

Dr. sci. **Sanin Haverić**, naučni savjetnik, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „Genetika“, predsjednik,

Dr. sci. **Amela Pilav**, naučna saradnica, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „Genetika“, članica i

Dr. sci. **Jasmin Ramić**, naučni saradnik, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „Genetika“, zamjenski član.

## **VIJEĆU**

### **Univerzitet u Sarajevu - Instituta za genetičko inženjerstvo i biotehnologiju**

Odlukom Vijeća Univerzitet u Sarajevu - Instituta za genetičko inženjerstvo i biotehnologiju, broj 154-2/23 od 20. 04. 2023. a na osnovu člana 29. Zakona o naučnoistraživačkoj djelatnosti Kantona Sarajevo („Službene novine Kantona Sarajevo“, broj 26/16), imenovana je **Komisija za izbor u naučno zvanje „naučni saradnik“** za oblast „**Genetika**“, koju čine:

1. Dr. sci. **Sanin Haverić**, naučni savjetnik, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „**Genetika**“, predsjednik,
2. Dr. sci. **Amela Pilav**, naučna saradnica, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „**Genetika**“, članica,
3. Dr. sci. **Jasmina Čakar**, naučna savjetnica, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „**Molekularna biologija**“, članica i
4. Dr. sci. **Jasmin Ramić**, naučni saradnik, Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, oblast: „**Genetika**“, zamjenski član.

Nakon uvida u dostavljene materijale, Komisija konstatira da se na „Konkurs za izbor u naučno zvanje: **Naučni saradnik** za oblast **Genetika**“, objavljen 31. 03. 2023. na web stranici Univerziteta u Sarajevu i web stranici Univerzitet u Sarajevu – Instituta za genetičko inženjerstvo i biotehnologiju, prijavila jedna kandidatkinja - dr. sci. **Mirela Džehverović**, koja je blagovremeno dostavila potpunu prijavu (Potvrda Sekretarijata Instituta br. 159/23 od 18. 04. 2023.).

U skladu sa članom 29. Zakona o naučnoistraživačkoj djelatnosti Kantona Sarajevo (Službene novine Kantona Sarajevo, br. 26/16), podnosimo sljedeći Izvještaj sa elaboracijom i ocjenom priložene dokumentacije.

# IZVJEŠTAJ

## 1. BIOGRAFSKI PODACI O KANDIDATU

### *Osnovni podaci*

Ime i prezime: **Mirela Džehverović**  
Mjesto rođenja: Sarajevo (Općina Centar), Bosna i Hercegovina  
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### *Obrazovanje*

#### **Doktor bioloških nauka u oblasti genetike**

**2019-2022.** Univerzitet u Sarajevu – Prirodno-matematički fakultet

Naslov rada: *Genetička diferencijacija između srednjovjekovne i recentne humane populacije u BiH*

#### **Magistar biologije - genetika**

**2017-2018.** Univerzitet u Sarajevu – Prirodno-matematički fakultet

Naslov rada: *Analiza kratkih repetitivnih sekvenci humanih koštanih ostataka sa arheoloških lokaliteta Kopošići i Divičani*

#### **Bakalaureat/Bachelor biologije - genetika**

**2014-2017.** Univerzitet u Sarajevu – Prirodno-matematički fakultet

Naslov rada: *Analiza 13 polimorfizama asociranih sa razvojem pretilosti i fizičkom sposobnosti*

#### **Nastavnik biologije**

**2010.** Univerzitet u Sarajevu – Prirodno-matematički fakultet

#### **Srednja škola**

**1988-1992.** Srednja medicinska škola - pedijatrijska sestra

#### **Osnovna škola**

**1980-1988.** Osnovna škola Džavid Haverić, Sarajevo

### *Radno iskustvo*

#### **Univerzitet u Sarajevu - Institut za genetičko inženjerstvo i biotehnologiju**

- Samostalni viši laborant, 2018 do danas,
- Viši laborant, 2008 - 2018.

#### **BIHAMK d.o.o.**

- Referent za aviosaobraćaj, IATA agent, 2003 - 2008.

#### **Univerzitet u Sarajevu – Prirodno-matematički fakultet**

- Laborant, 2001 – 2002.

## 2. PUBLIKACIJE KANDIDATA

### 2.1. Naučni radovi

1. **Džehverović M**, Jusić B, Pilav A, Lukic T, Cakar J. (2023). Kinship analysis of skeletal remains from the Middle Ages. *Forensic Science International, Genetics* 63:102829.
2. Jusic B, Pilav A, **Džehverović M**, Cakar J. (2023). Analysis of aborted fetal material using autosomal STR markers in forensic cases of sexual assault. *Journal of Forensic and Legal Medicine*, 94:102468.
3. Halilović E, Ahmić A, Kalajdžić A, Ismailović A, Čakar J, Lasić L, Pilav A, **Džehverović M**, Pojskić N. (2022). Paternal genetic structure of the Bosnian-Herzegovinian Roma: A Y-chromosomal STR study. *American Journal of Human Biology*, 34(6):e23719.
4. Jusić B, **Džehverović M**, Pilav A, Terzić S, Zukić S, Bujak E, Čakar J. (2022). Sex determination of medieval skeletal remains: evaluation of anthropological, odontological and genetic methods. *Journal of Bioanthropology*, 2(2):37-44.
5. Jusić B, Pilav A, **Džehverović M**, Čakar J. (2022). DNA paternity testing with two mismatches. *Jordan Journal of Biological Sciences*, 15(3):387-394.
6. **Džehverović M**, Čakar J, Bujak E, Pilav A, Ramić J, Kalajdžić A, Pojskić N. (2021). DNA analysis of skeletal remains of an important historical figure from the period of Medieval Bosnia. *International Journal of Osteoarchaeology*, 31(5):857-865.
7. Čakar J, **Džehverović M**, Pilav A. (2020). DNA analysis of thirty-eight years old stillborn's skeletal remains in case of disputed maternity. *Forensic Science International: Genetics*, 47:102294.
8. Pilav A, Pojskić N, Kalajdžić A, Ahatović A, **Džehverović M**, Čakar J. (2020). Analysis of forensic genetic parameters of 22 autosomal STR markers (PowerPlex® Fusion System) in a population sample from Bosnia and Herzegovina. *Ann of Hum Biol*, 47(3):273-283.
9. Hadžić Metjahić N, Vidović M, Čakar J, **Džehverović M**, Pilav A, Dogan S, Marjanović D. (2019). Genetic variation study on fifteen STR loci in isolated Slovenian "Inland Island" human populations of the Selška Valley Region. *Homo: Internationale Zeitschrift für die Vergleichende Forschung am Menschen*, 70(2):129-137.
10. Zametica B, Mačar S, Kalajdžić A, Pilav A, **Džehverović M**, Čakar J. (2018). Mutation Analysis of Autosomal STR Loci Commonly Used in Paternity Testing in Bosnia and Herzegovina. *Genetics & Applications*, 2(1):14-18.
11. **Džehverović M**, Ahatović A, Pojskić N, Lojo-Kadrić N, Pilav A, Marjanović D, Cakar J. (2018). Decrease in BMI: personal genotyping, individual diet and exercise plan. *Journal Of Health Sciences*, 7(2):91-98.
12. Beribaka M, Hafizović S, Pilav A, **Džehverović M**, Marjanović D, Čakar J. (2017). Comparison of two different multiplex systems in calculating kinship among close relatives. *Genetics & Applications*, 1(1):51-58.
13. Husukić Z, Pilav A, Čakar J, **Džehverović M**, Dogan S, Marjanović D. (2017). Comparative analysis of the efficiency of PowerPlex 16 and PowerPlex Fusion multiplex STR kits in the analysis of the challenging forensic samples. *Genetics & Applications*, 1(2):50-55.
14. Pilav A, Pojskić N, Ahatović A, **Džehverović M**, Čakar J, Marjanović D. (2017). Allele frequencies of 15 STR loci in Bosnian and Herzegovinian population. *Croatian Medical Journal*, 58:3:250-256.

15. Čakar J, Pilav A, **Džehverović M**, Ahatović A, Haverić S, Ramić J, Marjanović D. (2017). DNA identification of commingled human remains from the cemetery relocated by flooding in central Bosnia and Herzegovina. *Journal of Forensic Sciences*, 63(1):295-298.
16. Marjanović D, Hadžić Metjahić N, Čakar J, **Džehverović M**, Dogan S, Ferić E, Džijan S, Škaro V, Projić P, Madžar T, Rod E, Primorac D. (2015). Identification of human remains from the Second World War mass graves uncovered in Bosnia and Herzegovina. *Croatian Medical Journal*, 56:3:257-262.
17. Čakar J, Kovačević L, **Džehverović M**, Hadžić N, Pilav A, Muhić N, Karišik A, Marjanović D. (2013). Optimization of forensic DNA analysis of botanical traces, *Proceedings of 1st Symposium of Geneticists in Bosnia and Herzegovina*, February 17-18, 2011, Sarajevo, 75-79.
18. Hadžić N, Kovačević L, Čakar J, **Džehverović M**, Marjanović D. (2013). Testing of the possibility to generate a DNA profile from Collected fingerprints, *Proceedings of 1st Symposium of Geneticists in Bosnia and Herzegovina*, February 17-18, 2011, Sarajevo, 66-70.
19. Sirbubalo A, Buljugić Dž, Kovačević L, Čakar J, **Džehverović M**, Marjanović D (2013). Comparative analysis of efficacy of three different extraction protocols for DNA from biological trace of anagen hair, *Proceedings of 1st Symposium of Geneticists in Bosnia and Herzegovina*, February 17-18, 2011, Sarajevo, 75-80.
20. Causevic-Ramosevac A, Kovacevic L, Buljugic Dz, **Džehverovic M**, Cakar J, Marjanovic D. (2012). Comparative analysis of three different short tandem repeat multiplex system approaches in fingerprint DNA analysis. *HealthMED*, 10(6):3534-3539.
21. Musanovic J, Filipovska-Musanovic M, Kovacevic L, Buljugić Dz, **Džehverovic M**, Avdic J, Marjanovic D (2011). Determination of combined sibship indices “gray zone” using 15 STR loci for central Bosnian human population. *Mol Biol Rep*, 39:5195-5200.
22. Čenanović M, Pojskić N, Kovačević L, **Džehverović M**, Čakar J, Musemić Dž, Marjanović D. (2010). Diversity of Y-short tandem repeats in the representative sample of the population of canton Sarajevo residents, Bosnia and Herzegovina. *Coll. Antropol*, 34(2):545-550.
23. Marjanović D, Durmić-Paišć A, Kovačević L, Avdić J, **Džehverović M**, Haverić S, Ramić J, Kalamujić B, Lukić Bilela L, Škoro V, Projić P, Bajrović K, Drobnich K, Davoren J, primorac D. (2009). Identification of Skeletal Remains of Communist Armed Forces Victims During and After World War II: Combined Y-chromosome Short Tandem Repeat (STR) and MiniSTR Approach. *Croatian Medical Journal*, 50(3):296-304.
24. Kovačević L, Buljigić Dž, **Džehverović M**, Pašić-Durmić A, Marjanović D. (2010). Application of the PowerPlex® S5 MINISTR System in Forensic DNA Analysis of Human Telogenic Hair Shafts. *Healthmed*, 4(1):143-151.

## 2.2. *Stručni radovi*

1. **Džehverović M**. (2021). Pojmovnik odabrane biološke terminologije. *Udruženje genetičara u Bosni i Hercegovini, Bilten*, 12:17-20.
2. **Džehverović M**, Pilav A, Bujak E, Čakar J. (2017). DNK analizom arheoloških ostataka iz nekropole Kopošići otkrivena važna bosanskohercegovačka historijska ličnost. *Udruženje genetičara u Bosni i Hercegovini, Bilten*, 2:4-5.

### 2.3. Referati na naučnim skupovima

1. Miralem M, Jusic B, **Dzehverovic M**, Kalajdzic A, Pilav A, Cakar J. (2022). Evaluation of mitochondrial DNA of skeletal remains from period of Medieval Bosnia. 12<sup>th</sup> ISABS Conference on Forensic and Anthropological Genetics and Mayo Clinic Lectures in Individualized Medicine, Dubrovnik, Croatia. Journal of Bioanthropology, 266.
2. Jusic B, **Dzehverovic M**, Bujak E, Pilav A, Cakar J. (2022). DNA analysis revealed kinship between people from a small community living in Medieval Bosnia. 12<sup>th</sup> ISABS Conference on Forensic and Anthropological Genetics and Mayo Clinic Lectures in Individualized Medicine, Dubrovnik, Croatia. Journal of Bioanthropology, 267.
3. Jusić B, Pilav A, **Džehverović M**, Čakar J. (2021). Paternity testing with two autosomal STR mismatches: cases report. 2nd Congress of Geneticists in Bosnia and Herzegovina with International Participation, Sarajevo, Bosnia and Herzegovina. Genetics & Applications (Special Edition)-Book of Abstracts, 64.
4. **Džehverović M**, Bujak E, Pilav A, Jusić B, Pojskić N, Čakar J. (2021). DNA analysis of human skeletal remains from the medieval necropoles in Bosnia and Herzegovina – a genetic structure of our ancestors and prediction of their migrations. 2nd Congress of Geneticists in Bosnia and Herzegovina with International Participation, Sarajevo, Bosnia and Herzegovina. Genetics & Applications (Special Edition)-Book of Abstracts, 83.
5. Burkić S, Kalajdžić A, Pilav A, **Džehverović M**, Čakar J. (2021). Frequency analysis of 12 selected X-STR markers in population of Bosnia and Herzegovina. 2nd Congress of Geneticists in Bosnia and Herzegovina with International Participation, Sarajevo, Bosnia and Herzegovina. Genetics & Applications (Special Edition)-Book of Abstracts, 86.
6. Kovačević L, **Džehverovic M**, Pilav A, Čakar J (2021). The effect of storage conditions of blood traces on the DNA analysis in forensic cases. 2nd Congress of Geneticists in Bosnia and Herzegovina with International Participation, Sarajevo, Bosnia and Herzegovina. Genetics & Applications (Special Edition)-Book of Abstracts, 85.
7. **Džehverović M**, Čakar J, Bujak E, Kalajdžić A, Pilav A, Pojskić L, Pojskić N. (2021). DNA analysis of human skeletal remains from the medieval necropoles in Bosnia and Herzegovina. In: Poster Abstracts from the European Biotechnology Congress 2020. Biotechnology & Biotechnological Equipment, 35(S1), 107.
8. Halilović E, Ahmić A, Čakar J, Pilav A, **Džehverović M**, Lasić L, Kalamujić-Stroil B, Pojskić N. (2019). Y-chromosome haplogroup diversity of the Roma population of north-eastern Bosnia and Herzegovina. 1st Congress of Geneticists in Bosnia and Herzegovina with International Participation, Book of abstracts, 49.
9. Kalajdžić A, **Džehverović M**, Bujak E, Pilav A, Čakar J. (2019). Prediction of Y haplogroup in analysis of human skeletal remains from archaeological sites in Bosnia and Herzegovina. 1st Congress of Geneticists in Bosnia and Herzegovina with International Participation, Book of abstracts, 50.
10. Kalajdžić A, Pilav A, **Džehverović M**, Čakar J. (2019). DNA analysis of skeletal remains: case of disputable kinship testing. 1st Congress of Geneticists in Bosnia and Herzegovina with International Participation, Book of abstracts, 51.

11. **Džehverović M**, Kekić A, Pilav A, Čakar J. (2019). DNA analysis of bloodstains from crime scene: caseworks experience. 1st Congress of Geneticists in Bosnia and Herzegovina with International Participation, Book of abstracts, 52.
12. Miralem M, **Džehverović M**, Pilav A, Bujak E, Čakar J. (2019). DNA analysis suggest potential kinrelationship between two persons from distinct medieval archaeological sites. 1st Congress of Geneticists in Bosnia and Herzegovina with International Participation, Book of abstracts, 100.
13. Lukić T, Čomor L, Ajdinović E, Alibašić S, Mirela **Džehverović M**, Pilav A, Čakar J. (2019). DNA analysis of aborted fetal tissues in forensic cases. 1st Congress of Geneticists in Bosnia and Herzegovina with International Participation, Book of abstracts, 109.
14. **Džehverović M**, Bujak E, Pilav A, Pojskić N, Čakar J. (2019). DNA analysis of human skeletal remains from medieval necropolis in Divičani near Jajce (Bosnia and Herzegovina). 11th ISABS Conference on Forensic and Anthropogenic Genetics and Mayo Clinic Lectures in Individualized Medicine, Split, Croatia, June 17-22. Book of abstracts, p. 309.
15. Pilav A, Pojskić N, **Džehverović M**, Marjanović D, Čakar J. (2019). Allele frequencies and genetic parameters for 22 str loci in the sample of multinational Bosnia and Herzegovina residents. 11th ISABS Conference on Forensic and Anthropogenic Genetics and Mayo Clinic Lectures in Individualized Medicine, Split, Croatia, June 17-22,. Book of abstracts, p. 277.
16. **Džehverović M**, Ahatović A, Pilav A, Pojskić N, Marjanović D, Čakar J. (2017). Targeted gene panel profiling as a basis for individual program of nutrition and exercises. 1st Congress of Molecular Biologists of Serbia, Book of abstracts, p120.
17. **Džehverović M**, Pilav A, Buljak E, Busuladžić A, Sijarić M, Pojskić N, Čakar J. (2017). DNA analysis of skeletal remains from well-known Bosnian-Herzegovinian medieval necropolis revealed important historical person. 10th ISABS Conference on Forensic and Anthropogenic Genetics and Mayo Clinic Lectures in Individualized Medicine, Dubrovnik, Croatia, June 19-24. Book of abstracts, p. 161.
18. Pilav A, Pojskić N, Ahatović A, **Džehverović M**, Čakar J, Marjanović D. (2017). Allele frequencies and genetic parameters for 15 short tandem repeat loci in the population of Bosnia and Herzegovina. 10th ISABS Conference on Forensic and Anthropogenic Genetics and Mayo Clinic Lectures in Individualized Medicine, Dubrovnik, Croatia, June 19-24. Book of abstracts, p. 139.
19. Hadžić Metjahić N, Vidović M, Čakar J, **Džehverović M**, Pilav A, Dogan S, Marjanović D. (2017). Comparative molecular genetic analysis of the isolated Bosnian – Herzegovinian and Slovenian human populations. 10th ISABS Conference on Forensic and Anthropogenic Genetics and Mayo Clinic Lectures in Individualized Medicine, Dubrovnik, Croatia, June 19-24. Book of abstracts, p. 134.
20. Arapčić M, Herić A, Dogan S, Čakar J, Pilav A, **Džehverović M**, Marjanović D. (2017). Validation of the SureID® 21G Human STR Identification Kit and concordance study of the new generation multiplex STR kits. 10th ISABS Conference on Forensic and Anthropogenic Genetics and Mayo Clinic Lectures in Individualized Medicine, Dubrovnik, Croatia, June 19-24. Book of abstracts, p. 129.
21. **Džehverović M**, Pilav A, Čakar J, Marjanović D. (2016). Analysis of efficiency of the single-nucleotide polymorphisms (SNP`s) prediction test associated with the response

- to a diet and physical activity. 20th Congress of the European Anthropological Association. European Anthropology in a Changing World: From Culture to Global Biology, Zagreb, Croatia 24th-28th August 2016, Abstract book; 80.
22. Marjanović D, Čakar J, **Džehverović M**, Pilav A, Primorac D (2016). Challenges in the Molecular-Genetics identification of the Human remains. 20th Congress of the European Anthropological Association. European Anthropology in a Changing World: From Culture to Global Biology, Zagreb, Croatia 24th-28th August 2016, Abstract book; 4.
  23. **Džehverović M**, Pilav A, Haverić S, Ramić J, Marjanović D, Čakar J. (2016). Molecular - genetics characterization of mixed skeletal remains from cemetery near town Zenica after floods in Bosnia and Herzegovina. IUAES INTER CONGRES World anthropologies and privatization of knowledge: engaging anthropology in public, 4 – 9 May 2016, Dubrovnik, Croatia, Abstract book; 346-347.
  24. Beribaka M, Hafizovic S, Čakar J, Pilav A, **Džehverović M**, Marjanović D. (2015). DNA analysis in calculating kinship among the descendents of monozygotic twins. II Symposium of Genetics in B&H, October 2-3, Banja Luka, 58.
  25. Hafizovic S, Beribaka M, Čakar J, Pilav A, **Džehverović M**, Marjanović D. (2015). Comparative analysis of application of two Y-chromosome related multiplex STR systems. II Symposium of Genetics in B&H, October 2-3, Banja Luka, 73.
  26. Beribaka M, Hafizovic S, Pilav A, **Džehverović M**, Marjanović D, Čakar J. (2015). Comparison of two multiplex systems in calculating kinship among close relatives. 9th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinical Lectures in Individualized Medicine, 101.
  27. Hafizovic S, Beribaka M, Pilav A, **Džehverović M**, Marjanović D, Čakar J. (2015). Comparison of Maxwell and Qiagen methods for DNA extraction from different types of samples. 9th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinical Lectures in Individualized Medicine, 100.
  28. Marjanović D, Hadžić N, Čakar J, **Džehverović M**, Škaro V, Projić P, Džijan S, Dogan S, Primorac D. (2015). DNA Identification of Skeletal Remains from Second World War Massgraves in Ljubuški, Bosnia and Herzegovina. 9th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinical Lectures in Individualized Medicine, 47.
  29. Pilav A, Čakar J, Hadžić N, **Džehverović M**, Marjanović D. (2014). Bacterial contaminations of human bone and teeth samples: challenges in the interpretation of the artefact peaks in PowerPlex®16 profiles of human skeletal remains. The Fifth International Symposium on Sustainable Development, May 15-18, Sarajevo, B&H, 115.
  30. Pilav A, Čakar J, **Džehverović M**, Hadžić N, Marjanović D. (2014). Bacterial contamination of human bone samples. Scientific meeting “(Cyto)genetics & Biomedicine – with international participation”; Folia medica, Facultas medicinae, Universitas Saraeviensis; 49(1):57.
  31. Topčagić J, Kovačević L, Čakar J, Hadžić N, **Džehverović M**, Pilav A, Marjanović D. (2013). Kinship analysis of ancient individuals by combined use of small biallelic insertion/deletion (indel) and short tandem repeat (STR). 8th ISABS Conference on Forensic, Anthropologic and Medical Genetics and Mayo Clinical Lectures in Translational Medicine, 229.

32. Hadžić N, Čakar J, Kovačević L, **Džehverović M**, Pilav A., Marjanović D. (2013). Direct PCR optimization. 8th ISABS Conference on Forensic, Anthropologic and and Medical Genetics and Mayo Clinical Lectures in Translational Medicine, 175.
33. Dogan S, Kovačević L, Čakar J, **Džehverović M**, Hadžić N, Pilav A, Memon AR, Bajrović K, Marjanović D. (2013). Polymorphisms of 15 STR loci in the Turkish population of Bosnia and Herzegovina. 8th ISABS Conference on Forensic, Anthropologic and and Medical Genetics and Mayo Clinical Lectures in Translational Medicine, 196.
34. Marjanovic D, Kovacevic L, Cakar J, **Dzehverovic M**, Musemic D, Bajrovic K. (2011). DNA Analysis of ancient skeletal remains from old Bosnian graves. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, Island of Brac, Croatia, Abstract book, 120.
35. Causevic-Ramosevac A, Kovacevic L, Buljugic Dz, **Dzehverovic M**, Cakar J, Marjanovic D. (2011). Comparative analysis of three different STR multiplex system approaches in fingerprint DNA analysis. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, island of Brac, Croatia, Abstract book, 121.
36. Buljugic Dz, Cakar J, **Dzehverovic M**, Hadzic N, Musanovic J, Kovacevic L, Marjanovic D. (2011). Usage of the PowerPlex S5 System in Analysis of Human Telogenic Hair Shafts. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, Island of Brac, Croatia, Abstract book, 120.
37. Dujic Bilušić S, **Džehverović M**, Čakar J, Buljugić Dz, Kovačević L, Pehlić M, Polašek O, Rudan I, Anđelinović Š, Primorac D, Škaro V, Projić P, Marjanović D (2011). Allele frequencies of the New European Standard Set (ESS) loci plus SE33 locus in Dalmatian Human Population. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, Island of Brac, Croatia, Abstract book, 120.
38. Hadzic N, Hamidicevic M, Cakar J, **Dzehverovic M**, Buljugic Dz, Kovacevic L, Marjanovic D. (2011). Challenges in Application of PowerPlex®ESI17 Amplification Kit in LCN (Low Copy Number) DNA Analysis. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, island of Brac, Croatia, Abstract book, 121.
39. Cakar J, Karisik A, Muhic N, Hadzic N, **Dzehverović M**, Buljugic Dz, Musanovic J, Kovacevic L, Marjanovic D. (2011). Optimisation of Forensic DNA Analysis Process for Botanical Traces: a Comparative Analysis of Plant DNA Extraction from Fresh and Herbarized *Tilia plathyphyllos* Scop. Leaves. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Trnslation Medicine, Bol, island of Brac, Croatia, Abstract book, 110.
40. Musanovic J, Filipovska-Musanovic M, metovic A, Cakar J, Buljugic D, **Dzehverovic M**, Ibrulj S, Marjanovic D. (2011). Specificity of sibship determination using 15 str loci within inhabitants of bosnia and herzegovina. 7th ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, island of Brac, Croatia, Abstract book, 110.
41. Marjanovic D, Kovacevic L, Cakar J, **Dzehverovic M**, Musemic D, Bajrovic K. (2011). DNA Analysis of ancient skeletal remains from old Bosinan graves. 7th



ISABS Conference in Forensic, Anthropologic and Medical Genetics and Mayo Clinic Lectures in Translation Medicine, Bol, island of Brac, Croatia, Abstract book, 60.

42. Kovačević L, Čakar J, **Džehverović M**, Buljugić Dž, Marjanović D. (2011). Retrospektivna analiza raznovrsnosti bioloških tragova procesuiranih u laboratoriju za forenzičku genetiku (INGEB). I simpozij genetičara u Bosni i Hercegovini, Sarajevo, Bosna i Hercegovina, Abstract book, 97.
43. Hadžić N, Kovačević L, Čakar J, **Džehverović M**, Buljugić Dž, Marjanović D. (2011). Ispitivanje mogućnosti generiranja DNK profila iz prikupljenih otisaka prstiju (in Bosnian). I simpozij genetičara u Bosni i Hercegovini, Sarajevo, Bosna i Hercegovina, Abstract book, 102.
44. Hamidičević M, Buljugić Dž, Kovačević L, Čakar J, **Džehverović M**, Marjanović D. (2011). DNK analiza telogenih dlaka primjenom Powerplex ESI 17 multipleksnog STR Sistema – preliminarni rezultati (in Bosnian). I simpozij genetičara u Bosni i Hercegovini, Sarajevo, Bosna i Hercegovina, Abstract book, 100.
45. Sirbubalo A, Buljugić Dž, Kovačević L, Čakar J, **Džehverović M**, Marjanović D. (2011). Komparativna analiza tri različita protokola za izolaciju DNK iz biološkog traga anagene dlake (in Bosnian). I simpozij genetičara u Bosni i Hercegovini, Sarajevo, Bosna i Hercegovina, Abstract book, 101.
46. Muhić N, Karišik A, Čakar J, **Džehverović M**, Kovačević L, Buljugić Dž, Marjanović D. (2011). Optimizacija procesa forenzičke DNK analize biljnih tragova (in Bosnian). I simpozij genetičara u Bosni i Hercegovini, Sarajevo, Bosna i Hercegovina, Abstract book, 103.
47. Cosovic M, Bego T, Popovac A, Crnogorac V, **Dzheverovic M**, Avdic J, Kovacevic L, Marjanovic D. (2009). YSTRs in Process of Human Identification of WWII Skeletal Remains: Case Study. 6th ISABS Conference on Human Genome Project Based Applications in Forensic Science, Anthropology and Individualized Medicine, Split, Croatia, Abstract book, 78.
48. Zoranjic J, Valentic S, Buljugic Dz, **Dzheverovic M**, Avdic J, Kovacevic L, Marjanovic D. (2009). Challenges in Statistical Interpretation of Paternity Testing Results. 6th ISABS Conference on Human Genome Project Based Applications in Forensic Science, Anthropology and Individualized Medicine, Split, Croatia, Abstract book, 109.

#### **2.4. Knjige**

1. Čakar J, Marjanović D, Pilav A, **Džehverović M**. (2018). Forenzička genetika – laboratorijski priručnik. Univerzitet u Sarajevu – Institut za genetičko inženjerstvo i biotehnologiju, Sarajevo.
2. Bešić L, Muhović I, Ašić A, Čakar J, Lukić Bilela L, **Džehverović M**, Avdić M. (2018). Forensic DNA analysis of plant and animal biological traces; In: Marjanović D, Primorac D, Dogan S. (Eds). Forensic genetics – theory and application. International Burch University, Sarajevo.
3. Muhović I, Ašić A, Bešić L, **Džehverović M**, Marjanović D. (2018). Supplement: Procedures for the collection and labeling of biological traces meant for DNA analysis; In: Marjanović D, Primorac D, Dogan S. (Eds). Forensic genetics – theory and application. International Burch University, Sarajevo.

4. Marjanović D, Primorac D, Čakar J, Kovačević L, Hadžić N, **Džehverović M**, Pilav A. (2014). DNK tehnologije u forenzičkoj i sudskoj praksi; U: L. Kapur Pojskić, editor. Uvod u genetičko inženjerstvo i biotehnologiju, 2. izd. Institut za genetičko inženjerstvo i biotehnologiju, Sarajevo, Bosnia and Herzegovina.

### 3. OPIS NAUČNOISTRAŽIVAČKIH AKTIVNOSTI KANDIDATKINJE

Dr. **Mirela Džehverović** je u svom naučno-istraživačkom opusu dala zapažen doprinos razvoju moderne biološke nauke u BiH, naročito genetike na suvremenim osnovama, koristeći pri tome sofisticirane i veoma suptilne naučne i stručne metode. Posebno značajne rezultate ostvarila je u užoj oblasti DNK profiliranja humanih uzoraka primjenom savremenih molekularno-bioloških i forenzičko-genetičkih metoda i tehnika. Pored visoke fundamentalne vrijednosti, ostvareni rezultati imaju izuzetan aplikativni značaj u oblasti primjenjene genetike.

Učestvovala je u realizaciji osam naučnoistraživačkih projekata, studija i ekspertiza iz oblasti genetike, a trenutno je angažirana na dva naučnoistraživačka projekta u Univerzitet u Sarajevu - Institutu za genetičko inženjerstvo i biotehnologiju:

1. Genotipizacija lokalnih humanih populacija u Federaciji BiH, Federalno ministarstvo obrazovanja i nauke (2009);
2. Analiza učinkovitosti primjene DNK kratkih repetitivnih sekvenci u utvrđivanju srodstva među potomcima jednog roditeljskog para unutar izolovanih humanih populacija, Federalno ministarstvo obrazovanja i nauke (2010);
3. Analiza genetičkog diverziteta u izolovanoj humanojoj populaciji Selške doline, Federalno ministarstvo obrazovanja i nauke (2014); Realizacija projekta u okviru naučne i tehnološke saradnje između Bosne i Hercegovine i Republike Slovenije, međunarodno učešće;
4. Ispitivanje genskih varijanti (polimorfizama) povezanih s odgovorom organizma na prehranu i tjelesnu aktivnost, Federalno ministarstvo obrazovanja i nauke (2014);
5. Komparativna naliza efikasnosti PP16 i PPFusin multipleks STR lokusa u procesu humane forenzičke individualizacije, Ministarstvo za obrazovanje, nauku i mlade Kantona Sarajevo (2016);
6. DNK tipizacija humanih arheoloških ostataka u BiH, Privatni finansijer (2016-2017);
7. Digitalna rekonstrukcija parcijalnih DNK profila humanih skeltnih ostataka, Federalno ministarstvo obrazovanja i nauke (2018);
8. Genetičke karakteristike stanovnika srednjovjekovne Bosne, Ministarstvo za obrazovanje, nauku i mlade Kantona Sarajevo (2019).
9. Lice srednjovjekovne Bosne – 3D rekonstrukcija na bazi genetičkih informacija iz arheoloških uzoraka. Ministarstvo za obrazovanje, nauku i mlade Kantona Sarajevo (od 2021. - aktuelni projekt);
10. Genetičke i druge biološke specifičnosti prahistorijskih populacija na bh.prostoru. Ministarstvo za obrazovanje, nauku i mlade Kantona Sarajevo (od 2022. - aktuelni projekt).

Publikovala je ukupno 24 naučna rada, od čega 21 u priznatim publikacijama koje se nalaze u relevantnim međunarodnim naučnim bazama podataka i 48 konferencijskih saopćenja na međunarodnim naučnim skupovima. Dr. *Mirela Džehverović* je također koautor recenzirane stručne knjige (laboratorijskog priručnika) kao i tri poglavlja u dvije recenzirane knjige, koje pripadaju naučno-stručnoj oblasti za koju se kandidat bira.

Vlastite naučnoistraživačke sposobnosti i kompetencije kandidatkinja kontinuirano usavršava učešćem u stručnim radionicama i treninzima te nesebično dijeli sa širom društvenom i stručnom zajednicom kroz aktivan angažman u radu Udruženja genetičara u Bosni i Hercegovini (GENuBiH). Učestvovala je u organizaciji četiri naučna skupa iz oblasti Genetike. Dr. *Mirela Džehverović* je dobitnica nagrade Univerziteta u Sarajevu za rezultate naučnog/umjetničkog rada u 2020. godini.

#### 4. PRIJEDLOG SA OBRAZLOŽENJEM

Na osnovu izloženih činjenica i analize priložene dokumentacije o relevantnim pokazateljima naučnoistraživačkog i sveukupnog kredibiliteta prijavljene kandidatkinje, u skladu sa članom 29. Zakona o naučnoistraživačkoj djelatnosti Kantona Sarajevo (Službene novine Kantona Sarajevo, br. 26/16), Komisija jednoglasno zaključuje da dr. sci. *Mirela Džehverović* u potpunosti ispunjava sve propisane uvjete i odredbe člana 31. Zakona o naučnoistraživačkoj djelatnosti Kantona Sarajevo (Službene novine Kantona Sarajevo, br. 26/16) za izbor u zvanje naučnog saradnika za oblast „Genetika“.

Prijedlog koji slijedi, Komisija bazira na činjenici da dr. sci. *Mirela Džehverović* ima zvanje doktora bioloških nauka sa odbranjenom doktorskom disertacijom iz oblasti Genetike, sa prosječnom ocjenom 8,77 - na prvom ciklusu studija, 9,88 - na drugom ciklusu studija i 10,00 - na trećem ciklusu studija, publicirala je 21 naučni rad iz oblasti za koju se bira u priznatim publikacijama, koautor je laboratorijskog priručnika i tri poglavlja u knjigama te je pokazala naučnoistraživačke sposobnosti učešćem na međunarodnim konferencijama na kojima je prezentirala 48 naučnih saopćenja i učešćem u realizaciji 8 naučnoistraživačkih projekata.

Na temelju izloženih činjenica, ocjena i mišljenja te ostalih relevantnih kvaliteta kandidatkinje, a saglasno prethodnom zaključku, sa zadovoljstvom predlažemo kompetentnim organima da dr. *Mirelu Džehverović* izaberu u zvanje *naučnog saradnika* za oblast „Genetika“ u Univerzitet u Sarajevu - Institutu za genetičko inženjerstvo i biotehnologiju.

Sarajevo, 27. 04. 2023.

Komisija:

(Dr. sci. *Sanin Haverić*, naučni savjetnik)

(Dr. sci. *Amela Pilav*, naučna saradnica)

(Dr. sci. *Jasmin Ramić*, naučni saradnik)