case, the SARS-CoV-2 virus. On the other hand, if we observe a pandemic and strict lockdown in the first months as a stress, which could also be a trigger for T1D

development, the incidence increase could be registered earlier (31). The highest increase in incidence rate during the first year of COVID-19 was observed in children older than 5 but younger than 10, which was also described as a finding in the Italian region of Calabria (13).

Hence, a similar peak in incidence rate to the one in the first year of the COVID pandemic was observed in 2016 (Table 3), which could be due to a significantly decreased rate of immunization with measles–mumps–rubella (MMR) vaccine among Montenegrin children that year (2015—whole country coverage of 93.5%, 98% in the capital city; 2016—whole country coverage of 86.4%, 73.0% in the capital city; 2017—whole country coverage of 92.2%, 97.7% in the capital city) (32–35). In the following years, the government introduced mandatory immunization certificates for children who want to stay in kindergarten, which improved the immunization coverage rate.

The strength of this study is its nationwide character and timeliness with a long observational period of 30 years supported by the completeness of the diabetes registry and high-quality data from the second source. The limitation of the present study is a lack of the exact number of inhabitants in the period 1991–1999, which we assumed and predicted using the mathematical mode (polynomial regression).

This is the first nationwide report on a 30-year period of T1D incidence trend in Montenegro. It suggests that T1D incidence among Montenegrin children is rising again, after a plateau, and that there is a short-term influence of COVID-19

TABLE 3 Crude incidence rate of T1D in Montenegro for the last 5 years, in different age groups.

Age groups (years)	0–4	5–9	10–14	Total
Crude incidence rate(per 100,000 persons/year)				
2016	10.9	28.6	23.1	21.0
2017	5.1	21.0	31.6	19.4
2018	13.4	10.6	34.9	19.6
2019	8.1	16.0	31.9	19.7
2020	8.2	35.4	21.1	21.5

on new-onset T1D. The highest increase in the first year of the COVID pandemic is registered in 5–9-year-olds.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

MR, MS, and RV designed the research study. MR and NP gathered the data. IS conducted statistical analyses. MR and IS wrote the first draft of the manuscript. All authors contributed to study design and revised and approved the final version of the manuscript.

References

1. IDF: Diabetes Atlas. *Idf diabetes atlas* Vol. 2021. Brussels: International Diabetes Federation © International Diabetes Federation (2021).
2. Songini M, Mannu C, Targhetta C, Bruno G. Type 1 diabetes in Sardinia: facts and hypotheses in the context of worldwide epidemiological data. *Acta Diabetol* (2017) 54(1):9–17. doi: 10.1007/s00592-016-0909-2
3. Patterson CC, Harjutsalo V, Rosenbauer I, Neu A, Cinek O, Skrivarhaug T, et al. Trends and cyclical variation in the incidence of childhood type 1 diabetes in 26 European centres in the 25 year period 1989–2013: a multicentre prospective registration study. *Diabetologia* (2019) 62(3):408–17. doi: 10.1007/s00125-018-4763-3
4. Samardžić M, Martinović M, Nedović-Vuković M, Popović-Samardžić M. Recent incidence of type 1 diabetes mellitus in Montenegro: A shift toward younger age At disease onset. *Acta Clin Croat* (2016) 55(1):63–8. doi: 10.20471/acc.2016.55.01.10
5. LaPorte RE, McCarty D, Bruno G, Tajima N, Baba S. Counting diabetes in the next millennium: application of capture-recapture technology. *Diabetes Care* (1993) 16(2):528–34. doi: 10.2337/diacare.16.2.528
6. Segi M. Cancer mortality for selected sites in 21 countries (1950–57). Sendai: Tohoku University School of Public Health (1960).
7. Mobasser M, Shirmohammadi M, Amiri T, Vahed N, Hosseini Fard H, Ghojzadeh M. Prevalence and incidence of type 1 diabetes in the world: a systematic review and meta-analysis. *Health Promot Perspect* (2020) 10(2):98–115. doi: 10.34172/hpp.2020.18
8. Karvonen M, Viik-Kajander M, Moltchanova E, Libman I, LaPorte R, Tuomilehto J. Incidence of childhood type 1 diabetes worldwide. diabetes mondiale (DiaMond) project group. *Diabetes Care* (2000) 23(10):1516–26. doi: 10.2337/diacare.23.10.1516
9. Vukovic R, Jesic MD, Vorgucin I, Stankovic S, Folc N, Milenkovic T, et al. First report on the nationwide incidence of type 1 diabetes and ketoacidosis at onset in children in Serbia: a multicenter study. *Eur J Pediatr* (2018) 177(8):1155–62. doi: 10.1007/s00431-018-3172-4
10. Romić Putarek N, Ille J, Spehar Uroic A, Skrabic V, Stipančić G, Krnić N, et al. Incidence of type 1 diabetes mellitus in 0 to 14-year-old children in Croatia–2004 to 2012 study. *Pediatr Diabetes* (2015) 16(6):448–53. doi: 10.1111/pedi.12197
11. Bratina NU, Tahirović H, Battelino T, Krzisić C. Incidence of childhood-onset type 1 diabetes in Slovenia and the Tulza region (Bosnia and Herzegovina) in the period 1990–1998. *Diabetologia* (2001) 44:B27–31. doi: 10.1007/PL00002949
12. Maahs DM, West NA, Lawrence JM, Mayer-Davis EJ. Epidemiology of type 1 diabetes. *Endocrinol Metab Clin North Am* (2010) 39(3):481–97. doi: 10.1016/j.ecl.2010.05.011
13. Passanisi S, Salzano G, Aloe M, Bombaci B, Citriniti F, De Berardinis F, et al. Increasing trend of type 1 diabetes incidence in the pediatric population of the calabaria region in 2019–2021. *Ital J Pediatr* (2022) 48(1):66. doi: 10.1186/s13052-022-01261-z
14. Chobot A, Polanska J, Brandt A, Deja G, Glowinska-Olszewska B, Pilecki O, et al. Updated 24-year trend of type 1 diabetes incidence in children in Poland reveals a sinusoidal pattern and sustained increase. *Diabetes Med* (2017) 34(9):1252–8. doi: 10.1111/dime.13345
15. Lukács K, Pánczél P, Hosszúfalusi N. [Environmental factors and epidemiology of childhood type 1 diabetes]. *Orv Hetil* (2021) 162(1):13–22. doi: 10.1556/650.2021.31952
16. Rewers M, Ludvigsson J. Environmental risk factors for type 1 diabetes. *Lancet* (2016) 387(10035):2340–8. doi: 10.1016/S0140-6736(16)30507-4
17. Patterson CC, Dahlquist GG, Gyürüs E, Green A, Soltesz G. Incidence trends for childhood type 1 diabetes in Europe during 1989–2003 and predicted new cases 2005–20: a multicentre prospective registration study. *Lancet* (2009) 373(9680):2027–33. doi: 10.1016/S0140-6736(09)60568-7
18. Wilkin TJ. The accelerator hypothesis: weight gain as the missing link between type I and type II diabetes. *Diabetologia* (2001) 44(7):914–22. doi: 10.1007/s001250100548
19. Tsigalou C, Vallianou N, Dalamaga M. Autoantibody production in obesity: Is there evidence for a link between obesity and autoimmunity? *Curr Obes Rep* (2020) 9(3):215–54. doi: 10.1007/s13679-020-00397-8
20. Martinović M, Belojević G, Evans GW, Lausevic D, Asanin B, Samardžić M, et al. Prevalence of and contributing factors for overweight and obesity among Montenegrin schoolchildren. *Eur J Public Health* (2015) 25(5):833–9. doi: 10.1093/eurpub/ckv071
21. Gamble DR, Kinsley ML, FitzGerald MG, Bolton R, Taylor KW. Viral antibodies in diabetes mellitus. *Br Med J* (1969) 3(5671):627–30. doi: 10.1136/bmj.3.5671.627
22. Isaacs SR, Foskett DB, Maxwell AJ, Ward EJ, Faulkner CI, Luo JYX, et al. Viruses and type 1 diabetes: From enteroviruses to the virome. *Microorganisms* (2021) 9(7):1–26. doi: 10.3390/microorganisms9071519
23. Unsworth R, Wallace S, Oliver NS, Yeung S, Kshirsagar A, Naidu H, et al. New-onset type 1 diabetes in children during COVID-19: Multicenter regional findings in the U.K. *Diabetes Care* (2020) 43(11):e170–1. doi: 10.2337/dc20-1551
24. Caruso P, Longo M, Esposito K, Maiorino MI. Type 1 diabetes triggered by covid-19 pandemic: A potential outbreak? *Diabetes Res Clin Pract* (2020) 164:108219. doi: 10.1016/j.diabres.2020.108219
25. Rahmati M, Keshvari M, Mirnasuri S, Yon DK, Lee SW, Il Shin J, et al. The global impact of COVID-19 pandemic on the incidence of pediatric new-onset type 1 diabetes and ketoacidosis: A systematic review and meta-analysis. *J Med Virol* (2022) 1–16. doi: 10.1002/jmv.27996
26. Lim S, Bae JH, Kwon H-S, Nauck MA. COVID-19 and diabetes mellitus: from pathophysiology to clinical management. *Nat Rev Endocrinol* (2021) 17(1):11–30. doi: 10.1038/s41574-020-00435-4

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

27. Pranata R, Henrina J, Raffaello WM, Lawrensia S, Huang I. Diabetes and COVID-19: The past, the present, and the future. *Metabolism* (2021) 121:154814. doi: 10.1016/j.metabol.2021.154814
28. Cantuti-Castelvetri L, Ojha R, Pedro LD, Djannatian M, Franz I, Kuivanen S, et al. Neuropilin-1 facilitates SARS-CoV-2 cell entry and infectivity. *Science* (2020) 370(6518):856–60. doi: 10.1126/science.abd2985
29. Marni C, Scaramuzza A, Macedoni M, Marano G, Frontino G, Luconi E, et al. Type 1 diabetes onset in Lombardy region, Italy, during the COVID-19 pandemic: The double-wave occurrence. *EClinicalMedicine* (2021) 39:101067. doi: 10.1016/j.eclinm.2021.101067
30. Kostopoulou E, Eliopoulou MI, Rojas Gil AP, Chrysis D. Impact of COVID-19 on new-onset type 1 diabetes mellitus - a one-year prospective study. *Eur Rev Med Pharmacol Sci* (2021) 25(19):5928–35. doi: 10.26355/eurrev_202110_26869
31. Tittel SR, Rosenbauer J, Kamrath C, Ziegler J, Reschke F, Hammersen J, et al. Did the COVID-19 lockdown affect the incidence of pediatric type 1 diabetes in Germany? *Diabetes Care* (2020) 43(11):e172–3. doi: 10.2337/dc20_1633
32. *Health statistical yearbook 2015 of Montenegro*. Podgorica: Institute for Public Health of Montenegro (2017).
33. *Health statistical yearbook 2016 of Montenegro*. Podgorica: Institute for Public Health of Montenegro (2018).
34. *Health statistical yearbook 2017 of Montenegro*. Podgorica, Montenegro: Institute for Public Health of Montenegro (2019).
35. Coppieters KT, Boettler T, von Herrath M. Virus infections in type 1 diabetes. *Cold Spring Harb Perspect Med* (2012) 2(1):a007682. doi: 10.1101/cshperspect.a007682

UNIVERZITET CRNE GORE
VIJEĆU MEDICINSKOG FAKULTETA
Komisiji za doktorske studije

UNIVERZITET CRNE GORE MEDICINSKI FAKULTET			
Primijeno	Org. jed.	Broj	Vrijednost
15.11.2023	med	1848	

PODGORICA

PREDMET: Zahtjev za ocjenu doktorske disertacije

Poštovani,

U skladu sa Pravilima studiranja na doktorskim studijama Univerziteta Crne Gore, podnosim zahtjev za ocjenu doktorske disertacije pod nazivom:

„Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata“.

Završetkom doktorske disertacije i objavom rada u časopisu sa SCI/SCIE liste koji sadrži djelove sopstvenih istraživanja sprovedenih u okviru izrade doktorske disertacije, ispunila sam uslove za njenu predaju.

Ovim putem se obraćam Komisiji za doktorske studije Medicinskog fakulteta da inicira prijedlog Komisije za ocjenu doktorske disertacije.

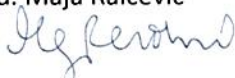
Uz zahtjev prilažem:

- Pismenu saglasnost mentora
- Štampani primjerak doktorske disertacije (7 primjeraka)
- fotokopiju radova objavljenih kao rezultat doktorske teze
- Biografiju i bibliografiju
- CD sa cjelokupnim sadržajem doktorske disertacije u PDF formatu kao i radove na kojima je zasnovana doktorska disertacija
- pisanu izjavu o autorstvu (Prilog 1 iz Uputstva o oblikovanju doktorske disertacije).

S poštovanjem,

Podnosilac

dr med. Maja Raičević



U Podgorici, dana 15.11.2023. godine

UNIVERZITET CRNE GORE

MEDICINSKI FAKULTET

Na osnovu odluke Senata Univerziteta Crne Gore br.03-417/2 od datuma 04.05.2017. godine imenovana sam za mentora za izradu doktorske disertacije kandidata dr med. Maje Raičević. U fazi predaje doktorske disertacije na pregled i ocjenu, u skladu sa Pravilima doktorskih studija Univerziteta Crne Gore, dajem:

SAGLASNOST

Saglasna sam da kandidat dr med. Maja Raičević može predati doktorsku disertaciju pod nazivom „Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata“ na pregled i ocjenu.

U Podgorici, dana 08.11.2023. godine

Mentor

Prof. dr Mira Samardžić



BIOGRAFIJA

Maja Raičević je rođena 13.07.1989. godine u Podgorici, gdje je završila Osnovnu školu „Maksim Gorki“ i Gimnaziju „Slobodan Škerović“, prirodno-matematički smjer, obje kao nosilac diplome „Luča A“. Diplomirala je u redovnom roku, maja 2014. godine, na Medicinskom fakultetu Univerziteta Crne Gore, sa prosječnom ocjenom 8,25. Tokom studija je bila učesnik programa razmjene studenata IFMSA (Kursk, Rusija, 2012. godine), a uzela je učešće i u nekoliko akreditovanih ljetnjih škola medicine (*Summer School in Emergency Medicine*, Dubrovnik, Hrvatska, 2011.godine, *International Summer School on Vaccinology*, Antverp, Belgija, jul 2013.godine, *Synapsist-A Summer School on Neuroscience*, Istanbul, Turska, jul 2014.godine. Oktobra 2014. godine je upisala doktorske studije na Medicinskom fakultetu Univerziteta Crne Gore i položila sve ispite odličnim uspjehom.

Nakon pripravničkog staža, jula 2015. godine, je započela radni angažman u Institutu za bolesti djece, u Kliničkom centru Crne Gore. Na pedijatrijskoj klinici je radila kao klinički ljekar, a potom nastavila svoj rad kao specijalizant pedijatrije. Specijalistički ispit je položila jula 2020. godine na Medicinskom fakultetu Univerziteta u Beogradu, odličnim uspjehom. U daljem toku je bila zaposlena kao pedijatar na Odjeljenju endokrinologije Instituta za bolesti djece, i u toj oblasti se dalje usavršavala. Subspecijalizaciju iz oblasti Endokrinologije je upisala novembra 2021. godine na Medicinskom fakultetu Univerziteta u Beogradu, a subspecijalistički ispit odnosno završni rad iz uže specijalizacije je položila i odbranila odličnim uspjehom, aprila, odnosno jula 2023. godine. U međuvremenu je pohađala školu nauke u organizaciji Medunarodnog udruženja za dijabetes kod djece i adolescenata (ISPAD) u Pragu 2022. godine (*ispad Science School*), kao i zimsku školu i školu za dijabetes gojaznost i metabolizam, u organizaciji Evropskog udruženja za pedijatrijsku endokrinologiju (ESPE) (*ESPE Winter School 2023 i ESPE DOM School 2022*).

Dobitnik je stipendije Allan Drash, zahvaljujući kojoj će se maja i juna 2024. godine usavršavati u oblasti pedijatrijske dijabetologije i endokrinologije na prestižnoj klinici CHOP, u Filadelfiji, u Sjedinjenim Američkim Državama.

Član je Udruženja endokrinologa Crne Gore, Evropskog udruženja za pedijatrijsku endokrinologiju (ESPE- European Society for Paediatric Endocrinology), i Medunarodnog

udruženja za dijabetes kod djece i adolescenata (ISPAD- International Society for Pediatric and Adolescent Diabetes).

Objavila je više naučnih radova u eminentnim časopisima indeksiranim u međunarodnim bazama (3 kao prvi autor, 1 kao koautor) i recezent je u referentnim medicinskim časopisima. Uzela je učešće u nekoliko međunarodnih naučnoistraživačkih projekata koji su u toku, sa naučnicima iz prestižnih svjetskih i evropskih centara.

Osim maternjeg jezika aktivno se služi engleskim i italijanskim jezikom, a poznavalac je i njemačkog i španskog jezika.

BIBLIOGRAFIJA

1. **Raicevic M**, Obradovic A, Samardzic M, Raicevic M, Curovic Popovic N, Panic Zaric S. Quality of Life of Elementary School Students with Type 1 Diabetes in a Developing Country during the COVID Pandemic. *Int J Environ Res Public Health*. 2022 Nov 11;19(22):14873. doi: 10.3390/ijerph192214873.
2. **Raicevic M**, Samardzic M, Soldatovic I, Curovic Popovic N, Vukovic R. Trends in nationwide incidence of pediatric type 1 diabetes in Montenegro during the last 30 years. *Front Endocrinol (Lausanne)*. 2022 Sep 6;13:991533. doi: 10.3389/fendo.2022.991533. PMID: 36147568; PMCID: PMC9485557.
3. Ng SM, Day H, Grundman JB, Ahmed PO, **Raicevic M**, Dziki T, Katkat N, Jacob A, Ferreira Clemente M, Alsaffar H, Ibrahim Elhenawy Y, Abdelmeguid Y, Dovc K. ISPAD Annual Conference 2022 highlights. *Pediatric Diabetes*, 2022, 23.8: 1151-6.
4. **Raičević M**, Milenković T, Hussain K, Đorđević M, Martić J, Todorović S, Mitrović K, Sarajlija A, Vuković R. Clinical and genetic characteristics of patients with congenital hyperinsulinism in 21 non-consanguineous families from Serbia. *Eur J Pediatr*. 2021 Mar 26. doi: 10.1007/s00431-021-04051-w.
5. Rudanović Perović M, Banjac L, Rudanović R, Dakić D, Lekić E, Dragaš Lj, Burić S, Vukićević J, **Raičević M**. Premature infant as a patient. *J. Perinat. Med.* 45. 2017; 612.
6. Burić S, Banjac L, Lakić D, Dakić D, Dragaš Lj, Lekić E, Rudanović R, **Raičević M**. Uticaj prevencije prijevremenog rođenja na kvalitet rada u neonatalnim centrima. *Medicinski zapisi*, 2016. 65(1): 220.
7. **Raičević M**. Prevalence and determinants of tobacco use among youth. *Medical Journal of Montenegro*, 2015;3(4):31-4. doi:10.5937/cma2-9231

Izjava o autorstvu

Potpisani-a: dr Maja Raičević

Broj indeksa/upisa: 9/14

Izjavljujem

da je doktorska disertacija pod naslovom:

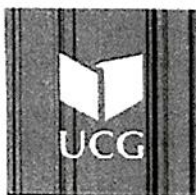
Dijabetes melitus tip 1 kod djece u Crnoj Gori: trend incidence, regionalne karakteristike i kvalitet života pacijenata

- rezultat sopstvenog istraživačkog rada,
- da predložena disertacija ni u cjelini ni u djelovima nije bila predložena za dobijanje bilo koje diplome prema studijskim programima drugih ustanova visokog obrazovanja,
- da su rezultati korektno navedeni, i
- da nijesam povrijedio/la autorska i druga prava intelektualne svojine koja pripadaju trećim licima.

Potpis doktoranda



U Podgorici, 15.11.2023.



Univerzitet Crne Gore
adresa / address: Cetinjska br. 2
81000 Podgorica, Crna Gora
telefon / phone: 00382 20 414 255
fax: 00382 20 414 230
mail: rektorat@ucg.ac.me
web: www.ucg.ac.me
University of Montenegro

Broj / Ref: 03-930
Datum / Date: 24.06.2021

Stampa: 29.06.2021
Klasifikacija: med 897

Na osnovu člana 72 stav 2 Zakona o visokom obrazovanju („Službeni list Crne Gore“ br 44/14, 47/15, 40/16, 42/17, 71/17, 55/18, 3/19, 17/19, 47/19, 72/19 i 74/20) i člana 32 stav 1 tačka 9 Statuta Univerziteta Crne Gore, Senat Univerziteta Crne Gore na sjednici održanoj 24.06.2021. godine, donio je

ODLUKU O IZBORU U ZVANJE

Dr Vesna Miranović bira se u akademsko zvanje redovni profesor Univerziteta Crne Gore za **oblasti Internistička grupa kliničkih medicinskih predmeta i Grupa predmeta uvoda u medicinu** na Medicinskom fakultetu Univerziteta Crne Gore, na neodređeno vrijeme.

SENAT UNIVERZITETA CRNE GORE
PREDSJEDNIK


Prof. dr Vladimir Božović, vršilac funkcije rektora

BIOGRAFIJA - PROF.DR VESNA MIRANOVIĆ

Rođena sam 1962. godine. Osnovnu školu i gimnaziju sam završila u Nišu i dobitnik sam Vukove diplome. Diplomirala sam 1986. godine na Medicinskom fakultetu Univerziteta u Nišu (prosječna ocjena 8,91).

Svoje stručno usavršavanje na specijalističkim studijama iz oblasti pedijatrije za potrebe Medicinskog zavoda u Podgorici završavam 1995. godine. Stručno zvanje supspecijaliste kardiologa stičem na Medicinskom fakultetu u Beogradu 2008. godine odbranom rada pod nazivom „Učestalost i rezultati liječenja djece sa urođenim srčanim manama u Crnoj Gori u periodu od 1995.-2005.godine.“

Akaderske poslijediplomske studije iz oblasti kardiologije završavam 1999. godine, odbranom rada pod nazivom „Prirodna evolucija ventrikularnog septalnog defekta.“ Zvanje doktora medicinskih nauka stičem 2002. godine odbranom doktorske teze pod nazivom „Mogućnosti savremene ehokardiografije u procjeni morfologije i hemodinamike ventrikularnog septalnog defekta.“

Svoje stručne kompetence sam iskazala u radu brojnih stručnih tijela od nacionalnog značaja:

- Član Nacionalnog koordinacionog tijela za zaštitu stanovništva od zaraznih bolesti (2020),
- Šef Operativnog štaba za sprječavanje zaraznih bolesti (2020),
- Član Operativnog štaba za turističke aktivnosti u uslovima postojanja zarazne bolesti (2020),
- Član Operativnog tima za zajedničku eksternu evaluaciju u cilju popunjavanja Zajedničke eksterne evaluacije WHO (Joint external evaluation WHO) (2019),
- Predsjednik Naučnog odbora VI Medical konferencije, Bečići (2019),
- Predsjednik Nacionalnog koordinacionog tijela za presađivanje organa u svrhu liječenja (2018 i dalje),
- Član interesorne Radne grupe za pripremu Strategije pametne specijalizacije Crne Gore – S3 (2018-2022) (2018),
- Član Radne grupe za potrebe sprovođenja procesa preduzetničkog otkrivanja u okviru izrade Strategije pametne specijalizacije (S3) za oblast zdravstveni turizam (2018),
- Član Naučnog odbora Drugog kongresa preventivne pedijatrije (2018),
- Član Komisije za pregovore sa proizvođačima/nosiocima dozvola za stavljanje lijeka u promet radi zaključenja posebnih ugovora (2017-18),
- Predsjednik Nacionalne komisije za kvalitet i bezbjednost zdravstvene zaštite (2017 i dalje),
- Predsjednik Nacionalne komisije za kontrolu bolničkih infekcija (2017-2019),
- Predsjednik Nacionalnog stručnog savjetodavnog tijela za imunizacije - NITAG (2017-2019),
- Predsjednik Komisije za polaganje stručnih ispita zdravstvenih radnika i zdravstvenih saradnika (2017 i dalje),
- Predsjednik Radne grupe za praćenje Evropskog zdravstvenog potrošačkog indeksa (ECHI) (2017),
- Predsjednik Radne grupe za pripremu Predloga zakona o medicinski potpomognutoj oplodnji (2017),
- Član Radne grupe za pripremu Predloga Zakona o lijekovima (2017),
- Član Radne grupe za pripremu Predloga odluke o kriterijumima za ostvarivanje naknade zdravstvenih radnika i zdravstvenih saradnika sa ekspertskim znanjima i značajnim doprinosom unapređenju zdravstvene zaštite (2017),
- Član Naučnog odbora Prvog kongresa preventivne pedijatrije (2016),
- Član Radne grupe za izradu ishoda učenja na studijskim programima Medicinskog fakulteta (2015),
- Član Komisije za obezbjeđenje i unaprijeđenje sistema kvaliteta na Medicinskom fakultetu (2015),

- Eksterni ekspert Agencije za lijekove i medicinska sredstva (CALIMS) (2013),
- Član Komisije za davanje stručnog mišljenja u postupku priznavanja inostranih sertifikata iz oblasti pedijatrije - imenovanje od strane Ministarstva rada i socijalnog staranja (2013),
- Član Stručne komisije Ljekarske komore Crne Gore (2010-2017),
- Predsjednik Komisije za upućivanje pacijenata na liječenje u inostranstvo Fonda zdravstva Crne Gore (2009-2016),
- Član Komisije za polaganje stručnih ispita zdravstvenih radnika i zdravstvenih saradnika (2009-2015),
- Potpredsjednik Komisije za prevenciju i sprječavanje intrahospitalnih infekcija u Kliničkom centru Crne Gore (2009-2013),
- Mentor dijela specijalističkog staža iz pedijatrije (2004-2017).

Dajem aktivni doprinos u radu stručnih tijela od međunarodnog značaja:

- Član Radnog tijela koje je formirala Centralno-evropska inicijativa (CEI) u saradnji sa WHO od predstavnika 17 Ministarstava zdravlja za stvaranje jedinstvenog regionalnog pristupa u borbi protiv pandemije COVID 19 (2020).
- Predstavnik Crne Gore u Evropskom komitetu za transplantaciju organa (CD-P-TO) pri Evropskom direktoratu za kvalitet lijekova (EDQM) (2019 i dalje).
- Član Radne grupe WHO pod nazivom „Small Countries Initiative (SCI) Ad Hoc Working Group on Human Resources for Health in Small Countries“ (2019 i dalje).
- Predstavnik Crne Gore u States Representatives Group for the Innovative Medicines Initiative 2 EU IMI2-Inicijativa za inovativne lijekove (2017 i dalje).
- Ministarstvo nauke Vlade Crne Gore imenovalo me za Nacionalnu kontakt osobu (NCP) za oblast „Health, Demographic Changes and Well-being“ EU programa za istraživanje i inovacije „Horizont 2020“ (2016-2017).

U periodu između dva izbora, uzela sam učešće u sljedećim projektima:

- Član istraživačkog tima naučnoistraživačkog projekta „COVID 19 – Slučaj Crne Gore“, koji sprovode Crnogorska akademija nauka, Ministarstvo zdravlja i Klinički centar Crne Gore u saradnji sa Institutom za javno zdravlje. Pozicija u projektu: Član istraživačkog tima (2020),
- Studies in biomedical engineering and medical informatics, BioEMIS, 530423-TEMPUS-1-2012- UK TEMPUS-JPCR. Pozicija u projektu: Istraživač (2016),
- Vođa HERIC projekta Vlade Crne Gore, Ministarstva nauke i Evropske banke za rekonstrukciju i razvoj pod nazivom: „Razvoj, validacija i implementacija telemedicinskog sistema TELEMONTKEG za brzu detekciju poremećaja srčanog ritma u Crnoj Gori“. Pozicija u projektu: Rukovodilac projekta (2015- 2017.),
- Usklađivanje curriculumuma VMŠ sa direktivama EU i uvođenje programa zasnovanog na kompetencijama 544169-TEMPUS-1-2013-1-BE-TEMPUS-JPCR. Pozicija u projektu: Istraživač (2013- 2016.).

Na čelu Direktorata za unapređenje kvaliteta zdravstvene zaštite i razvoj ljudskih resursa u Ministarstvu zdravlja, imala sam prilike da aktivno učestvujem u kreiranju zakonskih rješenja i strateških dokumenata od značaja za razvoj ne samo zdravstvenog sistema, već i pravaca razvoja države. U tom smislu bih izdvojila svoj angažman na izradi sljedećih zakona, strategija, pravilnika:

- Zakon o zdravstvenoj zaštiti (2020),
- Zakon o izmjenama i dopunama Zakona o presađivanju ljudskih organa u svrhu liječenja (2019),
- Strategija za poboljšanje kvaliteta zdravstvene zaštite i bezbjednosti pacijenata za period 2019-2023. godine sa Akcionim planom za 2019-2020. godinu (2019),
- Strategija pametne specijalizacije Crne Gore (2019-2024) (2019),

- Pravilnik o vrstama zdravstvenih usluga za koje se mogu sačiniti liste čekanja, kao i načinu i postupku sačinjavanja listi čekanja (2017)

Svoje učešće u aktivnostima sprovedenim pod okriljem WHO smatram izuzetno značajnim za lično profesionalno napredovanje:

- Šef delegacije na ministarskim konsultacijama WHO na temu „Protecting people from health emergencies together“, Istanbul, februar 2019.
- Izlaganje na panel diskusiji na skupu WHO pod nazivom „Future of Digital Health Systems“. Naziv izlaganja: „Electronical Appointment Sheduling Project: Is it possible to meet the needs of the patients and do not annoy the doctor?“ Kopenhagen, februar 2019.
- Član ministarske delegacije na temu izazova migracije radne snage u oblasti zdravstva malih zemalja na WHO „Sixth high-level meeting of the small countries: equity and sustainable development-keeping people in centre,“ San Marino, mart 2019.
- Član delegacije na 72. zasjedanju skupštine WHO. Član Committee on Credentials na istom skupu, Ženeva, maj 2019.
- Šef delegacije na ministarskoj konferenciji WHO South-eastern Europe Health Network (SEEHN) na temu obezbjeđenja primarne zdravstvene zaštite za populaciju koja stari, Tel Aviv, april 2018.

Na preporuku i uz podršku Minisatrstva nauke Vlade Crne Gore, učestvovala sam na:

- Član delegacije tokom zvanične evaluacije Strategije pametne specijalizacije S3 u Sevilji („Country dialogue for the assesment of Smart Specialisation Strategy of Montenegro 2019-2024“) pred Evropskom komisijom na temu Održivi i zdravstveni turizam (2019),
- Naučni forum IAEA Scientific Forum Nuclear Techniques in Human Health, Beč (2017),
- Radionica odgovornog istraživanja i inovacija, Kolašin (2016),
- Prva godišnja koferencija Naučnog zdravstvenog panela „Better Research for Better Health“, Brussels (2016).

Svoju inovativnost sam dokazala u unaprijeđenju zdravstvenog sistema kroz uvođenje digitalnih tehnologija:

- Kreiranje Jedinstvene platforme za elektronsko zakazivanje specijalističkih pregleda na sekundarnom i tercijernom nivou zdravstvene zaštite. Zahvaljujući uspješnoj implementaciji ovog inovativnog projekta, crnogorski zdravstveni sistem je napredovao na ECHI listi za 2018. godinu sa 35. na 23. mjesto, a pacijentima je zdravstvena zaštita postala dostupnija.
- Digitalizacija protokola liječenja urinarnih i respiratornih infekcija na primarnom nivou zdravstvene zaštite.

Izuzetno značajnim smatram svoj angažman na čelu Nacionalnog koordinacionog tijela za presađivanje organa u svrhu liječenja. Za relativno kratko vrijeme, od 2018. godine, pokrenut je niz aktivnosti koje su imale za cilj da Liste čekanja za transplantaciju organa budu vidljive, da se izmjenama Zakona o presađivanju organa ljudskog porijekla u svrhu liječenja poveća broj kadaveričnih transplantacija, da se uvedu donorske kartice, da se pokrene kampanja za podizanje svijesti o značaju donorstva, da se unaprijedi saradnja sa EUROTRANSPLANTOM kroz realizaciju Teaching and Training programa koji pruža mogućnost da Crna Gora razvije sopstvene transplantacione programe.

Tokom svoje profesionalne karijere, uzimala sam učešće u radu brojnih strukovnih tijela:

- Sekretar Kardiološke sekcije Društva ljekara Crne Gore (1996.-2000.)
- Član Predsjedništva Udruženja pedijatara Srbije i Crne Gore (2002.-2006. godine)
- Potpredsjednika Pedijatrijske sekcije Društva ljekara Crne Gore od 2001.-2008. godine.
- Član Asocijacije za preventivnu pedijatriju Crne Gore (2015.)

Tečno govorim engleski jezik. Služim se italijanskim jezikom u manjoj mjeri.

PODACI O RADNIM MJESTIMA I IZBORIMA U ZVANJE

Radni odnos sam zasnovala 1986. godine u Medicinskom zavodu Titograd, gdje najprije radim u Medicini rada kao ljekar opšte prakse. Za potrebe Dječje bolnice Medicinskog zavoda Titograd, dobijam specijalizaciju iz pedijatrije koju završavam 1995. godine. Nakon završetka specijalizacije, radni angažman nastavljam u Dječjoj bolnici Kliničko-bolničkog centra Podgorica (kasnije Institut za bolesti djece Kliničkog centra Crne Gore). Odlukom Vlade Crne Gore, 2017. godine bivam imenovana za generalu direktoricu Direktorata za unapređenje kvaliteta zdravstvene zaštite i razvoj ljudskih resursa. Tu funkciju obavljam do novembra 2020. godine, nakon čega nastavljam radni angažman u Institutu za bolesti djece Kliničkog centra Crne Gore. Tokom radne karijere u Kliničkom centru Crne Gore, rukovodila sam Pedijatrijskom klinikom u periodu od 1999.-2008. godine, a nakon toga sam bila direktor Instituta za bolesti djece do 2012. godine.

U nastavu na Medicinskom fakultetu Univerziteta Crne Gore, kao saradnik, sam uključena od 2003.-2007. godine, a 2007. godine, Odlukom Senata Univerziteta Crne Gore, birana sam u zvanje docenta na istom fakultetu. Odlukom Senata Univerziteta Crne Gore birana sam u zvanje vanrednog profesora Medicinskog fakulteta u martu 2013. godine. U periodu od 2016.-2018. godine, određena sam za odgovornog nosioca predmeta Opšta medicina studijskog programa Stomatologija. 2019. godine, imenovana sam za odgovornog nosioca predmeta Osnovi kliničke prakse I i Osnovi kliničke prakse II.

BIBLIOGRAFIJA

Monografije

1. Miranović V: 2016. *Fiziologija i patofiziologija srčanog ritma*. Studio Branko, Podgorica. ISBN 978-9940-9474-2-2
2. Miranović V: Anamneza i fizikalni pregled u pedijatriji. Medicinski fakultet Univerziteta Crne Gore. Podgorica 2006. ISBN 987-86-908751-1-5, 82 str.
3. Miranović V: Ventrikularni septalni defekt. Podgorica 2003. COBISS.CG-ID 6284048, 116 str.

Pregledni rad u časopisu međunarodnog značaja

1. Radojevic N, Konatrar J, Vukčević B, Jovovic A, Begic S, Savic S, Subramanian V, Miranovic V. *The socio-economic status of Families Experiencing the Sudden Unexpected Death of an Infant – It is possibly Related to a Higher Rate of Non-natural Deaths among Them*. Journal of Forensic and Legal Medicine 80 (2021) 102168.
2. Puca E, Čiviljak R, Arapovic J, Popescu C, Christova I, Raka L, Cana F, Miranovic V, Karageorgopoulos D, Bas D, Paglietti B, Barac A. *Short epidemiological overview of the current situation on COVID-19 pandemic in Southeast European (SEE) countries*. Journal of Infection in Developing Countries 2020;14(5):433-437. ISSN: 20366590, 19722680
3. Crnogorac S, Miranović V, (2018). *Pregnancy after malignant disease – challenges and possibilities*. Journal of Perinatal Medicine; 46(4):349-353. ISSN:1619-3997
4. M Turkalj, V Miranovic^{2,3}, R Lulic-Jurjevic, R Gjerga Juraski, D Primorac. *Cardiorespiratory complications in patients with osteogenesis imperfecta*. Paediatrica Croatica 2017;61: 106-12. <http://dx.doi.org/10.13112/PC.2017.15>
5. M Djukic, V Parezanovic, S Djordjevic, I Stefanovic, V Miranovic, S Ilic, I Jovanovic (2017). *Transcatheter closure of patent ductus arteriosus using Flipper coil and Amplatzer Duct Occluder- Ten-year experience from a single center*. Srpski arhiv za celokupno lekarstvo. ISSN 0370-8179

6. Miranović V, Crnogorac S (2017). *Genetic aspects of hereditary arrhythmogenic syndromes in children and adults*. Acta Clinica Croatica; 56:749-755. ISSN: 0353-9466
7. V Miranović. *The Incidence of congenital heart defects in the world regarding the severity of the defect*. Vojnosanitetski pregled 2016; 73(2): 159-164.
8. Miranović V: Ehokardiografska evaluacija hemodinamike ventrikularnog septalnog defekta. Odboren za štampu u časopisu "Srpski arhiv za celokupno lekarstvo". 2007 Volume 135, Issue 9-10, Pages:541-546, <https://doi.org/10.2298/SARH0710541M>. ISSN 0370-8179

Pregledni rad u časopisu nacionalnog značaja

1. Lutovac B, Miranović V, Dragana Pravić L (2018). *Značaj skrininga iznenadne srčane smrti kod mladih sportista: mesto i uloga telemedicinske elektrokardiografije*. Medical Data;10(1):007-010
2. Miranović V (2018). *Kawasakijeva bolest: protokol liječenja*. Medicinski zapisi, 67(1): 65-71 ISSN-0419-7747
3. Miranović V (2016). *Uticaj duvanskog dima na pedijatrijsku populaciju: od koncepcije do odraslog doba*. Medicinski zapisi, 65(2): 73-83 ISSN-0419-7747
4. Miranović V (2016). *Iznenadna smrt u djece-da li je moguća prevencija?* Medicinski zapisi, 65(1): 98-103 ISSN-0419-7747
5. Miranović V, Ašanin B, Stojanović R, Jovanović I, Vukomanović G, Nikčević D, Vukmirović M, Draganić S (2015). *TELEMONTEKG-nova vizija dijagnostike poremećaja srčanog ritma*. Medicinski zapisi, 64(1): 46-49. ISSN-0419-7747
6. Miranović V. *Sinkopa: dijagnostičke dileme*. XV Kongres društva ljekara Crne Gore, oktobar 2015, Bečići, Medicinski zapisi 64(1):106-107
7. Miranović V (2013). *Dijete sa urođenom srčanom manom i njegova porodica*. Medicinski zapisi, 62(1): 30-32. ISSN-0419-7747
8. V. Miranović: Urođene srčane mane: prošlost, sadašnji trenutak i budućnost. XIII Kongres Društva Ljekara Crne Gore sa međunarodnim učešćem. Bečići 2009. Medicinski zapisi 2009, Suppl.1:13-4.2009.
9. D. Dakić, L. Banjac, R. Rudanović, V. Miranović: Klinička slika novorođenčadi sa kongenitalnim anomalijama srca. XIII Kongres Društva Ljekara Crne Gore sa međunarodnim učešćem. Bečići 2009. Medicinski zapisi Suppl.1:137-138 (2009)
10. V. Miranović: Prospektivno praćenje djece sa sindromom prolapsa mitralne valvule u Crnoj Gori u periodu 1995-2003. godine. XII Kongres Društva Ljekara Crne Gore sa međunarodnim učešćem. Ulcinj 2005. Medicinski zapisi 2005, br.60, str. 49-51.
11. V. Miranović: Prospektivno praćenje djece sa atrio-ventrikularnim septalnim defektom na teritoriji Crne Gore u periodu od 1995-2003. godine. XII Kongres Društva Ljekara Crne Gore sa međunarodnim učešćem. Ulcinj 2005. Medicinski zapisi 2005, br. 60, str. 99.

Saopštenje na naučnom skupu međunarodnog značaja

(štampano u cjelini)

1. Miranović V: Kako prepoznati dijete sa urođenom srčanom manom u neonatalnom uzrastu? "Ian Donald Advanced Course in Obstetric and Gynecology". Bečići 2011.
2. Miranović V: Nedoumice pri istraživanju incidence urođenih srčanih mana. XVI Kongres Udruženja kardiologa Srbije sa međunarodnim učešćem. Beograd 2007. Kardiologija 1980-2007. Vol. 28 Suppl.1.

3. Miranović V: The Prevalence of Congenital Heart Diseases in Montenegro from 1995 to 2003. International Congress: „Health for all- Health Perspective in 21st Century“. Banja Luka 4th-8th, June 2003. Zbornik radova: Hronične nezarazne bolesti 2/II str. 99-102. ISBN 99938-716-2-1

Saopštenje na naučnom skupu međunarodnog značaja

(štampan u izvodu)

1. Miranović V. *The Role of molecular autopsy in sudden cardiac death in children*. 16th National Conference of Pediatrics, Tirana, 14-15 oktobar 2016
2. Miranović V. *Nasledne bolesti srca i iznenadna srčana smrt-put do dijagnoze*. 47. Pedijatrijski dani Srbije sa međunarodnim učešćem, Niš, 6.-8. oktobar 2016, Zbornik radova pp 21-22
3. Miranović V. *Sudden cardiac death in children: algorithm for identification of relatives of the victim*. V Pediatric School of Republik of Kosova, oktobar 2016, Drač
4. Miranović V. *TELEMONTEKG*. IV Pediatric School of Republik of Kosova, novembar 2015, Drač
5. Miranović V. *Bol u grudima sa povišenim vrijednostima tropanina u adolescenata*. 45. Pedijatrijski dani Srbije sa međunarodnim učešćem, Niš, 3.-5. oktobar 2013, Zbornik radova pp 126-127
6. Miranović V: *Emergency in Neonatal Cardiology*. Montenegro's Paediatric Meeting-Italian pediatric association. Pržno 2011.
7. Miranović V: *Upotreba Carvedilola u liječenju djece s kardiomiopatijom*. 42. Pedijatrijski dani Srbije sa međunarodnim učešćem. Niš 2009. Zbornik radova str.118.
8. Miranović V: *incidenca kardiomiopatija kod djece u Crnoj Gori*. 42. Pedijatrijski dani Srbije sa međunarodnim učešćem. Niš 2009. Zbornik radova str.119.
9. Miranović V: *Ross-ova operacija: pravo rješenje ili zabluda*. 41. pedijatrijski dani Srbije sa međunarodnim učešćem. Niš 2008. Zbornik radova str. 125.
10. Miranović V: *Stres roditelja djece sa urođenim srčanim manama*. 41. pedijatrijski dani Srbije sa međunarodnim učešćem. Niš 2008. Zbornik radova str. 128.

Saopštenje na naučnom skupu nacionalnog značaja

(štampan u cjelini)

1. Miranović V. *Kawasakijeva bolest: dijagnostički i klinički kriterijumi za postavljanje dijagnoze*. 39. Sabor ljekara sjeverne Crne Gore i jugozapadne Srbije, Berane 12. i 13. oktobar 2018, Zbornik radova pp13-18. ISBN: 978-9940-9915-0-0
2. Miranović V. *Iznenadna srčana smrt kod djece-kako da dijagnoze?* 37. Sabor ljekara sjeverne Crne Gore i jugozapadne Srbije, Bijelo Polje septembar 2016, Zbornik radova pp 17-19
3. Miranović V. *Sinkope-klinički značaj u dječjoj kardiologiji*. 35. Sabor ljekara sjeverne Crne Gore i jugozapadne Srbije, Pljevlja, septembar 2014, Zbornik radova pp 93-98
4. V. Miranović: *Zdravstvena zaštita majke i djeteta u Crnoj Gori*. XXXI Sabor ljekara sjeverne Crne Gore i jugozapadne Srbije. Bijelo Polje 2010. Zbornik radova:str. 14-17.
5. O. Miljanović, Miranović V, R. Rudanović, A. Dizdarević, T. Mujović, B. Bojović, D. Likić: *Registar zdravlja i razvoja djeteta*. III Kongres pedijatar Jugoslavije / Srbije i Crne Gore. Herceg Novi 2002. Zbornik radova III Kongresa pedijatar Srbije i Crne Gore str. 26-30.
6. R. Rudanović, S. Maglajlić, S. Simeunović, D. Dakić, S. Zeković, V. Miranović: *Kardiorespiratorni distres kod novorođenčadi sa posebnim osvrtom na PPHN (evaluacija i dijagnoza)*. III Kongres pedijatar Jugoslavije / Srbije i Crne Gore. Herceg Novi 2002. Zbornik radova III Kongresa pedijatar Srbije i Crne Gore str. 346.

Saopštenje na naučnom skupu nacionalnog značaja
(štampano u izvodu)

1. Miranović V. *TELEMONTEKG-tehnološki izazov za sprečavanje iznenadne srčane smrti*, april 2017, Naučna tribina Crnogorske akademije nauka i umjetnosti
2. Miranović V: Prolaps valvulae mitralis-realan ili precijenjen problem. IV Kongres pedijataru Srbije i Crne Gore sa međunarodnim učešćem. Beograd 2006. Zbornik sažetaka str. 275. ISBN 86-85527-02-3.
3. Miranović V: Tri sestre sa Sy Ellis Van Creveld-prikaz slučaja. IV Kongres pedijataru Srbije i Crne Gore sa međunarodnim učešćem. Beograd 2006. Zbornik sažetaka str. 279. ISBN 86-85527-02-3.
4. D. Nikčević, Miranović V: Naša iskustva u primjeni 24h Holter monitoringa (prvih 40 pacijenata). IV Kongres pedijataru Srbije i Crne Gore sa međunarodnim učešćem. Beograd 2006. Zbornik sažetaka str. 279-280. ISBN 86-85527-02-3.
5. Miranović V: Incidenca urođenih srčanih mana na teritoriji Crne Gore za period 1995-2003. godine. XV Kongres udruženja kardiologa Srbije i Crne Gore sa međunarodnim učešćem. Herceg Novi 2005. Sažeci radova – suplement str. 20. YU ISSN 0352-9320.
6. Miranović V: Klinička dijagnostika srčane insuficijencije u dječijem uzrastu. XV Kongres Udruženja kardiologa Srbije i Crne Gore sa međunarodnim učešćem. Herceg Novi 2005. Sažeci radova- suplement str. 92. YU ISSN 0352-9320.
7. Miranović V: Prospektivno praćenje djece sa ventrikularnim septalnim defektom u Crnoj Gori u periodu od 1995-2003. godine. Pedijatrijski dani Srbije i Crne Gore. Niš 2005. Zbornik radova Pedijatrijskih dana Srbije i Crne Gore str. 131-132.
8. Miranović V: Prospektivno praćenje djece sa koarktacijom aorte u Crnoj Gori u periodu od 1995.- 2003. godine. Pedijatrijski dani Srbije i Crne Gore. Niš 2005. Zbornik radova Pedijatrijskih dana Srbije i Crne Gore str. 132-133.
9. Miranović V: Retrospektivno i prospektivno praćenje pacijenta sa D- transpozicijom velikih krvnih sudova u periodu od 1990-95. godine i 1996.-2003. godine. Pedijatrijski dani Srbije i Crne Gore. Niš 2004. Zbornik radova Pedijatrijskih dana Srbije i Crne Gore str. 266-267.
10. Miranović V: Prospektivno praćenje pacijenata sa Tetralogijom Fallot u Crnoj Gori u periodu od 1995-2003. godine. Pedijatrijski dani Srbije i Crne Gore. Niš 2004. Zbornik radova Pedijatrijskih dana Srbije i Crne Gore str. 268-269.
11. Miranović V: Opravdanost upućivanja djece na kardiološku obradu iz primarne zdravstvene zaštite. III Kongres pedijataru Jugoslavije / Srbije i Crne Gore sa međunarodnim učešćem. Herceg Novi 2002. Zbornik radova III Kongresa pedijataru Srbije i Crne Gore str. 127.
12. Miranović V: Incidenca D-TGA u djece na teritoriji Crne Gore. III Kongres pedijataru Jugoslavije / Srbije i Crne Gore sa međunarodnim učešćem. Herceg Novi 2002. Zbornik radova III Kongresa pedijataru Srbije i Crne Gore str.130.
13. A. Dizdarević, Miranović V, O. Miljanović, S. Lončarević: Genetika urođenih anomalija srca. III Kongres pedijataru Jugoslavije / Srbije i Crne Gore sa međunarodnim učešćem. Herceg Novi 2002. Zbornik radova III Kongresa pedijataru Srbije i Crne Gore str. 485.
14. Miranović V: Naša iskustva u dijagnostici kritično oboljelog novorođenčeta sa kardiorespiratornim distresom. III Kongres pedijataru Jugoslavije / Srbije i Crne Gore. Herceg Novi 2002. Zbornik radova III Kongresa pedijataru Srbije i Crne Gore str. 135.
15. Miranović V: Prevencija bakterijskog endokarditisa – obavezna zaštita kod djece sa urođenim srčanim manama. IV Pedijatrijski dani Crne Gore. Podgorica 2000. Program i zbornika radova Pedijatrijske sekcije Društva ljekara Crne Gore str.133.
16. Miranović V: D-TGA: od intenzivne njege neonatologije Kliničkog centra Crne Gore do intenzivne njege „Hospital for Sick Children“ London. Podgorica 2000. IV Pedijatrijski dani Crne Gore. Program i zbornik radova Pedijatrijske sekcije Društva ljekara Crne Gore str. 74.



Univerzitet Crne Gore

adresa / address_ Cetinjska br. 2

81000 Podgorica, Crna Gora

telefon / phone_ 00382 20 414 255

fax_ 00382 20 414 230

mail_ rektorat@ac.me

web_ www.ucg.ac.me

University of Montenegro

Broj / Ref 03-699

Datum / Date 01.03. 2017.

Na osnovu člana 72 stav 2 Zakona o visokom obrazovanju („Službeni list Crne Gore“ br. 44/14, 47/15,40/16) i člana 32 stav 1 tačka 9 Statuta Univerziteta Crne Gore, Senat Univerziteta Crne Gore na sjednici održanoj 01.marta 2017.godine, donio je

ODLUKU O IZBORU U ZVANJE

Dr Mira Samardžić bira se u akademsko zvanje redovna profesorica Univerziteta Crne Gore za oblast Pedijatrija na Medicinskom fakultetu, na neodređeno vrijeme.



REKTOR

Prof. Radmila Vojvodić

MEDICINSKI FAKULTET U PODGORICI

PEDMET PEDIJARIJA

Prof dr Mira Samardžić

BIOGRAFIJA

Redovna profesorica dr sci Mira Samardžić rođena je 1955. godine u Sisku, Republika Hrvatska. Osnovnu školu i gimnaziju završila je u Topuskom. Diplomirala je na Medicinskom fakultetu u Beogradu 1979. godine i stekla zvanje ljekar opšte medicine.

Specijalizaciju iz pedijatrije započela je 1985. godine a specijalistički ispit položila novembra 1988. godine na Sveučilišnoj klinici „Rebro“ u Zagrebu i stekla zvanje specijalista pedijatar. Poslijediplomske specijalističke studije iz oblasti kliničke pedijatrije i dječje endokrinologije pohađala je na Medicinskom fakultetu Sveučilišta u Zagrebu od 1987-1991. godine.

Magistarsku tezu odbranila je 1994. godine na Medicinskom fakultetu u Beogradu, i stekla zvanje magistar medicinskih nauka iz oblasti endokrinologije. Doktorsku disertaciju pod mentorstvom Prof Slobodana Radmanovića, odbranila je 1999. godine na Medicinskom fakultetu u Beogradu i stekla zvanje doktor medicinskih nauka.

Završila je više edukacionih trening programa u zemlji i inostranstvu iz oblasti pedijatrije i pedijatrijske endokrinologije. Najznačajniji su :

1998g: *ESPE Winter School* (Bistritza, Bulgaria), pod rukovodstvom Prof dr Ze'ev Hochberg-a. ESPE (European Society for Paediatric Endocrinology) stipendija.

1999g. *Emergency Care in Pediatric* u Salzburg-u, Austrija. Stipendija American Austrian Foundation .

2000. g. Stručna edukacija u *Dipartimento di Biomedicina dell'Eta Evolutiva, Universita di Bari* , mentor Prof dr Luciano Cavallo. Stipendija Universita di Bari .

2003g: Stručna edukacija u *Mercy Children's Hospital* , University of Missouri, MO, USA, Kansas City, mentor Prof dr Jadranka Popović . Stipendija *The Lawson Wilkins Pediatric Endocrine Society*.

U okviru **TEMPUS** programa (2008) bila je na La clinica di Pediatria del Policlinico Universitario di Udine (Ambulatorio Diabetologia, Ambulatorio Endocrinologia) pod mentorstvom Prof dr Alfred Tenore, a u okviru **CEEPUS** CII-RO-0313-01-0809 -10 projekta držala sam predavanja na *Transilvania University of Brasov* (2009) i na *Charles University in Prague* (2010).

Bila je rukovodilac i koordinator timova za uvođenje *Skrininga novorođenčadi na urođene i nasljedne metaboličke bolesti* i *Terapije dijabetesa pomoću insulinskih pumpi*.

Član je ISPAD-a (International Society of the Pediatric & Adolescent Diabetes), ESPE (European Society for Paediatric Endocrinology, Udruženja pedijatar Crne Gore.

Prof dr sci Mira Samardžić je od 1979-1980. godine obavila obavezni ljeakarski staž u Medicinskim zavodu Titograd. Nakon toga osam mjeseci radi u Domu zdravlja Titograd. Od 1981-1992. godine bila je zaposlena u Vojno medicinskom centru Titograd kao ljekar opšte prakse, specijalizant pedijatrije i specijalista pedijatrije. Nakon toga, svoju profesionalnu karijeru nastavlja u Institutu za bolesti djece u Podgorica, Odjeljenje za endokrinologiju. Nosioc je zvanja primarijus od 2011 godine.

Od 1994. godine mentor je specijalizantima pedijatrije za oblast dječja endokrinologija i opšta pedijatrija odlukom Nastavno naučnog vijeća Medicinskog fakulteta u Beogradu.

U zvanje istraživač saradnik na Medicinskom institutu u Podgorici birana je 1994. godine. U zvanje asistenta za predmet Pedijatrija na Medicinskom fakultetu Univerziteta u Podgorici izabrana je 8. oktobra 2001. g. Od tada redovno učestvuje u izvođenju nastave. U zvanje docentkinje izabrana je 2006. g. u zvanje vanredne profesorice 2011. g a u zvanje redovne profesorice 2017. godine.

Od školske 2006/7 godine drži predavanja iz predmeta Pedijatrija i njega zdravog i bolesnog djeteta i na Visokoj medicinskoj školi u Beranama.

Prof dr sci Mira Samardžić je bila rukovodilac ili glavni istraživač u 4 nacionalna naučnoistraživačka projekta. Ima preko 100 autorskih i koautorskih radova, uvodnih predavanja i prezentacija objavljenih u međunarodnim i domaćim časopisima i na kongresima, od kojih je 14 objavljeno u časopisima na SCI /SCI Expanded listi. Prema Google Scholar citiranost istih je do kraja 2018. godine bila -552. Prof Samardžić je autorka jedne stručne knjige i 3 poglavlja u međunarodnim i domaćim monografijama, stručnim knjigama i vodičima.

Pomoćnik je urednika međunarodnog časopisa *Central European Journal of Paediatrics* i recenzent u međunarodnim časopisima : *Pediatric Diabetes, World Journal of Pediatrics, Srpski arhiv, Acta Medica Academica*.

RADOVI

Međunarodni časopisi koji se nalaze na SCI (Science Citation Index), SCI Expanded, SSCI (Social Sciences Citation Index Journal List) i A&HCI (Art and Humanities Citation Index, Current Contents)

1. C.C. Patterson, V. Harjutsalo, J. Rosenbauer³, A. Neu⁴, O. Cinek⁵, T. Skrivarhaug⁶, B. Rami-Merhar⁷, G. Soltész⁸, J. Svensson⁹, R.C. Parslow¹⁰, C. Castell¹¹, E.J. Schoenle¹², P.J. Bingley¹³, G. Dahlquist¹⁴, P. Jarosz-Chobot¹⁵, D. Marčiulionytė¹⁶, E.F. Roche¹⁷, U. Rothe¹⁸, N. Bratina¹⁹, C. Ionescu-Tirgoviste²⁰, I. Weets²¹, M. Kocova²², V. Cherubini²³, N. Rojnic Putarek²⁴, C.E. deBeaufort²⁵, **M. Samardzic**²⁶, A. Green²⁷. Trends and cyclic variation in the incidence of childhood type 1 diabetes in 26 European centres in the 25-year period 1989–2013 *Diabetologia* (2018)
DOI 10.1004/s00125-012-2571-8. In print (IF: 6.973)
2. **Mira Samardzic**¹, Husref Tahirovic², Narasa Popovic¹ and Milena Popovic-Samardzic³ Health related quality of life of Montenegro children and adolescents with type 1 diabetes. Relationship between metabolic control and quality of life. *J Pediatr Endocrinol Metab.* 2016;1;29(6):663-8.
doi: 10.1515/jpem-2015-0420. (IF in 2014: 0.995);
3. **Mira Samardzic**, Milica Martinovic , Mirjana Nedovic-Vukovic, and Milena Popovic-Samardzic³ . Recent incidence of type 1 diabetes mellitus in Montenegro: shift toward a younger age at onset of the disease. *Acta Clin Croat* 2016; 55:63-68.
doi: 10.20471/acc.2016.55.01.10 (IF 0.342)
4. **Samardzic M**, Popovic N, Terzic N, Popovic-Samardzic M and Nedovic-Vukovic M. Rising incidence of childhood type 1 diabetes in Montenegro. *Srp Arh Celok Lek.* 2016 ;144 (7-8):408-12.
(IF: 0.194)
5. Zerjav Tansek M, Groselj U, Angelkova N, Anton D, Baric I, Djordjevic M, Grimci L, Ivanova M, Kadam A, Kotori V, Maksic H, Marginean O, Margineanu O, Miljanovic O, Moldovanu F, Muresan M, Nanu M, **Samardzic M**, Sarnavka V, Savov A, Stojiljkovic M, Suzic B, Tincheva R, Tahirovic H, Toromanovic A, Usurelu N, Battelino T. Phenylketonuria screening and management in southeastern Europe - survey results from 11 countries. *Orphanet J Rare Dis.* 2015;10:68.
doi: 10.1186/s13023-015-0283-0. (IF 3.36).
6. Martinovic M¹, Belojevic G², Evans GW³, Lausevic D⁴, Asanin B⁵, **Samardzic M**⁶, Terzic N⁷, Pantovic S⁸, Jaksic M⁹, Boljevic J⁹.. Prevalence of and contributing factors for overweight and obesity among Montenegrin schoolchildren. *Eur J Public Health.* 2015 ;25(5):833-9.
doi: 10.1093/eurpub/ckv071. (I F- 2.459)
7. Martinovic M, Belojevic G, Evans GW, Asanin B, Lausevic D, Kovacevic ND, **Samardzic M**, Jaksic M, Pantovic S. Blood pressure among rural Montenegrin

children in relation to poverty and gender. *Eur J Public Health*. 2014; 24(3):385-9. (IF: 2.56)

8. Patterson C1, Gyürüs E, Rosenbauer J, Cinek O, Neu A, Schober E, Parslow R, Joner G, Svensson J, Castell C, Bingley P, Schoenle E, Jarosz-Chobot P, Urbonaitė B, Rothe U, Kržišnik C, Ionescu-Tirgoviste C, Weets I, Kocova M, Stipancic G, **Samardzic M**, de Beaufort C, Green A, Soltész G, Dahlquist G. Seasonal variation in month of diagnosis in children with type 1 diabetes registered in 23 European centers during 1989-2008: little short-term influence of sunshine hours or average temperature. *Pediatr Diabetes*. 2015 ;16(8):573-80. doi: 10.1111/pedi.12227. (IF 2.129)
9. Groselj U, Tansek MZ, Smon A, Angelkova N, Anton D, Baric I, Djordjevic M, Grimci L, Ivanova M, Kadam A, Kotori VM, Maksic H, Marginean O, Margineanu O, Milijanovic O, Moldovanu F, Muresan M, Murko S, Nanu M, Lampret BR, **Samardzic M**, Sarnavka V, Savov A, Stojiljkovic M, Suzic B, Tincheva R, Tahirovic H, Toromanovic A, Usurelu N, Battelino T. Newborn screening in southeastern Europe. *Mol Genet Metab*. 2014 ;113(1-2):42-5. doi: 10.1016/j.ymgme.2014.07.020.
10. CC Patterson, E Gyürüs, J Rosenbauer, O Cinek, A Neu, E Schober, RC Parslow, G Joner, J Svensson, C Castell, PJ Bingley, E Schoenle, J Jarosz-Chobot, B Urbonaite, U Rothe, C Krzisnik, C Ionescu-Tirgoviste, I Weets, M Kocova, G Stipancic, **M Samardzic**, CE deBeaufort, A Green, GG Dahlquist, G Soltesz. Trends in childhood type 1 diabetes incidence in Europe during 1989-2008: evidence of non-uniformity over time in rates incidence. *Diabetologia*. 2012;55(8):2142-7. doi: 10.1007/s00125-012-2571-8. (IF: 6.973)
11. Radojevic N, Bjelogrić B, Aleksic V, Rancic N, **Samardzic M**, Petkovic S, Savic S. Forensic aspects of water intoxication; four case reports and review of relevant literature. *Forensic Sci Int*. 2012;220(1-3):1-5. doi: 10.1016/j.forsciint.2012.01.021. (IF:2.26)
12. Pavicevic S, Bogdanovic R, Ludwig M, **Samardzic M**. Dentova bolest. *Srpski Arhiv* 2008;136(Supl.4):312-315. UDC: 616.61-008.6:616.633]-056. (IF: 0.194)
13. **Samardzic M**, Marinkovic J, Kocev N, Curovic N, Terzic N: Increasing incidence of childhood type. *Pediatr Diabetes*. 2010 ;11(6):412-6. doi: 10.1111/j.1399-5448.2009.00617.x (IF:2.171)
14. **Samardzic M**, Pavicevic S, Michael Ludwig, Radovan Bogdanovic .Effect of GH replacement therapy in a boy with Dent's disease. *J Med Case Rep*. 2011 ;5:400. doi: 10.1186/1752-1947-5-400. (IF:0.35)

II baza časopisa: Međunarodni časopisi koji se ne nalaze u prethodnim bazama podataka, a imaju redovnu međunarodnu distribuciju i rezime na stranom jeziku

15. **Samardžić M** , Terzić N, Popović M . Dijabetična ketoacidoza kod djece s novootkrivenim dijabetesom tipa 1 u Crnoj Gori: od 1999-2008 godine. *Med Pregl* 2012; 11-12: 503-506
DOI: 10.2298/MPNS1212503S
16. **Samardžić M**, Gligorovic-Barhanovic N, Popovic N, Popovic-Samardžić M. Newborn screening program for congenital hypothyroidism in Montenegro. *Paediatrics Today* 2013;9(2):158-162
DOI 10.5457/p2005-114.70
17. Saranac LJ, **Samardžić M**. Diabetes mellitus in childhood: facts and controversies . *Paediatrics Today* 7 (1), 10-17 .
DOI 10.5457/p2005-114.70
18. Bojović B, Dašić M, **Samardžić M** : Neki važniji dijagnostički parametri kod djece od 0-18 godina u Crnoj Gori. *Acta medica medianae* (Izdavač: Medicinski fakultet Univerziteta i Podružnica Srpskog lekarskog društva-Niš) 1992: Br 6 (str. 28-38). ISSN 0365-4478)
19. **Samardžić M**: Hipoglikemija. *Acta Medica Medianae* (Izdavač: Medicinski fakultet Univerziteta i Podružnica Srpskog lekarskog društva-Niš) 1994: Sep. br.1 (str.41-49). ISSN 0365-4478
20. Radišić J, Draškić M, Vodinelić V, Popović M, Stambolović V, **Samardžić M**: Povelja o pravima pacijenata. *Pravo –teorija i praksa*(Izdavač : Univerzitet Privredna akademija, Pravni fakultet za privredu i pravosuđe, Novi Sad . 1999: br12 (str. 39-45). ISSN 0352-3713.



Univerzitet Crne Gore

University of Montenegro

03-314

04.02. 16

Na osnovu člana 72 stav 2 Zakona o visokom obrazovanju (Službeni list Crne Gore br. 44/14 i 47/15) i člana 32 stav 1 tačka 9 Statuta Univerziteta Crne Gore, Senat Univerziteta Crne Gore, na sjednici održanoj 04. februara 2016. godine, donio je

ODLUKU O IZBORU U ZVANJE

DR DRAGAN LAUŠEVIĆ bira se u akademsko zvanje redovni profesor Univerziteta Crne Gore za predmete: Epidemiologija i Specijalna epidemiologija na osnovnom akademskom studijskom programu Medicina, na Medicinskom fakultetu.



REKTOR

Prof. Radmila Vojvodić

Prof. dr Dragan Laušević - Biografija

Rođen sam 21.12.1962. godine u Pljevljima, Crna Gora.

Osnovnu školu sam učio u Doboju i Budvi i završio je sa odličnim uspjehom. Srednju školu sam učio u Budvi i Podgorici i završio je sa odličnim uspjehom.

Školske 1982/83. godine započeo sam studije medicine, na Medicinskom fakultetu Univerziteta u Sarajevu. Na istom fakultetu sam diplomirao u januaru 1988. sa prosječnom ocjenom 9,40 (devetčetrdeset). Za postignuti uspjeh tokom studiranja nagrađen sam sa nekoliko diploma Univerziteta u Sarajevu i plaketom Medicinskog fakulteta u Sarajevu "dr Bogdan Zimonjić".

Specijalizaciju iz oblasti epidemiologije započeo sam u decembru 1990. na Medicinskom fakultetu u Beogradu, gdje sam je i završio u januaru 1994. sa odličnim uspjehom i stekao zvanje ljekara specijaliste iz epidemiologije.

Poslijediplomske studije upisao sam školske 1993/1994. godine na Medicinskom fakultetu Univerziteta u Beogradu. Magistarski rad pod naslovom "Epidemiološka studija raka dojke", odbranio sam 9. marta 1998. godine i stekao akademsko zvanje magistra medicinskih nauka.

Doktorsku disertaciju pod nazivom "Studija prevalencije pušenja duvana kod školske djece i omladine u Crnoj Gori" odbranio sam 03. juna 2004. godine na Medicinskom fakultetu Univerziteta u Beogradu.

U nekoliko navrata boravio sam na kraćim studijskim usavršavanjima u inostranstvu:

- 1996. godine - studijsko usavršavanje iz oblasti Infektivnih bolesti i epidemiologije u Salzburg-u, Austrija u organizaciji Medicinskog fakulteta Cornell iz New York-a, USA;
- 1997. godine - studijsko usavršavanje iz oblasti epidemiologije masovnih nezaraznih bolesti u Budimpešti u organizaciji Johns Hopkins University School of Hygiene and Public Health iz Baltimora, USA;
- 1998. godine - studijsko usavršavanje iz oblasti Epidemiologije u javnom zdravstvu (Advanced level course - Epidemiology in Public Health) u organizaciji London School of Hygiene & Tropical Medicine, University of London i WHO European Centre for Environment and Health;
- 2001. godine - studijsko usavršavanje iz oblasti Menadžmenta Programa imunizacija za zemlje Evrope i Centralne Azije u Budimpešti, u organizaciji Svjetske banke i Semmelweis instituta;
- 2006. godine - studijsko usavršavanje iz oblasti Dizajniranja istraživačkih studija u medicini za postdoktorske istraživače u Cavtatu - Dubrovnik u organizaciji Instituta za Globalno Zdravlje Univerziteta u Kaliforniji, USA i Škole narodnog zdravlja „dr Andrija Štampar“, Medicinski fakultet Univerziteta u Zagrebu, Hrvatska
- 2007. godine – studijsko usavršavanje za Istraživače iz oblasti Bio-bihejvioralnih tipova istraživanja među skrivenim populacijama uz upotrebu tehnike Uzorkovanja vođenog ispitanicima (Response Driven Sample – RDS) u organizaciji Škole narodnog zdravlja „dr Andrija Štampar“, Medicinski fakultet Univerziteta u Zagrebu, Hrvatska
- 2015. godine – studijsko usvršavanje u oblasti upotrebe epidemioloških softvera za obradu epidemioloških podataka u organizaciji Mediteranske škole za primjenjenu epidemiologiju – Institut Karlo III, Madrid, Španija

PODACI O RADNIM MJESTIMA

Period od februara 1988. do februara 1989. godine proveo sam na obaveznom pripravničkom stažu u Kliničko-bolničkom centru Crne Gore i Domu zdravlja u Podgorici.

Od maja 1989. do oktobra 1989. godine radio sam u Domu zdravlja Budva, a od novembra 1989. do avgusta 1999. radio sam u Odjeljenju za epidemiologiju Zavoda za zdravstvenu zaštitu Podgorica.

Od septembra 1999. do maja 2001. godine radio sam u Dječijem fondu Ujedinjenih nacija kao Koordinator zdravstvenog programa za Crnu Goru.

Od maja 2001. do februara 2003. vršio sam dužnost Pomoćnika ministra zdravlja u Vladi Republike Crne Gore.

Od marta 2003. do danas radim u Centru za kontrolu i prevenciju bolesti Instituta za zdravlje Crne Gore.

Od 2016. godine radim u Centru za nauku i kontinuiranu edukaciju Instituta za zdravlje Crne Gore.

PODACI O IZBORIMA U ZVANJE

Odlukama Naučno-nastavnog vijeće Univerziteta Crne Gore iz januara 1992. i 1998. godine stekao sam prvo zvanje Istraživača saradnika, a potom i zvanje Višeg istraživača.

U zvanje asistenta na Katedri za epidemiologiju Medicinskog fakulteta u Podgorici izabran sam u martu 1999. godine.

U zvanje docenta na predmetu epidemiologija na Medicinskom fakultetu u Podgorici izabran sam 2005. godine.

U zvanje vanrednog profesora na predmetu epidemiologija na Medicinskom fakultetu u Podgorici izabran sam 2010. godine.

U zvanje redovnog profesora na predmetu epidemiologija na Medicinskom fakultetu u Podgorici izabran sam 2016. godine.

Dugi niz godina, za potrebe Medicinskog fakulteta Univerziteta u Beogradu obavljam dužnosti mentora za ljekare koji se nalaze na specijalizaciji iz oblasti epidemiologije, a od 2016.g i dužnost mentora-koordinatora za ljekare na specijalizaciji iz epidemiologije.

Bio sam član Nacionalne komisije za sertifikaciju dječije paralize u SR Jugoslaviji, kao i član crnogorskog nacionalnog tima koji je koordinirao uspješnu eradikaciju dječije paralize na prostoru Crne Gore.

Takođe, bio sam član Komisije Vlade RCG za prevenciju narkomanije kod djece i omladine u Crnoj Gori, član radne grupe Ministarstva zdravlja za implementaciju Nacionalnog plana akcije za djecu u RCG i član Komisije za zarazne bolesti Ministarstva zdravlja.

Dugi niz godina sam bio Koordinator Programa imunizacija i "Focal point" za programe obaveznih imunizacija prema Svjetskoj zdravstvenoj organizaciji.

Član sam Nacionalne komisije za kontrolu raka pri Ministarstvu zdravlja.

Takođe, član sam Nacionalnog stručno-savjetodavnog tijela za imunizacije i član Nacionalnog koordinacionog tijela za eliminaciju i eradikaciju pojedinih zaraznih bolesti pri Ministarstvu zdravlja.

Dobitnik sam Zahvalnice Saveznog sekretarijata za rad, zdravstvo i socijalno staranje za doprinos uspješnoj aktivnosti na eradikaciji dječije paralize na prostoru SR Jugoslavije, Zahvalnice Cazasa (Društva za borbu protiv SIDE Crne Gore) i Zahvalnice Crnogorskog društva za borbu protiv raka.

BIBLIOGRAFIJA – Dragan Laušević

1. Dente MG, Riccardo F, Bejaoui M, Fabiani M, Lausevic D, and Declich S. Contribution of Regional Networks to the Control of Cross-Border Public Health Threats: EpiSouth in the Mediterranean Region and Southeast Europe. *Health Security* Vol. 15, No. 4. Published Online: 1 Aug 2017 <https://doi.org/10.1089/hs.2016.0081>
2. Laušević D, Begić S, Terzić N, Vratnica Z, Čičić A and Mugoša B. Factors Associated with Inconsistent Condom Use with Clients among Female Sex Workers in Podgorica, Montenegro. *Srp Arh Celok Lek.* 2016 Jul-Aug;144(7-8):424-430. DOI: 10.2298/SARH1608424L. ISSN: 0370-8179.
3. Vratnica Z, Zehender G, Ebranati E, Sorrentino C, Lai A, Vujošević D, Veo C, Presti AL, Cella E, Giovanetti M, Laušević D, Galli M, Ciccozzi M and Mugoša B. Hepatitis B virus genotype and subgenotype prevalence and distribution in Montenegro. *Journal of Medical Virology.* 2015;87(5):807–813. DOI: 10.1002/jmv.24083. ISSN: 1096-9071.
4. Martinović M, Belojević G, Evans GW, Lausevic D, Asanin B, Samardžić M, Terzić N, Pantović S, Jaksic M, Boljević J. Prevalence of and contributing factors for overweight and obesity among Montenegrin schoolchildren. *Eur J Public Health.* 2015 Apr 4. pii: ckv071. [Epub ahead of print] DOI: <http://dx.doi.org/10.1093/eurpub/ckv071>. Print ISSN: 1101-1262; ISSN: 1464-360X.
5. Laušević D, Begić S, Mugoša B, Terzić N, Vratnica Z, Labović I, Božičević I. Prevalence of HIV and other infections and correlates of needle and syringe sharing among people who inject drugs in Podgorica, Montenegro: a respondent-driven sampling survey. *Harm Reduction Journal* 2015;12:2 doi:10.1186/s12954-015-0039-0. ISSN: 1477-7517 (online).
6. Laušević D, Todorović B, Begić S. The impact of „chosen“ physician on immunization coverage with MMR vaccine. *Acta Medica Mediana.* 2015; 54(2):56-62 UDK 61, YU ISSN 0365-4478 i EISSN 1821-2794. DOI: 10.5633/amm.2015.0210
7. Martinović M, Belojević G, Evans GW, Ašanin B, Laušević D, Duborija Kovačević N, Samardžić M, Jaksic M and Pantović S. Blood pressure among rural Montenegrin children in relation to poverty and gender. *Eur J Public Health.* 2014; 24(3): 385-389. doi: 10.1093/eurpub/ckt181. Print ISSN: 1101-1262; Online ISSN: 1464-360X.
8. Laušević D, Mugoša B, Terzić N, Vratnica Z, Labović I, Begić S. Razlike u rizičnim ponašanjima u odnosu na HIV infekciju između muških i ženskih pripadnika populacije injektirajućih korisnika droga u Podgorici. *Medical Journal of Montenegro.* 2014; 2(3):17- 21. DOI: 10.5937/cma2-6869. ISSN: 1800- 9964 EISSN: 2336-9140
9. Baćak V, Laušević D, Mugoša B, Vratnica Z, Terzić N. Hepatitis C Virus Infection and Related Risk Factors among Injection Drug Users in Montenegro. *European Addiction Research* 2013; 19:68-73. ISSN: 1022-6877; eISSN: 1421-9891 DOI: 10.1159/000339840 (Online).
10. Zehender G, Sorrentino C, Lai A, Ebranati E, Gabanelli E, Lo Presti A, Vujošević D, Laušević D, Terzić D, Shkjezi R, Bino S, Vratnica Z, Mugoša B, Galli M, Ciccozzi M. Reconstruction of the evolutionary dynamics of hepatitis C virus subtypes in Montenegro and the Balkan region. *Infection, Genetics and Evolution* 2013; 17:223-230. ISSN: 1567-1348. doi: 10.1016/j.meegid.2013.04.003. Epub 2013 Apr 18.
11. Maver JP, Korać Tina, Dirnitrov G, Dobrossy L, Engele L, Ilijazović E, Kesić V, Kostova P, Laušević D, Maurina A, Nicula AF, Molnar Z, Panayotova Y, Primić-Žakelj MP, Repše- Fokter A, Romejko-Wolniewicz E, Smailyte G, Suteu O, Swiderska-Kiec J, Tachezy R, Valerianova Z, Veerus P, Viberga I, Znaor A, Zubor P, Poljak M. Cervical cancer screening practices in central and eastern Europe in 2012. *Acta Dermatovenerologica Alpina, Pannonica et Adriatica* 2013; 22:7-19. ISSN: 1318-4458. doi: 10.2478/v10162-012-0025-0.
12. Seme K, Maver JP, Korać Tina, Canton A, Častkova J, Dimitrov G, Filippova I, Hudcova H, Ilijazović E, Kaić B, Kesić V, Kuprevičiene N, Laušević D, Molnar Z, Perevoščikovs J, Spaczynski M, Stefanova V, Učakar V, Poljak M. Current status of human papillomavirus vaccination implementation in Central and eastern Europe. *Acta Dermatovenerologica Alpina, Pannonica et Adriatica.* 2013; 22:21-25. ISSN: 1318-4458. doi: 10.2478/v10162-012-0026-z.

13. Bino S, Cavaljuga S, Kunchev A, Lausevic D, Kaic B, Pistol A, Kon P, Karadjovski Z, Georghita S, Cicevalieva S. Southeastern European Health Network (SEEHN) Communicable Diseases Surveillance: A Decade of Bridging Trust and Collaboration. *Emerging Health Threats Journal*. 2013; 6:1-7. *Emerg Health Threats J* 2013, 6: 19950 - <http://dx.doi.org/10.3402/ehth.v6i0.19950>. eISSN: 1752-8550. doi: 10.3402/ehth.v6i0.19950.
14. Ciccozzi M, Lai A, Ebranati E, Gabanelli E, Galli M, Mugosa B, Vratnica Z, Vujošević D, Laušević D, Ciotti M, Cella E, Lo Presti A, Zehender G. Phylogeographic Reconstruction of HIV-1B in Montenegro and Balkan Region. *AIDS Res Hum Retroviruses*. 2012 Oct; 28(10):1280-4. Epub 2012 Apr 3. Online ISSN: 1931-8405. DOI:10.1089/aid.2011.0138
15. Labović I, Terzić N, Strahinja R, Mugoša B, Laušević, Vratnica Z. HIV-Related Knowledge, Attitudes and Sexual Risk Behaviours Among Montenegrin Youth. *Ser J Exp Clin Res*. 2011; 12(2):57-66. ISSN 1820 – 8665.
16. Vujošević D, Mugoša B, Cvelbar U, Mozetič M, Repnik U, Zavašnik-Bergant T, Laušević D, Medenica S, Rajković D, Šćepanović A. Viability Assessment of *Escherichia Coli* after Oxygen Plasma Treatment by Fluorescent Microscopy. *Medicinski zapisi*; 2011; Vol. 60(1):7-10. ISSN:0419-7747
17. Ciccozzi M, Vujošević D, Lo Presti A, Mugoša B, Vratnica Z, Lai A, Laušević D, Drašković N, et al. Genetic Diversity of HIV Type 1 in Montenegro. *AIDS Res Hum Retroviruses*. 2011 Aug; 27(8):921-4. Epub 2010 Dec 31. ISSN: 0889-2229; Online ISSN: 1931-8405. doi: 10.1089/AID.2010.0323.
18. Štulhofer A, Laušević D, Božičević I, Baćak V, Mugoša B, Terzić N, Drglin T. HIV Risk among Female sex Workers in Croatia and Montenegro. *Coll Antropol*. 2010 Sep;34(3):881-6. ISSN 0350-6134.
19. Werber D, Laušević D, Mugoša B, Vratnica Z, Ivanović-Nikolić Lj, Žižić Lj, Alexandre-Bird A, Fiore L, Ruggeri FM, Di Bartolo I, Battisone A, Gassilloud B, Perelle S, Nitzan Kaluski D, Kivi M, Andraghetti R, Pollock KG: Massive outbreak of viral gastroenteritis associated with consumption of municipal drinking water in a European capital city. *Epidemiology and Infection* 2009 Jun 18:1-8. ISSN: 0950-2688 and EISSN: 1469-4409. DOI:10.1017/S095026880999015X
20. Laušević D, Todorović B, Rakočević B, Medenica S, Beatović V, Hadžifejzović A. Pravovremenost i nivo obuhvata primovakcinacijom protiv malih boginja i rubele u Crnoj Gori. *Acta Medica Medianae*, 2009; 48(3): 9-14, UDK: 616.915/.916.1:615.371. YU ISSN 0365- 4478 i EISSN 1821-2794 .
21. Laušević D, Todorović B, Rakočević B, Medenica S, Beatović V, Hadžifejzović A. Timeliness and level of primary immunization coverage against diphtheria, whooping cough and tetanus in Montenegro *Acta Facultatis Medicinae Naissensis*, 2009; 26(3): 113-119. UDC 615.371: 616.9. ISSN 0351-6083.
22. Laušević D. Uspješnost prevencije i kontrole vakcino preventibilnih oboljenja u Crnoj Gori. *Medicinski Zapisi* 2009; 58(1-2): 39-46. YU ISSN – 0419-7747.



БРОЈ: 4/1

ДАТУМ 04.12.2023. године

БЕОГРАД

Декан
Проф. др Лазар Давидовић

ПОТВРДА

Овим потврђујемо да се **ПРОФ.ДР ВЕРА ЗДРАВКОВИЋ**, налази у радном односу на Медицинском факултету у Београду - ОЈ предмета Педијатрија, н.б. - Универзитетска дечија клиника, почев од 16.04.2009. године, на пословима ванредног професора.

Потврда се издаје на лични захтев именоване.

Продекани
Проф. др Душан Попадић
Проф. др Дејана Јовановић
Проф. др Арсен Ристић
Проф. др Татјана Пекмезовић
Проф. др Иванка Марковић
Проф. др Даница Грујичић

Др Суботића 8
поштански факс 497
11000 Београд
Република Србија
Телефон: (011) 3636-300
Телефакс: (011) 2684-053

www.med.bg.ac.rs
mf.bg@med.bg.ac.rs

Средства рачун трезора
840-1139660-10
Бене приходе Факултета
840-1139666-89

СЛУЖБА ЗА РАДНЕ ОДНОСЕ

Виши стручнотехнички сарадник

Радмила Шкрбић-Лучић



Vera Zdravković
Mileševska 51/60
Tel: 244 8567
0643092656
Beograd
Univerzitetska dečja klinika, Medicinski fakultet

Email:
verazdravkovic@gmail.com

EDUKACIJA I LICENCE

- 2019 - 2021 Research Ethics Education Program, *Icahn School of Medicine at Mount Sinai (New York)*, **Etički status planiranja pedijatrijske palijativne nege**
- 2017 Uža specijalizacija iz endokrinologije, Medicinski fakultet, Beograd,
Hipertiroidizam u dečjem uzrastu
- 2015 Doktorska disertacija, **Odnos poremećaja insulinske rezistencije i sekrecije kod gojaznih adolescenata sa visokim rizikom za tip 2 dijabetesa**
- 2007 Licenca Lekarske komore Srbije, br 77856
- 2005 Diploma magistra nauka, Institut medicinskih nauka, Univerzitet u Torontu, Kanada
- 2002-2005 Postdipomske studije, Toronto, Kanada
Magistarska teza: **Randomizirana placebo kontrolisana klinička studija sa pioglitazonom radi poboljšanja metaboličke kontrole kod adolescenata sa Dijabetes melitusom Tip 1**
- 2002 –2005 Subspecijalizacija – Dečja Endokrinologija i metabolizam
Hospital for Sick Children, Toronto, Kanada
- 2002 Edukaciona licenca, Koledž lekara i hirurga Ontarija, br 78686
- 1996 Specijalistički ispit iz pedijatrije, (ocena odličan)
- 1992 – 1996 Specijalizacija iz pedijatrije , Univerzitetska Dečja Klinika, Tiršova
- 1994 Usmeni magistarski ispit iz endokrinologije, (ocena 10)
- 1991 Poslediplomske studije iz endokrinologije, Medicinski fakultet, Univerzitet u Beogradu
- 1992 Stručni ispit za doktora medicine

- 1991-1992 Opšti lekarski staž, stipendista Kliničkog Centra Srbije
- 1991** Diploma doktora medicine
- 1985 – 1991 Medicinski fakultet, Univerziteta u Beogradu, prosečna ocena 9.25
- 1981 – 1985 Tehničar za molekularnu biologiju i biohemiju, VIII beogradska gimnazija, nosilac diplome Vuk Karadžić
- 1973 – 1981 Osnovna škola Veselin Masleša, u Beogradu, nosilac diplome Vuk Karadžić

PROFESIONALNO USAVRŠAVANJE

- 2018 Advanced insulin pump training course, Hannover, Germany
- 2013 Advanced course, Pump therapy, Medtronic, Lozana, Švajcarska
- 2011 Postgraduate Course on Growth Hormone and Growth Factors, Metabolic Disorders in Gothenburg, Sweden, 16-20th May 2011.
- 2010 Growth and puberty – Ippokrates seminar, Birmingham, UK
- 2009 Pediatric endocrinology review board course, LWPES, Njujork
- 2008 40-ti Medunarodni simpozijum o endokrinologiji i metabolizmu, Pariz
- 2007 39-ti Medunarodni simpozijum o endokrinologiji i metabolizmu, Berlin
- 2007 *European Forum for Good Clinical Practice* (EFGCP) kurs, Beograd
- 2007 Radionica sa međunarodnim učešćem „Kako se piše naučni članak“, pod pokroviteljstvom Ministarstvo zdravlja Republike u Beogradu
- 2006 European Society of Endocrinology – Prvi postdiplomski kurs iz kliničke endokrinologije, Beograd
- 2006 Advanced pump trainer course, Atina
- 2005 Certified Pump Trainer Course, Beograd
- 2004 Kurs za članove Istraživačko Etičkog komiteta, The Hospital for Sick Children, Toronto
- 2002 ISPAD (International society for pediatric and adolescent diabetes)-**grant**
Naučna Škola za Istraživačke metodologije, Toronto, Kanada

- 1998 ESPE (European Society for Pediatric Endocrinology)-**grant**
Zimska škola – postdiplomski kurs iz dečije endokrinologije , Sofija
- 1994 **Stipendija** Srpskog Medicinskog Ženskog Fonda, London i Britanskog Saveta (3 meseca):
Centar za Dečju Endokrinologiju i Metabolizam, London, UK
Projekat: Rast posle ozračenja celog tela
Supervizori: Prof. Charles G Brook i Peter C Hindmarsh
- 1994 ISPAD (International society for pediatric and adolescent diabetes) - **grant**
Zimski postdiplomski kurs o dijabetesu u dece i adolescenata
- 1993 Teorijska nastava iz primene ultrazvuka u dijagnostici: Endokrinologija, abdomen i urologija

ČLANSTVA U STRUKOVNIM UDRUŽENJIMA

- 2017 Etički komitet Medicinskog fakulteta, Univerzitet u Beogradu
- 2010 ESPE (European society of endocrinology), član
- 2007-2019 Istraživačko etički komitet Univerzitetske dečje klinike, predsednik
- 2002- Član ISPAD-a, međunarodnog udruženja za dijabetes u dece i adolescenata
- 1997 Član Srpskog lekarskog društva

IZLAGANJA NA SKUPOVIMA U ZEMLJI I INOSTRANSTVU

- 2022 Prevremeni pubertet-koga lečiti, Endosek, Beograd
- 2021 Manifestacije adrenalne insuficijencije u dečjem uzrastu, 7.kongres endokrinologa Srbije
- 2020 Prevremeni pubertet, Tiršova on line, Dani Univerzitetske dečje klinike
- 2019 Specifičnosti hipertireoze kod dece , Peti kongres o štitastoj žlezdi, Zlatibor
Vitamin D, terapija u dečjem uzrastu, Dani Univerzitetske dečje klinike, Beograd
Predijabetes kod dece, 7. Srpski kongres o šećernoj bolesti, Beograd
- 2018 Hipertireoza kod dece, 6. Kongres endokrinologa Srbije sa međunarodnim učešćem, Beograd
Etiologija i patogeneza tipa I dijabetesa kod dece, Pedijatrijska škola, Zlatibor
Klinički tok hipertireoze kod dece, Prvi kongres dečjih endokrinologa Srbije, Zlatibor

Prevenција gojaznosti, Dani Univerzitetske dečje klinike, Beograd

- 2017 Tip 2 dijabetesa kod dece, Pedijatrijska sekcija SLD, Subotica
Tiroidni karcinomi kod dece. Četvrti kongres o štitastoj žlezdi, Beograd
Prevrnjeni i kasni pubertet, Dani Univerzitetske dečje klinike, Beograd
The management of hyperthyroidism in children, 6th World Congress of Endocrinology, Prague, Czech Republic
Kako razlikovati tip 1 i tip 2 dijabetesa kod dece, Prvi srpski kongres o šećernoj bolesti kod dece
- 2016 KAH kod dece, V Kongres endokrinologa Srbije sa međunarodnim učešćem, Beograd
Endokrine sekvele malignih bolesti kod dece, Dani Univerzitetske dečje klinike, Beograd
Izazovi za dete, porodicu i lekare nakon postavljanja dijagnoze dijabetesa, Dani Univerzitetske dečje klinike, Beograd
Comparison of cardio-metabolic risk in obese female adolescents and patients with type 1 diabetes, 2nd International symposium on PCO and Women's Health, Beograd
- 2015 Faktori rizika za tip 2 dijabetesa kod dece, V srpski kongres o šećernoj bolesti sa međunarodnim učešćem, Beograd
- 2014 The diagnosis of prediabetes in adolescents, EFLM course, Beograd
Tumor jukstaglomerularnih ćelija-redak uzrok hipertenzije kod dece, 3.kongres nefrologa Srbije, Beograd
Pediatric Pump School, Medtronic Academia,
Autoimunski tiroiditis, Pedijatrijska sekcija SLD
- 2013 Gojaznost i pubertet, Dani Univerzitetske dečje klinike
Rast i razvoj malog deteta, Zavod za sportsku medicinu, KME
Rast i razvoj školskog deteta, Zavod za sportsku medicinu KME
Edukacija za članove etičkih odbora, Medicinski fakultet, Beograd
Neželjeni efekti insulinske terapije insulinom, prepoznavanje i lečenje
Hipoglikemija, KME, Arandelovac
- 2012 Poliurija, Dani Univerzitetske dečje klinike
- 2011 Neonatalni dijabetes, seminar Instituta za neonatologiju, Beograd
Procena ACTH rezerve u dijagnostici hipopituitarizma - prikaz slučaja, sastanak istraživača Međunarodne studije ishoda
- 2010 Endokrini uzroci hipertenzije u dečjem uzrastu, II Kongres udruženja za hipertenziju Srbije sa međunarodnim učešćem, Beograd
Glukozni senzori, Dani Univerzitetske dečje klinike
Terapija hormonom rasta kod nefroloških pacijenata, sastanak istraživača Međunarodne studije ishoda

- 2009 Adolescentkinja izmenjenog ponašanja, interaktivni prikaz slučaja, Dani Univerzitetske dečje klinike
Korisnik i otvoreni pristup, Biblioteka Medicinskog fakulteta Univerziteta u Beogradu i Novom Sadu
Septoptička displazija, sastanak istraživača Međunarodne studije ishoda
- 2008 Deficit hormona rasta kod dece – prikaz bolesnika sa Ratkeovom cistom, sastanak istraživača Međunarodne studije ishoda
- 2007 Primena insulinskih pumpi kod dece, Dani Univerzitetske dečje klinike
- 2006 Metabolički sindrom u dečjem uzrastu, Dani Univerzitetske Dečje Klinike
Hipertireoza u dece – novine u lečenju, Pedijatrijska sekcija SLD
- 2005 Dijabetes tip 2 u dece i adolescenata, Dani Univerzitetske dečje klinike
Does the addition of pioglitazone to insulin improve metabolic control in youth with type 1 diabetes and insulin resistance? A randomized placebo-controlled trial, ISPAD annual meeting, Krakow, Poland
- 2003 Presentation and Clinical Course of Type 2 Diabetes in Children and Adolescents – Kongres kanadskih dečjih endokrinologa (CPEG), Montreal
- 2002 Type 2 Diabetes in Children and Adolescents – HSC experience, videoconference Toronto- Brisbane, Australia
- 1996 Kongenitalna hipotireoza, Dani Univerzitetske dečje Klinike

RADNO ISKUSTVO I PROJEKTI

- 2021 - Pedijatrija Vanredni profesor Medicinskog fakulteta u Beogradu, predmet**
- 2015- 2021 Docent Medicinskog fakulteta u Beogradu, predmet Pedijatrija
- 2009 -2015 Asistent Medicinskog fakulteta u Beogradu, predmet Pedijatrija
- 2021 - Šef odeljenja endokrinologije, Univerzitetska dečja klinika**
- 2005- 2021 Lekar specijalista pedijatrije zaposlen na Endokrinološkom odeljenju Univerzitetske dečje klinike

Projekti:

- *Monogeniski dijabetes:*
Istraživači: Sonja Pavlović, Milena Ugrin, Vera Zdravkovic

Multicentrično, dvostruko-slepo, randomizovano, placebo kontrolisano kliničko ispitivanje faze III za procenu bezbednosti i efikasnosti sitagliptina kod pedijatrijskih pacijenata sa tip 2 dijabetes melitusom i neadekvatnom kontrolom glikemije

Glavni istraživač: Vera Zdravković

- Prevencija tipa 2 dijabetesa kod dece
Istraživači: Prof dr NM Lalić, dr V.Zdravković
- EndoKIGS studija
Sponzor: Pfizer
Istraživači: Prof Dr S.Sajić, Dr V.Zdravković, V.Bojić i M.Ješić
- Prevencija bubrežnih bolesti u dece
Projekat Ministarstva nauke, ev br 145028
Nosilac projekta Prof dr A.Peco-Antić
- Norditropin – međunarodna studija ishoda, Faza IV
Sponzor: Novo Nordisk
Istraživači: Prof Dr S.Sajić, Dr V.Zdravković, V.Bojić i M.Ješić
- Levemir- Post marketinška studija, Faza IV
Sponzor: Novo Nordisk
Istraživači: Prof Dr S.Sajić, Dr V.Zdravković, V.Bojić i M.Ješić
- Hipertireoza u dece, klinički tok, uvođenje terapije radioaktivnim jodom
Glavni istraživač: Dr Vera Zdravković
- Primena pamidronata u dece obolele od Osteogenesis Imperfecta
Istraživači: Dr V. Zdravković i Prof dr S.Necić

2006 Organizovanje posete stručnog tima za dijabetes, iz bolnice The Hospital for Sick Children u Kanadi radi započinjanje programa terapije insulinskim pumpama u dece. Organizacija edukativnog seminara za dečje endokrinologe Srbije i Crne Gore.

2006 Odlukom nastavno naučnog veća medicinskog fakulteta određuje se za mentora dela specijalističkog staža iz Pedijatrije

2002 - 2005 Hospital for Sick Children, Toronto
Istraživačko / Klinička subspecijalizacija- Odeljenje endokrinologije

Magistarska teza: “Randomizirana placebo kontrolisana klinička studija sa pioglitazonom radi poboljšanja metaboličke kontrole kod adolescenata sa Dijabetes melitusom Tip 1”, Faza 3
Mentor: Prof dr Denis Daneman, komentor: Dr Jill Hamilton

Projekti:

Genetska analiza Pit-1, Prop, Lhx3 and Hsx3 gena u dece sa idiopatskim

hipopituitarizmom,
Glavni istraživač : Dr Jill Hamilton

Tip 2 dijabetes u dece,
Glavni istraživač: Dr Jill Hamilton

1999 - 2002 Hospital for Sick Children, Toronto
Koordinator istraživačkih studija – Odeljenje endokrinologije

Projekti:

“ 24-nedeljna randomizirana, Duplo-Slepa, Aktivno-Kontrolisana, Multicentična Studija radi procene bezbednosti i efikasnosti primene Roziglitazona kod pedijatrijskih pacijenata sa tipom 2 Dijabetes Mellitusa”
Sponzor: Smith Kline Beecham, Faza 3
Istraživači: Doktori Jill Hamilton and Denis Daneman

“Genetika i Neuroendokrinologija Niskog Rasta, Medjunarodna studija (GeNeSIS)” –
Sponzor : Eli Lilly, Faza IV
Istraživači: Doktori Jill Hamilton, Denis Daneman, Kusiel Perlman i Diane Wherrett

“Randomizirana kontrolisana studija radi procene korisnosti metformina kao insulin senzitivirajućeg agensa u adolescenata sa tipom 1 dijabetesa kojima je potrebna velika količina insulina ”
Istraživači: Doktori Jill Hamilton, Denis Daneman, Etienne Sochett

1996-1999 Univerzitetaska dečja klinika, Tiršova, Beograd
Endokrinološko odeljenje – lekar specijalista

Organizuje kamp za decu obolelu od dijabetesa koji se 1997 i 1998 sa uspehom održava na Mitrovcu na Tari

Projekti:

- *Teške hipoglikemije u dece obolele od Tipa 1 dijabetesa*

Mentor: Prof dr S.Necić

- *Lečenje hormonom rasta dece sa Turnerovim sindromom i hroničnom bubrežnom insuficijencijom*

Glavni istraživači: Prof Dr S.Radmanović i Prof dr O.Jovanović

- *Krvni pritisak u dece obolele od Dijabetesa tip 1*

Glavni istraživač: Doc dr M.Kostić

1994 – 1996 Univerzitetaska dečja klinika, Tiršova, Beograd

Lekar na specijalizaciji (zaposlenje na određeno vreme)**Projekti:***Serumski osteokalcin u dece sa hroničnom bubrežnom insuficijencijom*

Glavni istraživač: Prof dr A.Peco-Antić

1992 – 1994 Univerzitetska Dečja Klinika, Tiršova, Beograd**Volonterska specijalizacija**

1991-1992 Kliničko Bolnički Centar Zvezdara

Odsek za neonatologiju, klinički lekar, volonter

LIČNI PODACI

Rodena u Beogradu, 1967.

Ima ćerku, uzrasta 17 godina.

Govori engleski i italijanski jezik.

.

SPISAK RADOVA

1. Smudja M, Milenkovic T, Minakovic I, **Zdravkovic V**, Mitic S, Milutinovic D Determinants of health-related quality of life in children and adolescents living with type 1 diabetes mellitus during the COVID-19 pandemic. *S.Nurs Open*. 2023 Nov;10(11):7394-7410. doi: 10.1002/nop2.1993. Epub 2023 Sep 8
2. Djordjevic S, Milic-Rasic V, Brankovic V, Kosac A, Dejanovic-Djordjevic I, Bijelic M, Dimkic-Tomic T, Markovic-Denic L, Kovacevic S, Petrovic H, Vitorovic S, Dobric Z, **Zdravkovic V** Serum leptin levels in children and adolescents with spinal muscular atrophy types 2 and 3[☆]. *Arch Pediatr*. 2022 Oct;29(7):480-483. doi: 10.1016/j.arcped.2022.08.015. Epub 2022 Sep 13. PMID: 36109285
3. Djordjevic SA, Milic-Rasic V, Brankovic V, Kosac A, Dejanovic-Djordjevic I, Markovic-Denic L, Djuricic G, Milcanovic N, Kovacevic S, Petrovic H, Djukic M, **Zdravkovic V**. Glucose and lipid metabolism disorders in children and adolescents with spinal muscular atrophy types 2 and 3. *Neuromuscul Disord*. 2021 Apr;31(4):291-299. doi: 10.1016/j.nmd.2021.02.002. Epub 2021 Feb 3.
4. Doknic M, Stojanovic M, Soldatovic I, Milenkovic T, **Zdravkovic V**, Jesic M, Todorovic S, Mitrovic K, Vukovic R, Miljic D, Savic D, Milicevic M, Stanimirovic A, Bogosavljevic V, Pekic S, Manojlovic-Gacic E, Djukic A, Grujicic D, Petakov M. Mapping the journey of transition: a single-center study of 170 childhood-onset GH deficiency patients. *Endocr Connect*. 2021 Aug 13;10(8):935-946. doi: 10.1530/EC-21-0274.
5. Stankovic S, Vukovic R, Vorgucin I, **Zdravkovic V**, Folic N, Zivic S, Ignjatovic A, Rancic N, Milenkovic T, Todorovic S, Mitrovic K, Jesic M, Sajic S, Bojic V, Katanic D, Dautovic S, Cvetkovic V, Saranac L, Markovic S, Tucakovic T, Lesovic S, Ljubojevic M, Ilic T, Vrebalov M, Mikic M, Jelenkovic B, Petrovic R, Saric S, Simić D, Cukanovic M, Stankovic M First report on the nationwide prevalence of paediatric type 1 diabetes in Serbia and temporal trends of diabetes ketoacidosis at diagnosis-a multicentre study. *J Pediatr Endocrinol Metab*. 2020 Nov 19;34(2):225-229. doi: 10.1515/jpem-2020-0405. Print 2021 Feb 23. PMID: 33544544
6. Ješić MD, Stock H, **Zdravković V**, Kovačević S, Savić M, Ješić MM Neonatal diabetes mellitus due to a new KCNJ11 mutation - 10 years of the patient's follow-up. *Turk J Pediatr*. 2021;63(3):490-494. doi: 10.24953/turkjped.2021.03.016.
7. Jovanovic M, Paunovic I, Zdravkovic V, Djordjevic M, Rovcanin B, Tausanovic K, Slijepcevic N, Zivaljevic V. Case-control study of primary hyperparathyroidism in juvenile vs. adult patients. *Int J Pediatr Otorhinolaryngol*. 2020;131:109895. M23, IF 1,22
8. Komazec J, Ristivojevic B, Zukic B, Zdravkovic V, Karan-Djurasevic T, Pavlovic S, Ugrin M. Analysis of the promoter regions of disease-causing genes in maturity-onset diabetes of the young patients. *Molecular Biology Reports*. 2020;47(9):6759-6768
9. Zivaljevic V, Jovanovic M, Diklic A, Zdravkovic V, Djordjevic M, Paunovic I. Differences in primary hyperparathyroidism characteristics between children and adolescents. *J Pediatr Surg*. 2019:S0022-3468(19)30670-0. M22. IF 2,09

10. Macut D, Zdravković V, Bjekić-Macut J, Mastorakos G, Pignatelli D. Metabolic Perspectives for Non-classical Congenital Adrenal Hyperplasia With Relation to the Classical Form of the Disease. *Front Endocrinol* .2019;10:681 **M22, IF 3,63**
11. Ivanisevic I, Daneman D, Zdravkovic V. A newborn with a massive goiter. *Paediatr Child Health*. 2019. 10.1093/pch/pxz099 **M23, IF 1,06**
12. Doknic M, Miljic D, Pekic S, Stojanovic M, Savic D, Manojlovic-Gacic E, Milenkovic T, Zdravkovic V, Jesic M, Damjanovic D, Lavrnice S, Soldatovic I, Djukic A, Petakov M. Single center study of 53 consecutive patients with pituitary stalk lesions. *Pituitary*. 2018;21(6):605-614. **M22, IF 3,33**
13. Komazec J, Zdravkovic V, Sajic S, Jesic M, Andjelkovic M, Pavlovic S, Ugrin M. The importance of combined NGS and MLPA genetic tests for differential diagnosis of maturity onset diabetes of the young. *Endokrynol Pol*. 2019;70(1):28-36. **M23, IF 1,52**
14. Jesić MD, Milenković T, Mitrović K, Todorović S, **Zdravković V**, Jesić MM, Bosnjović-Tucaković T, Marković S, Vorguin I, Stanković S, Sajić S Problems in diabetes management in school setting in children and adolescents with type 1 diabetes in Serbia. *Vojnosanit Pregl*. 2016 Mar;73(3):273-6. doi: 10.2298/vsp150203007j.PMID: 27295913
15. Zdravkovic V, Sajic S, Mitrovic J, Stefanovic I, Pavicevic P, Nikolic D, Dimic J, Lalic NM. THE DIAGNOSIS OF PREDIABETES IN ADOLESCENTS. *J Med Biochem* 34: 38–45, 2015, **M23, IF 1.08**
16. Peco-Antić A, Ozaltin F, Parezanović V, Milosevski-Lomić G, Zdravković V. Proteinuria in Frasier syndrome. *Srp Arh Celok Lek*. 2013;141(9-10):685-8, **M23, IF 0.17**
17. Ješić MD, Ješić MM, Stanisavljević D, Zdravković V, Bojić V, Vranješ M, Trifunović D, Necić S, Sajić S. Ketoacidosis at presentation of type 1 diabetes mellitus in children: a retrospective 20-year experience from a tertiary care hospital in Serbia. *Eur J Pediatr*. 2013 172(12):1581-5, **M21, IF 1.98**
18. Baloš Lj, Sajić S., Zdravkovic V. Elementi metaboličke kontrole kod dece obolele od dijabetesa tip 1 pre i posle uvođenja insulinskih analoga u lečenje. *Srp Arh Celok Lek*. 2011;139(9-10):605-9, **M23, IF 0.19**
19. Zdravkovic V, Hamilton JK, Daneman D, Cummings EA. Pioglitazone as adjunctive therapy in in adolescents with type 1 diabetes. *J Pediatr*. 2006;149(6):845-849. **M21, IF 3.99**
20. Turton JP, Reynaud R, Mehta A, Torpiano J, Saveanu A, Woods KS, Tiulpakov A, Zdravkovic V, Hamilton J, Attard-Montalto S, Parascandalo R, Vella C, Clayton PE, Shalet S, Barton J, Brue T, Dattani MT. Novel mutations within the POU1F1 gene associated with variable combined pituitary hormone deficiency. *J Clin Endocrinol Metab*. 2005;90(8):4762-70. **M21, IF 6.02**
21. Zdravkovic V, Daneman D, Hamilton J. Presentation and Course of Type 2 Diabetes in Youth in a Large Multiethnic City. *Diabet Med*, 2004;21(10):1144-8. **M22, IF 2.6**
22. Hamilton J, Cummings E, Zdravkovic V, Finegood D, Daneman D: Metformin as an Adjunct Therapy in Adolescents with Type 1 Diabetes and Insulin Resistance-A randomized controlled trial. *Diabetes Care* 2003;26(1):138-43. **M21, IF 7.05**
23. Peco-Antić A, Nastic-Miric D, Babic D, Milikić V, Paripovic V : Serum osteocalcin in Children with Chronic Renal failure. *Nephron* 1997;76:366-367. **M22 IF 1.56/2=0.78**
24. Peco-Antić A, Nastić-Mirić D, Milikić V, Babić D, Pejčić I, Kostić M, Paripović V, Jovanović O, Krusić D, Mancić J. [Serum osteocalcin in children with chronic renal insufficiency] *Srp Arh Celok Lek*. 1996;124(9-10):227-31.
25. Zdravković V. Update on the management of pediatric thyroid cancer. *Adv Pediatrics Adol Med*. (2018);1(1): 1-5

26. Sajić S, Zdravković V, Ješić M, Bojić V. Hipertireoidizam dečjeg doba. *Medicinski glasnik Specijalna bolnica za bolesti štitaste žlezde i bolesti metabolizma Zlatibor*, 2010;37:29-36.

24.6.2022.

SPISAK RADOVA

1. Smudja M, Milenkovic T, Minakovic I, **Zdravkovic V**, Mitic S, Milutinovic D Determinants of health-related quality of life in children and adolescents living with type 1 diabetes mellitus during the COVID-19 pandemic. S.Nurs Open. 2023 Nov;10(11):7394-7410. doi: 10.1002/nop2.1993. Epub 2023 Sep 8
2. Djordjevic S, Milic-Rasic V, Brankovic V, Kosac A, Dejanovic-Djordjevic I, Bijelic M, Dimkic-Tomic T, Markovic-Denic L, Kovacevic S, Petrovic H, Vitorovic S, Dobric Z, **Zdravkovic V** Serum leptin levels in children and adolescents with spinal muscular atrophy types 2 and 3[†]. Arch Pediatr. 2022 Oct;29(7):480-483. doi: 10.1016/j.arcped.2022.08.015. Epub 2022 Sep 13. PMID: 36109285
3. Djordjevic SA, Milic-Rasic V, Brankovic V, Kosac A, Dejanovic-Djordjevic I, Markovic-Denic L, Djuricic G, Milcanovic N, Kovacevic S, Petrovic H, Djukic M, **Zdravkovic V**. Glucose and lipid metabolism disorders in children and adolescents with spinal muscular atrophy types 2 and 3. Neuromuscul Disord. 2021 Apr;31(4):291-299. doi: 10.1016/j.nmd.2021.02.002. Epub 2021 Feb 3.
4. Doknic M, Stojanovic M, Soldatovic I, Milenkovic T, **Zdravkovic V**, Jesic M, Todorovic S, Mitrovic K, Vukovic R, Miljic D, Savic D, Milicevic M, Stanimirovic A, Bogosavljevic V, Pekic S, Manojlovic-Gacic E, Djukic A, Grujicic D, Petakov M. Mapping the journey of transition: a single-center study of 170 childhood-onset GH deficiency patients. Endocr Connect. 2021 Aug 13;10(8):935-946. doi: 10.1530/EC-21-0274.
5. Stankovic S, Vukovic R, Vorgucin I, **Zdravkovic V**, Folic N, Zivic S, Ignjatovic A, Rancic N, Milenkovic T, Todorovic S, Mitrovic K, Jesic M, Sajic S, Bojic V, Katanic D, Dautovic S, Cvetkovic V, Saranac L, Markovic S, Tucakovic T, Lesovic S, Ljubojevic M, Ilic T, Vrebalov M, Mikic M, Jelenkovic B, Petrovic R, Saric S, Simić D, Cukanovic M, Stankovic M First report on the nationwide prevalence of paediatric type 1 diabetes in Serbia and temporal trends of diabetes ketoacidosis at diagnosis-a multicentre study. J Pediatr Endocrinol Metab. 2020 Nov 19;34(2):225-229. doi: 10.1515/jpem-2020-0405. Print 2021 Feb 23. PMID: 33544544
6. Ješić MD, Stock H, **Zdravković V**, Kovačević S, Savić M, Ješić MM Neonatal diabetes mellitus due to a new KCNJ11 mutation - 10 years of the patient's follow-up. Turk J Pediatr. 2021;63(3):490-494. doi: 10.24953/turkjped.2021.03.016.
7. Jovanovic M, Paunovic I, Zdravkovic V, Djordjevic M, Rovcanin B, Tausanovic K, Slijepcevic N, Zivaljevic V. Case-control study of primary hyperparathyroidism in juvenile vs. adult patients. Int J Pediatr Otorhinolaryngol. 2020;131:109895. M23, IF 1,22
8. Komazec J, Ristivojevic B, Zukic B, Zdravkovic V, Karan-Djurasevic T, Pavlovic S, Ugrin M. Analysis of the promoter regions of disease-causing genes in maturity-onset diabetes of the young patients. *Molecular Biology Reports.* 2020;47(9):6759-6768
9. Zivaljevic V, Jovanovic M, Diklic A, Zdravkovic V, Djordjevic M, Paunovic I. Differences in primary hyperparathyroidism characteristics between children and adolescents. J Pediatr Surg. 2019:S0022-3468(19)30670-0. M22. IF 2,09
10. Macut D, Zdravković V, Bjekić-Macut J, Mastorakos G, Pignatelli D. Metabolic Perspectives for Non-classical Congenital Adrenal Hyperplasia With Relation to the Classical Form of the Disease. Front Endocrinol .2019;10:681 M22, IF 3,63
11. Ivanisevic I, Daneman D, Zdravkovic V. A newborn with a massive goiter. Paediatr Child Health. 2019. 10.1093/pch/pxz099 M23, IF 1,06

12. Doknić M, Miljić D, Pečić S, Stojanović M, Savić D, Manojlović-Gaćić E, Milenković T, Zdravković V, Jesić M, Damjanović D, Lavrnjić S, Soldatović I, Djukić A, Petaković M. Single center study of 53 consecutive patients with pituitary stalk lesions. *Pituitary.* 2018;21(6):605-614. **M22, IF 3,33**
13. Komazec J, Zdravković V, Sajić S, Jesić M, Andjelković M, Pavlović S, Ugrin M. The importance of combined NGS and MLPA genetic tests for differential diagnosis of maturity onset diabetes of the young. *Endokrynol Pol.* 2019;70(1):28-36. **M23, IF 1,52**
14. Jesić MD, Milenković T, Mitrović K, Todorović S, **Zdravković V**, Jesić MM, Bosnjović-Tucaković T, Marković S, Vorguin I, Stanković S, Sajić S Problems in diabetes management in school setting in children and adolescents with type 1 diabetes in Serbia. *Vojnosanit Pregl.* 2016 Mar;73(3):273-6. doi: 10.2298/vsp150203007j.PMID: 27295913
15. Zdravković V, Sajić S, Mitrović J, Stefanović I, Pavicević P, Nikolić D, Dimić J, Lalić NM. THE DIAGNOSIS OF PREDIABETES IN ADOLESCENTS. *J Med Biochem* 34: 38–45, 2015, **M23, IF 1.08**
16. Peco-Antić A, Ozaltin F, Parežanović V, Milosevski-Lomić G, Zdravković V. Proteinuria in Frasier syndrome.*Srp Arh Celok Lek.* 2013;141(9-10):685-8, **M23, IF 0.17**
17. Ješić MD, Ješić MM, Stanisavljević D, Zdravković V, Bojić V, Vranješ M, Trifunović D, Necić S, Sajić S. Ketoacidosis at presentation of type 1 diabetes mellitus in children: a retrospective 20-year experience from a tertiary care hospital in Serbia. *Eur J Pediatr.* 2013 172(12):1581-5, **M21, IF 1.98**
18. Baloš Lj, Sajić S., Zdravković V. Elementi metaboličke kontrole kod dece obolele od dijabetesa tip 1 pre i posle uvođenja insulinskih analoga u lečenje. *Srp Arh Celok Lek.* 2011;139(9-10):605-9, **M23, IF 0.19**
19. Zdravković V, Hamilton JK, Daneman D, Cummings EA. Pioglitazone as adjunctive therapy in adolescents with type 1 diabetes. *J Pediatr.* 2006;149(6):845-849. **M21, IF 3.99**
20. Turton JP, Reynaud R, Mehta A, Torpiano J, Saveanu A, Woods KS, Tiulpakov A, Zdravković V, Hamilton J, Attard-Montalto S, Parascandolo R, Vella C, Clayton PE, Shalet S, Barton J, Brue T, Dattani MT. Novel mutations within the POU1F1 gene associated with variable combined pituitary hormone deficiency. *J Clin Endocrinol Metab.* 2005;90(8):4762-70. **M21, IF 6.02**
21. Zdravković V, Daneman D, Hamilton J. Presentation and Course of Type 2 Diabetes in Youth in a Large Multiethnic City. *Diabet Med.* 2004;21(10):1144-8. **M22, IF 2.6**
22. Hamilton J, Cummings E, Zdravković V, Finegood D, Daneman D: Metformin as an Adjunct Therapy in Adolescents with Type 1 Diabetes and Insulin Resistance-A randomized controlled trial. *Diabetes Care* 2003;26(1):138-43. **M21, IF 7.05**
23. Peco-Antić A, Nastić-Mirić D, Babić D, Milikić V, Paripović V : Serum osteocalcin in Children with Chronic Renal failure. *Nephron* 1997;76:366-367. **M22 IF 1.56/2=0.78**
24. Peco-Antić A, Nastić-Mirić D, Milikić V, Babić D, Pejčić I, Kostić M, Paripović V, Jovanović O, Krusić D, Mancić J. [Serum osteocalcin in children with chronic renal insufficiency] *Srp Arh Celok Lek.* 1996;124(9-10):227-31.
25. Zdravković V. Update on the management of pediatric thyroid cancer. *Adv Pediatrics Adol Med.* (2018);1(1): 1-5
26. Sajić S, Zdravković V, Ješić M, Bojić V. Hipertireoidizam dečjeg doba. *Medicinski glasnik Specijalna bolnica za bolesti štitaste žlezde i bolesti metabolizma Zlatibor*, 2010;37:29-36.



Univerzitet Crne Gore

UNIVERSITY OF MONTENEGRO
BEOGRADSKA 11
81000 ZAGREB
TEL: +385 1 4646 111
WWW.UCG.CG

University of Montenegro

broj: 05-65/3

datum: 29.10.2020

26.10.2020	
med	1810

Na osnovu člana 72 stav 2 Zakona o visokom obrazovanju („Službeni list Crne Gore“ br 44/14, 47/15, 40/16, 42/17, 71/17, 55/18, 3/19, 17/19, 47/19, 72/19 i 74/20) i člana 32 stav 1 tačka 9 Statuta Univerziteta Crne Gore, Senat Univerziteta Crne Gore na sjednici održanoj 22.10.2020. godine, donio je

ODLUKU O IZBORU U ZVANJE

Dr Lidija Banjac bira se u akademsko zvanje docent Univerziteta Crne Gore za **oblasti Internistička grupa kliničkih medicinskih predmeta i Grupa predmeta uvoda u medicinu**, na Medicinskom fakultetu Univerziteta Crne Gore, na period od pet godina.

~~SENAT UNIVERZITETA CRNE GORE
PREDSJEDNIK~~

~~Prof. dr Danilo Nikolić, rektor~~

BIOGRAFIJA

Dr sci med Lidija Banjac

Rodena sam 10.05.1960. god. u Peći. Osnovnu i srednju školu sam završila sam u Peći. Za postignute uspehe u osnovnoj i srednjoj školi nagrađena sam „Vukovom diplomom“. Medicinski fakultet u Prištini upisala sam 1977.god.. Fakultet sam završila u predviđenom roku (1983. god.) sa prosečnom ocenom 10 (deset). Za postignuti uspeh na fakultetu dobitnik sam povelje Srpskog lekarskog društva „Najbolji diplomirani student“.

Specijalizaciju iz pedijatrije započela sam 1986. god. Specijalistički staž obavila sam u UDK u Beogradu, a specijalistički ispit iz pedijatrije položila 1991. god. na Medicinskom fakultetu u Beogradu sa ocenom 5 (pet) i preporukom za rad na klinikama (institutima).

Subspecijalizaciju iz neonatologije započela sam 2002.god., subspecijalistički staž obavila u neonatološkim centrima u Beogradu, a subspecijalistički ispit položila 2003.god. na Medicinskom fakultetu u Beogradu. Subspecijalistički rad („Indikacije za započinjanje i njihov uticaj na tok i trajanje mehaničke ventilacije“) odbranila sam 2004. god. i stekla zvanje subspecijaliste neonatologa.

Bila sam doktorand prve generacije postdiplomskih studija Medicinskog fakulteta u Podgorici. Magistrski rad na temu „Povezanost intrakranijalne hemoragije i nastanka retinopatije prematuriteta“, odbranila sam 2007.god.

Doktorsku disertaciju: Serumski nivo „Insulinu sličnog faktora rasta tip 1“ u predikciji bolesti prematuriteta, odbranila je 2012. god. na Medicinskom fakultetu u Podgorici i stekla zvanje doktora medicinskih nauka. Prvi sam doktor nauka koji je svoje doktorske studije u potpunosti završio na Medicinskom fakultetu u Podgorici.

Završila je edukacije iz pedijatrijske reanimacije (2002.god.) i neonatalne reanimacije (2012.god.). Završila sam edukaciju za transfontanelarnu neurosonografiju (EHO CNS-a).

Odlukom Medicinskog fakulteta Univerziteta u Beogradu od 2013.god.određena sam za Mentora za lekare na specijalizaciji iz pedijatrije – neonatologije.

Zvanje „primarijus“ dobila sam odlukom Ministarstva zdravlja Crne Gore, br. 52-7/2013 od 18.09.2014. Za docenta na katedri za pedijatriju, izabrana sam 24.05.2015. (04 br.1964)

Bila sam načelnik Centra za neonatologiju, Instituta za bolesti djece, Kliničkog centra Crne Gore, od 2016. do 2019.

Objavljivala sam radove iz oblasti intenzivne neonatalne nege, mehaničke ventilacije, prematuriteta, retinopatije prematuriteta, neonatalne miastenije gravis, neonatalnog tetanusa, intrakranijalne hemoragije, bronhopulmonalne displazije, hemofilije i dr.

Rezultati naučno-istraživačkih radova „in extenso“ proistekli iz disertacije (*Banjac L, Pro-Oxidants and Antioxidants in Retinopathy of Prematurity*) se citiraju u visoko rangiranim međunarodnim časopisima sa SCI liste (*International Journal of Genetics and Genomics; Pediatr Infect Vaccine.*)

Moja dva rada (*Banjac L. The values of serum cytokines in chronic lung disease in newborn; Banjac L, Retinopathy of prematurity and serum level of Insulin-like growth factor-1.*) iz domena - Retinopathy of prematurity, insulin-like growth factor, metaloproteinase, bila su u 2013.god. na prvom i drugom mestu TOP 20 liste BioMedLib, dok su se u 2015.god. nalazili na petom i devetom mestu.

Bila sam uvodni predavač i moderator na svetskom kongresu iz perinatalne medicine 13th World Congress of Perinatal Medicine (WCPM) 2017.god. Takode, bila sam moderator i uvodni predavač na Kongresima preventivne pedijatrije sa internacionalnim učesćem (Prvi Kongres Bečići, 2016.; Drugi Kongres Bečići, 2018.;)

Učestvovala sam u pisanju univerzitetske knjige „Neonatologija“ (autora: Prof.dr A.Doronjski i Prof.dr V.Stojanović) u izdanju Medicinskog fakulteta, Katedre za pedijatriju, Univerziteta u N.Sadu, Knjiga je „u štampi“, namenjena je subspecijalizantima iz oblasti neonatologije i biće prva knjiga iz oblasti neonatologije na ovim prostorima.

KVANTITATIVNO OCJENJIVANJE NAUČNO-ISTRAŽIVAČKE I STRUČNE BIBLIOGRAFIJE

1. NAUČNOISTRAŽIVAČKA DJELATNOST			
Radovi u naučnim časopisima			
Q2 Rad u eminentnom međunarodnom časopisu (časopis indeksiran na SCI/SCIE/SSCI/A&HCI listama, rangiran u prvih 50% časopisa po Scopusovom rangiranju)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Radović V.Saša, Lazović Ranko, Crnogorac Snezana, Banjac Lidija and Suhih Djordje. Duodenal atresia with apple-peel configuration of the ileum and absent superior mesenteric artery- Case Report. BMC Pediatrics 2016; 16:150. DOI: 10.1186/s12887-016-0690-y.	8	
Q3 Rad u međunarodnom časopisu (časopis indeksiran na SCI/SCIE/SSCI/A&HCI listama, rangiran u prvih 75% časopisa po Scopusovom rangiranju)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Banjac L, Banjac G, Kotur-Stevuljević J, Spasojević-Kalimanovska V, Gojković T, Bogavac-Stanojević N.i sur.(vodeći autor) Pro-Oxidants and Antioxidants in Retinopathy of Prematurity. Acta Clin Croat. 2018;57(3.):458-463. https://doi.org/10.20471/acc.2018.57.03.08	6	
2.	Banjac L, Banjac G, Kotur-Stevuljević J, Spasojević-Kalimanovska V, Gojković T, Bogavac-Stanojević N.i sur.(vodeći autor) Pro-Oxidants and Antioxidants in Retinopathy of Prematurity. Acta Clin Croat. 2018;57(3.):458-463. https://doi.org/10.20471/acc.2018.57.03.08	6	
3.	Bokan V, Dasic Z, Nejkov S, Banjac L, Nikolic E. „Does diabetes affect stability to people with unilateral transtibial amputation? Srp Arh Celok Lek. 2018 Nov-Dec; 146(11-12):689-693.	6	
4.	Banjac L, Bokan V. Retinopathy of prematurity and serum level of Insulin-like growth factor-1 Acta Clin Croat. (Science Citation Index Expanded) 2012; 51(2):209-13. ISSN 0353-9466	6	
5.	Banjac L, Nikcevic D, Vujosevic D, Raonic J, Banjac G. Tachicardia in newborn with enterovirus infection - Case Report. Acta Clin Croat. (Science Citation Index Expanded) 2014; 53 (1) 102-6. ISSN 0353-9466	6	
Q4 Rad u međunarodnom časopisu (ostali časopisi indeksirani na SCI/SCIE/SSCI/A&HCI listama)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Banjac L. Vrednosti citokina u serumu kod hronične plućne bolesti novorođenčeta. Med Pregl; 2011; 64 (7-8):362-7. N. Sad. YU ISSN 0025-8105 UDK 616.24-036.1-07-053.31 DOI: 10.2298/MPNS1108362B	4	
2.	Banjac L, Bokan V, Karisik M. Correlation between intracranial hemorrhage in preterm infants and serum levels of insulin-like growth factor. HealthMed (Science Citation Index Expanded) 2012, 6(4) 1232-9. ISSN 1840-2291	4	
3.	Bokan Mirkovic V, Banjac L, Dasic Z, Dapcevic M. Non-Pharmacological Treatment Of Diabetic Polyneuropathy By Pulse Electromagnetic Field. HealthMed (Science Citation Index Expanded) 2012; 6(4) 1291-6. ISSN 1840-2291		
Q5 Rad u međunarodnom časopisu koji nije indeksiran na SCI/SCIE/SSCI/A&HCI listama		UKUPNO ZA REFERENCU	ZA KANDIDATA

1.	Banjac L. Human papillomavirus infection in newborns; how to diagnose? EC Paediatrics /in press/	4	
2.	Banjac L. Serumski nivo "Insulinu sličnog faktora rasta tip 1" u predikciji retinopatije prematuriteta, PONS-Medicinski časopis, 2010; 7(1) 3-8. ISSN 1820-2411	4	
Q6 Rad u časopisu nacionalnog značaja		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Banjac L, Marić I, Bajmak A. Konzervativni tretman omfalocela. Medical Journal of Montenegro,2013; 1(1): 1-3. ISDN 1800-9964	2	
Radovi na naučnim konferencijama, učešća na izložbama, i slično			
K1 Predavanje po pozivu na međunarodnom skupu štampano u cjelini (neophodno pozivno pisino)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Banjac L. Structure of neonatal morbidity in Montenegro. 13th World Congress of Perinatal Medicine 2017 Belgrade, Serbia. 13th WCPM 2017 Invited Speakers Abstracts, J. Perinat. Med. 45, str. 68. DOI 10.1515/jpm-2017-2007 (Uvodno predavanje) Regional session: Chairpersons: Nebojsa Radunovic, Serbia and Lidija Banjac, Montenegro.	3	
K3 Naučni rad na nacionalnom naučnom skupu (štampano u cjelini)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Banjac L. Neonatalna sepsa prevencija, dijagnostika i terapija. Uvodno predavanje. Prvi kongres preventivne pedijatrije Crne Gore sa međunarodnim učešćem, Bečići 2016. U: Zbornik radova, Vol.65, (Suppl.1):122-8. ISSN-0419-7747.	1	
2.	Banjac L. Dakić D, Rudanović M, Banjac G. Prevencija kongenitalne citomegalovirusne infekcije u perinatologiji. Uvodno predavanje. Drugi kongres preventivne pedijatrije Crne Gore sa međunarodnim učešćem, Bečići 2018. U: Zbornik radova, Vol.67, (Suppl.1):91-3. ISSN-0419-7747.	1	
K4 Saopštenje na međunarodnom naučnom skupu (štampano u izvodu)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Dakić D, Dragas Lj, Rudanović R, Banjac L, Dakić T, Vujović B. Urinary tract infections in newborns. 5th Congress of European Academy of Pediatric Societies EAPS, Barcelona, Spain, 2014.EAPS-0861 No 267.	0.5	
2.	Banjac L, Borović S, Dakić D, Banjac G. Incidence and risk factory for Retinopathy of prematurity. In: Selected Abstracts of the 4th International Congress of UENPS; Athens (Greece); December 11th-14th 2014.J Pediatr Neonat Individual Med. 2015;4(1):e040103.doi:10.7363/040103.	0.5	
3.	Ivelja B, Banjac L, Nikčević D, Vušurović N. Kliničke manifestacije enterovirusne infekcije. XXXIV Timočki medicinski dani, 2015.U: Timočki medicinski glasnik - Zbornik sažetaka. Vol. 40 Suppl. 1; 36-7: YU ISSN 0350-2899.		
4.	Banjac L, Banjac G, Dragaš Lj, Danojla Dakić D, Banjac G. Insulin-like growth factor type I and intrauterine growth. 12th WCPM Madrid 2015. Abstract book P-0192:632.		

5.	Dragaš Lj, Banjac L, Banjac G, Dakić D, Banjac G. Severe enterovirus infection in newborn (case report). 12th WCPM Madrid 2015. Abstract book P-0151:591.		
6.	Banjac L, Banjac G. Cerebral venous sinus thrombosis in neonates. 9th International Conference on Neonatology and Pediatric neurology 2016 Valencia, Spain. J Neonatal Biol 2016; 5:4(Suppl) http://dx.doi.org/10.4172/2167-0897.C1.003		
7.	Banjac L. Structure of neonatal morbidity in Montenegro. 13th World Congress of Perinatal Medicine 2017 Belgrade, Serbia. 13th WCPM 2017 Invited Speakers Abstracts, J. Perinat. Med. 45, str. 68. DOI 10.1515/jpm-2017-2007 .		
8.	Rudanovic Perovic M, Banjac L, Rudanovic R, Dakic D, Lekic E, Dragas Lj, Buric S, Vukicevic J, Raicevic M. Premature infant as a patient. 13th World Congress of Perinatal Medicine 2017 Belgrade, Serbia. 13th WCPM 2017 Abstract book, J. Perinat. Med. 45P-0181. DOI 10.1515/jpm-2017-2007		
9.	Buric S, Banjac L, Rudanovic R, Dakic D, Lekic E, Dragas Lj, Rudanovic Perovic M, Vukicevic J. Characteristics of morbidity of preterm infants in relation to the birth weight. 13th World Congress of Perinatal Medicine 2017 Belgrade, Serbia. 13th WCPM 2017 Abstract book, J. Perinat. Med. 45P-0190. DOI 10.1515/jpm-2017-2007		
10.	Dakic D, Dragas Lj, Rudanovic R, Banjac L, Dakic T, Vujovic B. Urinary tract infections in newborns. 5th Congress of European Academy of Pediatric Societies EAPS, Barcelona, Spain, 2014. EAPS-0861 No 267.		
11.	Dunjić B, Oros A, Antonović O, Ristovski N, Banjac L, Stanković M, Dunjić M. Udruženost asfiksije sa teškom retinopatijom kod prevremeno rođene dece koja zahtevaju intervenciju laserom. U: 45. Pedijatrijski dani Srbije sa međunarodnim učešćem, Niš. Udruženje pedijatarata Srbije. Pedijatrijska sekcija SLD; 2013. Zbornik radova, str. 144.		
12.	Banjac L, Dunjić B, Ristovski-Jakšić N, Dragas Lj, Banjac G. Prematurus I bolest i prematuriteta. U: 45. Pedijatrijski dani Srbije sa međunarodnim učešćem, Niš. Udruženje pedijatarata Srbije. Pedijatrijska sekcija SLD; 2013. str. 143		
13.	Borovic S, Dakic D, Dragas Lj, Lekic E, Banjac L, Rudanovic R, Oros A. Treatment and screening of Retinopathy of prematurity In Montenegro. U: X-th South-Eastern European Ophthalmological Society (SEEOS), III-rd Congress of Ophthalmologists of Macedonia with international participation. Ohrid, Macedonia. 2013. 235.		
14.	Banjac L, Dragas Lj, Dakic D, Raonic J, Banjac G. Respiratory Distress Syndrome and Perinatal Asphyxia - the most common indication for mechanical ventilation. U: 24th Annual Meeting of the European Society of Paediatric and Neonatal Intensive Care ESPNIC. Caring without Borders. Rotterdam, The Netherlands. 2013. PP:140.		

15.	Banjac L, Raonic J, Banjac G. Perinatal asphyxia indication for starting mechanical in newborn. 32nd Balkan Medical Week Balkan Medical Union 2012. O52: 79.		
16.	Banjac L, Borovic S, Dakic D, Dragas Lj, Raonic J, Banjac G. Serum Level of Insulin Like Growth Factor-1 at the beginning of the Retinopathy of Prematurity Phase 2. 3rd International Congress of UENPS 2012, Acta Med Port 2012;25(S2):184. ISSN:0870-399X e- ISSN: 1646-0758.		
17.	Borović S, Oros A, Banjac L. Ten years of experience in the treatment of ROP in Montenegro. II Kongres oftalmologa BiH, Banja Luka, BiH 2012. PP-82.		
18.	Miljkovic M, Gojkovic T, Stojakovic P, Banjac G, Slavkovic M, Ivanisevic J, Kotur-Stevuljevic J, Banjac L. Paraoxonase-1 (PON-1) status in the premature newborn. 5th Congres of Pharmacy of Macedonia, Ohrid R. Macedonia 2011. PP-86: str. 27. Macedonian Pharmaceutical Bulletin, 2011; 57 (suppl), 171.		
19.	Banjac G, Stojakovic P, Slavkovic M, Ivanisevic J, Miljkovic M, Gojkovic T, Kotur-Stevuljevic J, Banjac L. The values of parameters of oxidative status as a possible factor in predicting premature retinopathy. 5th Congres of Pharmacy of Macedonia, Ohrid R. Macedonia 2011. PP-85 str 27. Macedonian Pharmaceutical Bulletin, 2011; 57 (suppl), 170-171.		
20.	Mijovic G, Banjac L. Blood culture isolates during one year in a Center of neonatology in Montenegro. U: The 3rd Congress of the European Academy of Pediatric Societies EAPS. Copenhagen European Academy of Pediatric Research (2010) 68,684–685; doi: 10.1203/00006450-201011001-01383.		
21.	Rudanović R, Dakić D, Banjac L, Lekić E, Dragaš Lj, Rudanović M. Protokol za UZ praćenje i otkrivanje intrakranijalnih abnormalnosti kod rizičnih i prijevremeno rođenih novorođenčadi. South East European Congress in Perinatal Medicine, Belgrade, 2009; 34-7.		
22.	Dragas S, Andric B, Banjac L. Infectious Mononucleosis Complicated with Acute Hemolytic Anemia. 2nd Congress of the European Academy of Paediatrics, Nice, France, 2008. Arch Dis Child 2008;93(2):134. ISSN 0003-9888		
23.	Dragas S, Djecevic J, Banjac L. Complications of mononucleosis infection. 2nd Congress of the European Academy of Paediatrics, Nice, France, 2008. Arch Dis Child 2008;93: ps 134. ISSN 0003-9888		
24.	Banjac L, Dakić D, Borović S, Rudanović R, Dragas Lj, Lekić E. Predikcija premature retinopatije. U: 41. Pedijatrijski dani Srbije sa međunarodnim učešćem, Niš. Udruženje pedijatarata Srbije. Pedijatrijska sekcija SLD; 2008. str. 169 (Oralna prezentacija).		
25.	Banjac L, Rudanović R, Lj. Dragaš. Retinopatija prematuriteta u Crnoj Gori – Internacionalni Workshoop ROP- u, N.Sad, 2007.		
26.	Rudanović R, Dakić D, Dragaš Lj, Raspopović S, Raičević S, Lekić E, Banjac L, Miketić V, Kočović A. Perinatalna dijagnoza I njen značaj u tretmanu anomalija gastrointestinalnog trakta (GIT-a). VI Kongres perinatalne medicine sa međunarodnim učešćem, Beograd, Srbija, 2007. Zbornik radova, 148.		
27.	Rudanović R, Lekić E, Dakić D, Banjac L, Dragaš Lj, Rudanović M, Marojević G. Respiratorni distres novorođenčeta /evaluacija i terapija/. Zbornik radova Jubilarni XX simpozijum Sekcije za perinatalnu medicine, Beograd. 2005. str. 147.		
K5 Saopštenje na nacionalnom naučnom stupu (štampano u izvodu)		UKUPNO ZA REFERENCU	ZA KANDIDATA

1.	Borović S, Pojužina N, Dakić D, Banjac L, Dragaš Lj, Lekić E, Rudanović R. Retinopathy of prematurity. 1.Kongres oftalmologa Crne Gore sa međunarodnim učešćem, Bečići, oktobar 2015. U: Knjiga sažetaka Crnogorsko oftalmološko društvo str 41. ISBN 978 9940-9696-0-8 COBISS.CG-ID 28118032.	0.2	
2.	Adžić M, Savić A, Banjac L, Vujović T, Obradović M. Uloga fizikalne terapije u liječenju deformiteta stopala tipa pes calcaneovalgus Četvrti kongres Udružena fizijatar Crne Goresa međunarodnim učešćem, Cetinje, septembar, 2015. U: Zbornik radova 2015. str.32-34. ISBN 978-9940-9062-3-8 COBISS.CG-ID 27947024.	0.2	
3.	Banjac L, Banjac G, Dragaš Lj, Dakić D, Janković M. Williamsov sindrom – prikaz slučaja. XV Kongres Društva ljekara Crne Gore, Bečići, 2015. U: Medicinski zapisi, Vol.64. Br.1; P_025: 139-40. ISSN-0419-7747.		
4.	Nikčević D, Rudanović R, Banjac L, Dragaš Lj. Bradikardija kod novorođenčeta – prikaz slučaja. XV Kongres Društva ljekara Crne Gore, Bečići 2015. U: Medicinski zapisi, Vol.64. Br.1; P_013: 111-2. ISSN-0419-7747.		
5.	Dakić D, Dragaš Lj, Rudanović R, Banjac L, Dakić T, Lekić E. Problemi preterminske novorođenčadi rođene blizu termina. XV Kongres Društva ljekara Crne Gore, Bečići, 2015. U: Medicinski zapisi, Vol.64. Br.1; P_051: 135-6. ISSN-0419-7747.		
6.	Rudanović R, Perović M, Lekić E, Dakić D, Banjac L, Dragaš Lj, Vukićević J. Neonatalni apstinencijalni sindrom (NAS). XV Kongres Društva ljekara Crne Gore, Bečići, 2015. U: Medicinski zapisi, Vol.64. Br.1; P_057: 138-9. ISSN-0419-7747.		
7.	Burić S, Banjac L, Dakić D, Dragaš Lj, Lekić E, Rudanović R, Rudanović M. Uticaj prevencije prijevremenog rođenja na kvalitet rada u neonatalnim centrima. Prvi kongres preventivne pedijatrije Crne Gore sa međunarodnim učešćem, Bečići 2016. U: Zbornik radova, Vol.65, (Suppl.1):220. ISSN-0419-7747.		
8.	Banjac L. Tranzitorna neonatalna miastenija gravis. U: IV Pedijatrijski dani Crne Gore, Podgorica: Udruženje pedijatar Srbije i Crne Gore;2000. str 77. (oralna prezentacija)		
9.	Rudanović R, Dakić D, Vuković B, Stanišić J, Miljanović O, Banjac L. Organizacija neonatalne zdravstvene zaštite u Crnoj Gori za desetogodišnji period /Struktura morbiditeta i mortaliteta hospitalizovane novorođenčadi) IV Pedijatrijski dani Crne Gore 13.-15. decembra 2000, Podgorica - Zbornik radova, strana 72. (oralna prezentacija)		
10.	Dakić D, Rudanović R, Vuković B, Stanišić J, Banjac L. Hipoksično – ishemična encefalopatija – dijagnostički i terapijski problem. IV Pedijatrijski dani Crne Gore 13.- 15. decembra 2000, Podgorica – Zbornik radova, strana 72-75. (oralna prezentacija)		
11.	Banjac L, Adamović T. Neonatalni tetanus. U: XI Kongres Društva ljekara Crne Gore, H. Novi: Društvo ljekara Crne Gore; 2001. str.19. (oralna prezentacija)		
12.	Banjac L, Dakić D, Lj. Dragaš. Indikacije za započinjanje mehaničke ventilacije (2000/2001). U: III Kongres pedijatar		

	Srbije i Crne Gore sa međunarodnim učešćem, H. Novi: Udruženje pedijatarata Srbije i Crne Gore; 2002.str.369. (oralna prezentacija)		
13.	Borović S, Rudanović R, Banjac L, Lekić E, Dragaš Lj. Prikaz slučajeva retinopatije prematuriteta na Institutu za bolesti djece u vremenskom periodu od 1996-2001 godine. III Kongres pedijatarata Srbije i Crne Gore sa međunarodnim učešćem Herceg Novi 2002. Zbornik radova, strana 352.		
14.	Banjac L, Dragaš Lj. Mehanička ventilacija u Centru za neonatologiju u Podgorici. U: XII Kongres Društva ljekara Crne Gore sa međunarodnim učešćem Ulcinj: Društvo ljekara Crne Gore; 2005. str 105. YUISSN-0419-7747. (oralna prezentacija)		
15.	Rudanović R, Dakić D, Banjac L. Rani rast i razvoj novorođenčeta (adaptacija novorođenčeta u ranom neonatalnom periodu). U: XII Kongres Društva ljekara Crne Gore sa međunarodnim učešćem Ulcinj: Društvo ljekara Crne Gore; 2005. str 97. YUISSN-0419-7747.		
16.	Rudanović R, Dakić D, Banjac L, Rudanović M, Janović B, Sorat N. Evaluacija faktora rizika za razvoj respiratornog distress sindroma novorođenčadi. U: XII Kongres Društva ljekara Crne Gore sa međunarodnim učešćem Ulcinj: Društvo ljekara Crne Gore; 2005. str. 43. YUISSN-0419-7747		
17.	Banjac L, Dakić D, S. Borović. Incidencija prematurne retinopatije, U:XIII Kongres Društva ljekara Crne Gore, Bečići, 2009. Medicinski zapisi, (Suppl. 1), P189: 135. ISSN 04197747		
18.	Banjac L, Dragaš Lj, D. Dakić. Prijem pretermnske novorođenčadi Centar za neonatologiju, U: XIII Kongres Društva ljekara Crne Gore, Bečići, 2009. Medicinski zapisi, (Suppl. 1), P190: 136. ISSN 04197747		
19.	Dakić D, Banjac L, Rudanović R, Miranović V. Klinička slika novorođenčadi sa kongenitalnim anomalijama srca. U: XIII Kongres Društva ljekara Crne Gore, Bečići, 2009. Medicinski zapisi, (Suppl. 1), P194: 137. ISSN 04197747		
20.	Lekić E, Dragaš Lj, Dakić D, Banjac L. Uzročnici površinskih infekcija u novorođenčeta U: XIII Kongres Društva ljekara Crne Gore, Bečići, 2009. Medicinski zapisi, (Suppl. 1), P198: 139. ISSN 04197747		
21.	Rudanović R, Rudanović-Perović M, Raičević J, Dakić D, Dragaš Lj, Banjac L, Lekić E. Colodion baby U:XIII Kongres Društva ljekara Crne Gore, Bečići 2009. Društvo ljekara Crne Gore; P201:140. ISSN 04197747		
22.	Banjac L, Dragaš Lj, Dakić D. Hemožilija u novorođenčeta – prikaz slučaja. U: XXXI Sabor ljekara sjeverne Crne Gore i jugozapadne Srbije, Bijelo Polje: Društvo Ljekara Crne Gore i Srpsko lekarsko društvo; 2010, str.68-9.		
23.	Dakić D, Dragaš Lj, Rudanović R, Banjac L, Dakić T, Vujović B. Infekcije urinarnog trakta kod novorođenčadi. U: XIII Kongres Društva ljekara Crne Gore: Medicinski zapisi, 2013. 62 (1), str. 32. ISSN-0419-7747		
24.	Banjac L, Dakić D, Dragaš Lj, Banjac G. Prematurus i bolesti prematuriteta. U: XIII Kongres Društva ljekara Crne Gore: Medicinski Zapisi, 2013. 62 (1), P. 012. str. 32. ISSN-0419-7747		
Uređivačka i recenzentska djelatnost			
R11 Recenziranje radova objavljenih u međunarodnim časopisima (Q1, Q2, Q3, Q4)		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Shankar A. et al. "Radiculitis and its current approach" International Journal of Clinical Chemistry and Laboratory	2	

	Medicine (IJCCLM) (Q1) Volume 5, Issue 2, 2019. PP 25-34 ISSN 2455-7153 DOI: http://dx.doi.org/10.20431/2455-7153.0502005		
2.	Lucio KCDV, Bentlin MR, Augusto ACL, et al. The ROPScore as a Screening Algorithm for Predicting Retinopathy of Prematurity in a Brazilian Population. Clinics (Q2). 2018; Clinics, 73:e377. PMID: 30066729 PMCID: PMC6055020 doi:10.6061/clinics/2018/e377	2	
R12 Recenziranje radova objavljenih u ostalim časopisima		UKUPNO ZA REFERENCU	ZA KANDIDATA
1.	Das A, Mhanna M, Sears J, et al. (2018.) Effect of fluctuation of oxygenation and time spent in the target range on retinopathy of prematurity in extremely low birth weight infants. (Q3) J Neonatal Perinatal Med 2018;11(3):257–263. doi:10.3233/NPM-1757- Clinical Trial. PMID 30103354	0.5	
2.	Maryam M. Prognosis of Adult Critically Ill Cancer Patients admitted to Intensive Care Unit: A Systematic Review” “Medical Research and Clinical Case Reports”2018. (Q3) Vol.2:184-96. ISSN: 2578-3416.	0.5	
3.	“Use of modern family planning methods among women of south-western Nigeria: a snapshot”. “Medical Research and Clinical Case Reports” (Q3) Manuscript ID:MRCR18-RA-0047 Category: Research Article		
4.	Magdy M. “Cardiac Glycosides: From Heart Failure to Cancer Treatment” PY - 2019/07/14 Medical Research and Clinical CaseReports (Q3). ISSN: 2578-3416		
5.	Shafti S.S. “Resistant Obsessive Compulsive Disorder: A Preliminary Study with Third Generation Antipsychotic as Supplementary Treatment. Medical Research and Clinical CaseReports (Q3); 2019.Vol.3(1): 43-49. ISSN: 2578-3416		