

## Curriculum Vitae

Dr. Zahra Kargarpour

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### 1. Academic education:

2019- to date "Musculoskeletal and Dental Research", Medical University of Vienna, Vienna, Austria Doctoral thesis supervisor: Prof. Reinhard Gruber; Medical University of Vienna.  
2015- 2019 "Biochemistry", Doctor of Philosophy, Tarbiat Modares University, Tehran, Iran; Doctoral thesis supervisor: Univ. Assoc. Prof. Dr. Sadegh Hasannia; Tarbiat Modares University, Tehran, Iran.  
2012- 2015 "Biochemistry", Master of Science, Tarbiat Modares University, Tehran, Iran; Master thesis supervisor: Univ. Assoc. Prof. Dr. Sadegh Hasannia; Tarbiat Modares University, Tehran, Iran.  
2007- 2011 "Molecular Genetics", Bachelor of Science, University of Isfahan, Isfahan, Iran.

### 2. Working experiences:

2018- 2019 Visiting scholar, Medical University of Vienna, Vienna, Austria  
2016- 2018 Quality control manager, Novateb Pars, Tehran, Iran

### 3. Publications

1. Nasirzade J, Kargarpour Z, Mitulović G, Strauss FJ, Panahipour L, Schwarz F, Gruber R (2021). Proteomic and genomic analysis of acid dentin lysate with focus on TGF- $\beta$  signaling. (Scientific Reports, in revision)
2. Kargarpour Z, Nasirzade J, Panahipour L, Miron RJ and Gruber R (2021). Liquid P-+RF Reduces the Inflammatory Response and Osteoclastogenesis in Murine Macrophages. *Front. Immunol.* 12:636427. doi: 10.3389/fimmu.2021.636427
3. Nasirzade J, Alccayhuaman, K.A.A.; Kargarpour, Z.; Kuchler, U.; Strauss, F.J.; Panahipour, L.; Kamleitner, C.; Heimel, P.; Schwarz, F.; Gruber, R. Acid Dentin Lysate Failed to Modulate Bone Formation in Rat Calvaria Defects. *Biology* 2021, 10, 196. <https://doi.org/10.3390/biology10030196>
4. Panahipour L, Kargarpour Z, Luza B, Lee JS, Gruber R. TGF- $\beta$  Activity Related to the Use of Collagen Membranes: In Vitro Bioassays. *Int J Mol Sci.* 2020 Sep 10;21(18):6636. doi: 10.3390/ijms21186636. PMID: 32927851; PMCID: PMC7555929.
5. Panahipour L, Kargarpour Z, Laggner M, Mildner M, Ankersmit HJ, Gruber R. TGF- $\beta$  in the Secretome of Irradiated Peripheral Blood Mononuclear Cells Supports In Vitro Osteoclastogenesis. *Int J Mol Sci.* 2020 Nov 13;21(22):8569. doi: 10.3390/ijms21228569. PMID: 33202935; PMCID: PMC7696998.
6. Kargarpour Z, Nasirzade J, Panahipour L, Miron RJ, Gruber R. Relative Centrifugal Force (RCF; G-Force) Affects the Distribution of TGF- $\beta$  in PRF Membranes Produced Using Horizontal Centrifugation. *Int J Mol Sci.* 2020 Oct 15;21(20):7629. doi: 10.3390/ijms21207629. PMID: 33076376; PMCID: PMC7589083.
7. Kargarpour Z, Nasirzade J, Di Summa F, Panahipour L, Miron RJ, Gruber R. Platelet-Rich Fibrin Can Neutralize Hydrogen Peroxide-Induced Cell Death in Gingival Fibroblasts. *Antioxidants (Basel).* 2020 Jun 26;9(6):560. doi: 10.3390/antiox9060560. PMID: 32604944; PMCID: PMC7346145.
8. Di Summa F, Kargarpour Z, Nasirzade J, Stähli A, Mitulović G, Panić-Janković T, Koller V, Kaltenbach C, Müller H, Panahipour L, Gruber R, Strauss FJ. TGF $\beta$  activity released from platelet-rich fibrin adsorbs to titanium surface and collagen membranes. *Sci Rep.* 2020 Jun 23;10(1):10203. doi: 10.1038/s41598-020-67167-3. PMID: 32576959; PMCID: PMC7311486.
9. Kargarpour Z, Nasirzade J, Panahipour L, Miron RJ, Gruber R. Liquid Platelet-Rich Fibrin and Heat-Coagulated Albumin Gel: Bioassays for TGF- $\beta$  Activity. *Materials (Basel).* 2020 Aug 6;13(16):3466. doi: 10.3390/ma13163466. PMID: 32781631; PMCID: PMC7475845.
10. Nasirzade J, Kargarpour Z, Panahipour L, Schwarz F, Gruber R. Cleaning Teeth Reduces the Inflammatory Response of Macrophages to Acid Dentine Lysate. *Int J Mol Sci.* 2020 Dec 2;21(23):9207. doi: 10.3390/ijms21239207. PMID: 33276685; PMCID: PMC7730611.
11. Strauss FJ, Nasirzade J, Kargarpour Z, Stähli A, Gruber R. Effect of platelet-rich fibrin on cell proliferation, migration, differentiation, inflammation, and osteoclastogenesis: a systematic review of in vitro studies. *Clin Oral Investig.* 2020 Feb;24(2):569-584. doi: 10.1007/s00784-019-03156-9. Epub 2019 Dec 26. PMID: 31879804; PMCID: PMC6988133.

12. Nasirzade J, Kargarpour Z, Hasannia S, Strauss FJ, Gruber R. Platelet-rich fibrin elicits an anti-inflammatory response in macrophages in vitro. J Periodontol. 2020 Feb;91(2):244-252. doi: 10.1002/JPER.19-0216. Epub 2019 Sep 14. PMID: 31376159; PMCID: PMC7065136.
13. Kargarpour Z, Nasirzade J, Strauss FJ, Di Summa F, Hasannia S, Müller HD, Gruber R. Platelet-rich fibrin suppresses in vitro osteoclastogenesis. J Periodontol. 2020 Mar;91(3):413-421. doi: 10.1002/JPER.19-0109. Epub 2019 Sep 17. PMID: 31381154; PMCID: PMC7155126.

#### **4. Courses**

2019 ECTS PhD training course, Bologna, Italy

#### **5. Awards and certificates**

2018 Sabbatical scholarship from Science and technology ministry of Iran

#### **6. Patents**

Iran Organization of Science and Technology, national patent "the process of producing *Thermus thermophilus* DNA ligase thermostable enzyme", Record No.:94271, Des 2017

#### **7. Grants and Awards**

Iranian ministry of science scholarship: six months grant to spend as a visiting researcher, April 2018

#### **8. Skills**

Molecular biology techniques:

Conventional PCR, SDS PAGE analysis, DNA Electrophoresis, Western blotting, bacterial competent cell preparation, protein expression, purification of expressed protein using affinity chromatography (Native and denaturing condition), enzyme activity assay.

Cellular Biology techniques:

Working with several cell lines including Raw 264-7, HSC2, HEK293T, isolating bone marrow derived cells from mice, cell isolation from tissue samples (gingival fibroblasts)

Basic methods such as RT-PCR, ELISA, Histochemical staining of multinucleated cells (TRAP staining), ALP staining, migration assay, MTT assay, Immunohistochemically staining of cells, BrdU Cell proliferation assay, Live and Dead staining assay, flow cytometry, platelet-rich fibrin preparation (liquid and membrane form), hard tissue histological analysis.

Computer skills:

General software: Microsoft Office

Specific Software: Adobe illustrator, Photoshop, graphpad PRISM

General skills:

English: advanced level, German: basic

Statistics: advanced

#### **9. Supervision of diploma thesis (Co-supervisor)**

1. Julia Huber; Comparison of TGF $\beta$  signaling in PRF membrane and coagulated blood in gingival fibroblasts
2. Aliya Tuktarova; The effect of PRF on the growth of the cells from bone tissue

#### **10. References**

Dr. nat. techn. Reinhard Gruber

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Dr. Scient. med. Layla Panahipour. DDS

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