

OLEH ANDRUKHOV PUBLICATIONS LIST

Full Papers in peer-reviewed journals

1. Andrukhover O, Blufstein A, Behm C, Moritz A, Rausch-Fan X. Vitamin D₃ and dental mesenchymal stromal cells. *Appl Sci* 2020; 10(13):4527.
2. Behm C, Blufstein A, Abhari SY, Koch C, Gahn J, Schäffer C, Moritz A, Rausch-Fan X, Andrukhover O. Response of human mesenchymal stromal cells from periodontal tissue to LPS depends on the purity but not on the LPS source. *Mediators Inflamm* 2020 (accepted).
3. Behm C, Blufstein A, Gahn J, Nemec M, Moritz A, Rausch-Fan X, Andrukhover O. Cytokines differently define the immunomodulation of mesenchymal stem cells from the periodontal ligament. *Cells*. 2020 May 14;9(5):1222.
4. Andrukhover O, Behm C, Blufstein A, Wehner C, Gahn J, Pippenger B, Wagner R, Rausch-Fan X. Effect of implant surface material and roughness to the susceptibility of primary gingival fibroblasts to inflammatory stimuli. *Dent Mater*. 2020; 36(6):e194-e205.
5. Blufstein A, Behm C, Kubin B, Gahn J, Moritz A, Rausch-Fan X, Andrukhover O. Transcriptional activity of vitamin D receptor in human periodontal ligament cells is diminished under inflammatory conditions. *J Periodontol* (accepted).
6. Wehner C, Lettner S, Moritz A, Andrukhover O, Rausch-Fan X. Effect of bisphosphonate treatment of titanium surfaces on alkaline phosphatase activity in osteoblasts: a systematic review and meta-analysis. *BMC Oral Health*. 2020 Apr 25;20(1):125.
7. Zhang F, Özdemir B, Nguyen PQ, Andrukhover O, Rausch-Fan X. Methanandamide diminish the *Porphyromonas gingivalis* lipopolysaccharide induced response in human periodontal ligament cells. *BMC Oral Health*. 2020 Apr 15;20(1):107.
8. Behm C, Blufstein A, Gahn J, Kubin B, Moritz A, Rausch-Fan X, Andrukhover O. Pleiotropic effects of vitamin D3 on CD4+ T lymphocytes mediated by human periodontal ligament cells and inflammatory environment. *J Clin Periodontol*. 2020; 47(6):689-701.
9. Guo B, Tang C, Wang M, Zhao Z, Shokoohi-Tabrizi HA, Shi B, Andrukhover O, Rausch-Fan X. In vitro biocompatibility of biohybrid polymers membrane evaluated in human gingival fibroblasts. *J Biomed Mater Res B Appl Biomater*. 2020 Feb 25.
10. Behm C, Blufstein A, Gahn, J, Kubin B, Nemec M, Moritz A, Rausch-Fan X, Andrukhover O. 1,25(OH)2D3 differently affects immunomodulatory activities of mesenchymal stem cells depending on the presence of TNF-a, IL-1b, and IFN-g. *J Clin Med* 019 Dec 14;8(12). pii: E2211.
11. Andrukhover O, Behm C, Blufstein A, Rausch-Fan X. Immunomodulatory properties of dental tissue-derived mesenchymal stem cells: Implication in disease and tissue regeneration. *World J Stem Cells* 2019;11(9):604-617.
12. Blufstein A, Behm C, Gahn J, Uitz O, Naumovska I, Moritz A, Rausch-Fan X, Andrukhover O. Synergistic effects triggered by simultaneous Toll-Like Receptor 2 and 3 activation in human periodontal ligament stem cells. *J. Periodontol*. 2019; 90(10):1190-1201.
13. Behm C, Blufstein A, Gahn J, Noroozkhian N, Moritz A, Rausch-Fan X, Andrukhover O*. Soluble CD14 enhances the response of periodontal ligament stem cells to toll-like receptor 2 agonists. *Mediators Inflamm* 2019 Apr 23;2019:8127301
14. Oberoi G, Janjić K, Müller AS, Schädl B, Andrukhover O, Moritz A, Agis H. Contraction Dynamics of Rod Microtissues of Gingiva-Derived and Periodontal Ligament-Derived Cells. *Front Physiol*. 2018 Dec 21;9:1683. doi: 10.3389/fphys.2018.01683.
15. Ford K, Latic N, Slavic S, Zeitz U, Dolezal M, Andrukhover O, Erben RG, Andrukhover O. Lack of vitamin D signalling per se does not aggravate cardiac functional

- impairment induced by myocardial infarction in mice. *PLoS One*. 2018 Oct 1;13(10):e0204803. doi: 10.1371/journal.pone.0204803.
16. Blufstein A, Behm C, Nguyen PQ, Rausch-Fan X, Andrukhover O*. Human periodontal ligament cells exhibit no endotoxin tolerance upon stimulation with *Porphyromonas gingivalis* lipopolysaccharide. *J Periodontal Res* 2018 53(4):589-597. doi: 10.1111/jre.12549.
 17. Wang Y, Wang P, Andrukhover O, Wang T, Song S, Yan C, Zhang F. Meta-analysis of the prognostic value of the neutrophil-to-lymphocyte ratio in oral squamous cell carcinoma. *J Oral Pathol Med*. 2018 Feb 6. doi: 10.1111/jop.12688.
 18. Wang Y, Andrukhover O, Rausch-Fan X. Oxidative Stress and Antioxidant System in Periodontitis. *Front Physiol*. 2017 Nov 13;8:910. doi: 10.3389/fphys.2017.00910.
 19. Andrukhover O*, Hong JS, Andrukhover O, Blufstein A, Moritz A, Rausch-Fan X. Response of human periodontal ligament stem cells to IFN-γ and TLR-agonists. *Sci Rep*. 2017 Oct 9;7(1):12856. doi: 10.1038/s41598-017-12480-7
 20. Liu J, Andrukhover O, Laky M, Nürnberg S, Moritz A, Lyu P, Rausch-Fan X. Behavior of human periodontal ligament cells on dentin surfaces ablated with an ultra-short pulsed laser. *Sci Rep*. 2017 Oct 6;7(1):12738. (equal contribution with first author)
 21. Haririan H, Andrukhover O, Böttcher M, Pablik E, Wimmer G, Moritz A, Rausch-Fan X. Salivary Neuropeptides, Stress and Periodontitis. *J Periodontol*. 2017 Sep 15:1-15.
 22. Sperr M, Kundi M, Tursic V, Bristela M, Moritz A, Andrukhover O, Rausch-Fan X, Sperr WR. Prevalence of Comorbidities in Periodontitis Patients Compared to the General Austrian Population. *J Periodontol*. 2017 Aug 28:1-13. doi: 10.1902/jop.2017.170333.
 23. Shi B, Andrukhover O*, Özdemir B, Shokoohi Tabrizi HA, Dard M, Rausch-Fan X. Effect of enamel matrix derivative on the angiogenic behaviors of human umbilical vein endothelial cells on different titanium surfaces. *Dent Mater J*. 2017 Jul 26;36(4):381-386. doi: 10.4012/dmj.2016-212.
 24. Andrukhover O, Huber R, Shi B, Berner S, Rausch-Fan X, Moritz A, Spencer ND, Schedle A. Proliferation, behavior, and differentiation of osteoblasts on surfaces of different microroughness. *Dent Mater*. 2016 Nov;32(11):1374-1384. doi: 10.1016/j.dental.2016.08.217
 25. Laky M, Bertl K, Haririan H, Andrukhover O, Seemann R, Volf I, Assinger A, Gruber R, Moritz A, Rausch-Fan X. Serum levels of 25-hydroxyvitamin D are associated with periodontal disease. *Clin Oral Investig*. 2016 Sep 29. [Epub ahead of print]. doi: 10.1007/s00784-016-1965-2
 26. Haririan H, Andrukhover O, Rausch-Fan X, Pablik E. Letter to the Editor: Authors' Response. *J Periodontol*. 2016 Nov;87(11):1251-1252. doi: 10.1902/jop.2016.160352
 27. Andrukhover O*, Andrukhover O, Özdemir B, Haririan H, Müller-Kern M, Moritz A, Rausch-Fan X. Soluble CD14 Enhances the Response of Periodontal Ligament Stem Cells to *P. gingivalis* Lipopolysaccharide. *PLoS One*. 2016 Aug 9;11(8):e0160848. doi: 10.1371/journal.pone.0160848.
 28. Cai Z, Falkensammer F, Andrukhover O, Chen J, Mittermayr R, Rausch-Fan X. Effects of Shock Waves on Expression of IL-6, IL-8, MCP-1, and TNF-α Expression by Human Periodontal Ligament Fibroblasts: An In Vitro Study. *Med Sci Monit*. 2016 Mar 20;22:914-21.
 29. Jonke E, Gemperli AC, Zhang T, Özdemir B, Dard M, Rausch-Fan X, Andrukhover O*. Effect of tyrosine-rich amelogenin peptide on behavior and differentiation of endothelial cells. *Clin Oral Investig*. 2016 Feb 12.
 30. Zhang T, Andrukhover O*, Haririan H, Müller-Kern M, Liu S, Liu Z, Rausch-Fan X. Total Antioxidant Capacity and Total Oxidant Status in Saliva of Periodontitis Patients in Relation to Bacterial Load. *Front Cell Infect Microbiol*. 2016 Jan 6;5:97. doi: 10.3389/fcimb.2015.00097. eCollection 2015. (equal contribution with 1st author)
 31. Haririan H, Andrukhover O, Pablik E, Neuhofer M, Moritz A, Rausch-Fan X. Comparative Analysis of Calcium-Binding Myeloid-Related Protein-8/14 in Saliva and Serum of Patients With Periodontitis and Healthy Individuals. *J Periodontol*. 2016 Feb;87(2):184-92.

32. Andrukhover O*, Gemperli AC, Tang Y, Howald N, Dard M, Falkensammer F, Moritz A, Rausch-Fan X. Effect of different enamel matrix derivative proteins on behaviour and differentiation of endothelial cells. *Dent Mater* 2015; 31(7): 822-832.
33. Friedrich V, Gruber C, Nimeth I, Pabinger S, Sekot G, Posch G, Altmann F, Messner P, Andrukhover O, Schäffer C. Outer membrane vesicles of *Tannerella forsythia*: Biogenesis, composition, and virulence. *Mol Oral Microbiol*. 2015;30(6):451-73.
34. Fleischmann L, Crismani A, Falkensammer F, Bantleon HP, Rausch-Fan X, Andrukhover O*. Behavior of osteoblasts on Ti surface with two different coating designed for orthodontic devices. *J Materials Science* 2015 Jan;26(1):5335.
35. Özdemir B, Shi B, Bantleon HP, Moritz A, Rausch-Fan X, Andrukhover O*. Endocannabinoids and inflammatory response in periodontal ligament cells. *PLoS One* 2014 Sep 16;9(9):e107407.
36. Shi B, Andrukhover O, Berner S, Schedle A, Rausch-Fan X. The angiogenic behaviors of human umbilical vein endothelial cells (HUVEC) in co-culture with osteoblast-like cells (MG-63) on different titanium surfaces. *Dent Mater*. 2014 Aug;30(8):839-47. (equal contributuion with first author)
37. An N, Andrukhover O, Tang Y, Falkensammer F, Bantleon HP, Ouyang X, Rausch-Fan X. Effect of nicotine and *Porphyromonas gingivalis* lipopolysaccharide on endothelial cells in vitro. *PLoS One*. 2014 May 12;9(5):e96942 (equal contributuion with first author)
38. Andrukhover O*, Andrukhover O, Hulan U, Tang, Y, Bantleon H-P, Rausch-Fan X. Both 25-hydroxyvitamin-D₃ and 1,25-dihydroxyvitamin-D₃ reduces inflammatory response in human periodontal ligament cells. *PLOS One*. 2014 Feb 28;9(2):e90301.
39. Andrukhover O, Salama M, Krssak M, Wiedemann D, El-Housseiny L, Hacker M, Gildehaus FJ, Andrukhover O, Mirzaei S, Kocher A, Zuckermann A, Aharinejad S. Single dose GSTP1 prevents infarction-induced heart failure. *J Card Fail*. 2014 Feb;20(2):135-45.
40. Andrukhover O*, Steiner I, Liu S, Bantleon HP, Moritz A, Rausch-Fan X. Different effects of *Porphyromonas gingivalis* lipopolysaccharide and TLR2 agonist Pam3CSK4 on the adhesion molecules expression in endothelial cells. *Odontology*. 2015 Jan;103(1):19-26.
41. Andrukhover O*, Ertlschweiger S, Moritz A, Bantleon HP, Rausch-Fan X. Different effects of *P. gingivalis* LPS and *E. coli* LPS on the expression of interleukin-6 in human gingival fibroblasts. *Acta Odontol Scand*. 2014;72(5):337-45.
42. Kharchuk IV, Andrukhover OO, Rybal'chenko VK, Andrukhover O. [Mechanisms of nephrotoxicity of novel anticancer compound maleimide derivative MI-1]. *Fiziol Zh*. 2013;59(3):50-7.
43. Haririan H, Andrukhover O, Bertl K, Lettner S, Kierstein S, Moritz A, Rausch-Fan X. Microbial Analysis of Subgingival Plaque Samples Compared With That of Whole Saliva in Periodontitis Patients. *J Periodontol*. 2014 Jun;85(6):819-28.
44. Andrukhover O, Haririan H, Bertl K, Rausch WD, Bantleon HP, Moritz A, Rausch-Fan X. Nitric oxide production, systemic inflammation and lipid metabolism in periodontitis patients: possible gender aspect. *J Clin Periodontol*. 2013;40:916-23.
45. Posch G, Andrukhover O, Vinogradov E, Lindner B, Messner P, Holst O, Schäffer C. Structure and Immunogenicity of the Rough-Type Lipopolysaccharide from the Periodontal Pathogen *Tannerella forsythia*. *Clin Vaccine Immunol*. 2013; 20:945-953.
46. An N, Rausch-fan X, Wieland M, Matejka M, Andrukhover O, Schedle A. Initial attachment, subsequent cell proliferation/viability and gene expression of epithelial cells related to attachment and wound healing in response to different titanium surfaces. *Dent Mater*. 2012; 28:1207-1214.
47. Bertl K, Schoiber A, Haririan H, Laky M, Steiner I, Rausch WD, Andrukhover O, Rausch-Fan X. Non-surgical periodontal therapy influences salivary melatonin levels. *Clin Oral Investig*. 2013; 17:1219-1225.
48. Liu S, Bertl K, Sun H, Liu ZH, Andrukhover O, Rausch-Fan X. Effect of simvastatin on the osteogenetic behavior of alveolar osteoblasts and periodontal ligament cells. *Hum Cell*. 2012; 25:29-35.

49. Haririan H, Bertl K, Laky M, Rausch WD, Böttcher M, Matejka M, Andrukhover O, Rausch-Fan X. Salivary and Serum Chromogranin A and α -Amylase in Periodontal Health and Disease. *J Periodontol.* 2012; 83:1314-1321.
50. Bertl K, Haririan H, Laky M, Matejka M, Andrukhover O, Rausch-Fan X. Smoking influences salivary histamine levels in periodontal disease. *Oral Dis.* 2012; 18(4):410-416.
51. Andrukhover O, Ulm C, Reischl H, Nguyen PQ, Matejka M, Rausch-Fan X. Serum Cytokine Levels in Periodontitis Patients in Relation to the Bacterial Load. *J Periodontol.* 2011; 82(6):885-892.
52. Sekot G, Posch G, Messner P, Matejka M, Rausch-Fan X, Andrukhover O*, Schäffer C. Potential of the *Tannerella forsythia* S-Layer to Delay the Immune Response. *J Dent Res.* 2011; 90(1):109-114.
53. Zhang Y, Andrukhover O, Berner S, Matejka M, Wieland M, Rausch-Fan X, Schedle A. Osteogenic properties of hydrophilic and hydrophobic titanium surfaces evaluated with osteoblast-like cells (MG63) in coculture with human umbilical vein endothelial cells (HUVEC). *Dent Mater.* 2010;26(11):1043-1051.
54. Qu Z, Andrukhover O, Laky M, Ulm C, Matejka M, Dard M, Rausch-Fan X. Effect of enamel matrix derivative on proliferation and differentiation of osteoblast cells grown on the titanium implant surface *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2011; 111(4):517-522. [1-st author equal contribution]
55. Qu Z, Laky M, Ulm C, Matejka M, Dard M, Andrukhover O*, Rausch-Fan X. Effect of Emdogain on proliferation and migration of different periodontal tissue-associated cells. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2010;109(6):924-31.
56. Andrukhover O, Matejka M, Rausch-Fan X. Effects of cyclosporine A on human periodontal ligament cells. *Acta Odontol Scand.* 2010;68(6):329-34.
57. Zhang Y, Schedle A, Matejka M, Rausch-Fan X, Andrukhover O. Proliferation and differentiation of osteoblasts in co-culture with human umbilical vein endothelial cells: improved analysis using fluorescence activated cell sorting. *Cell Mol Biol Lett* 2010 Dec;15:517-29.
58. Bertl K, An N, Bruckmann C, Dard M, Andrukhover O, Matejka M, Rausch-Fan X (2009). Effects of enamel matrix derivatives on proliferation, migration and angiogenic factor expression of endothelial cells *in vitro*. *J Periodont Oct*;80(10):1622-30.
59. Galler S, Andruhov O, Stephenson DG, Stephenson GM (2009). Qualitatively different cross-bridge attachments in fast and slow muscle fiber types. *Biochem Biophys Res Commun* 385: 44-48.
60. An N, Schedle A, Wieland M, Andrukhover O, Matejka M, Rausch-fan X (2009). Proliferation, behavior and cytokine gene expression of human umbilical vascular endothelial cells (HUVECs) in response to different titanium surfaces. *J Biomed Res Mater A Apr*;93(1):364-72.
61. Andruhov O, Galler S (2008). Influence of fast and slow alkali myosin light chain isoforms on the kinetics of stretch-induced force transients of fast-twitch type IIA fibres of rat. *Pflugers Arch* 455: 1165-1172.
62. Andruhov O, Andruhova O, Galler S (2006). The catch state of mollusc catch muscle is established during activation: experiments on skinned fibre preparations of the anterior byssus retractor muscle of *Mytilus edulis* L. using the myosin inhibitors orthovanadate and blebbistatin. *J Exp Biol* 209: 4319-4328.
63. Andruhova O, Stephenson GM, Andruhov O, Stephenson DG, Galler S (2006). Myosin heavy chain isoform composition and stretch-activation kinetics in single fibres of *Xenopus laevis* iliofibularis muscle. *J Physiol (Lond)* 574:307-317.
64. Andruhov O, Andruhova O, Galler S (2006). Cross-bridges kinetics in rabbit and rat skeletal muscle depending on myosin light chain isoform. *Pflügers Arch* 452:667-673.
65. Andruhov O, Andruhova O, Galler S (2006). Dependence of the cross-bridges kinetics on myosin light chain isoforms in rabbit and rat skeletal muscle fibres. *J Physiol (Lond)* 571: 231-242.

66. Höpflinger MC, Andruchova O, Andruchov O, Grassberger H, Galler S (2006). Effect of pH on the rate of myosin head detachment in molluscan catch muscle: are myosin heads involved in the catch state? *J Exp Biol* 209: 668-676.
67. Andruchova OV, Höpflinger M, Andruchov O, Galler S (2005). No effect of twitchin phosphorylation on the rate of myosin head detachment in molluscan catch muscle: are the myosin heads involved in catch state? *Pflugers Arch* 450:326-334.
68. Andrukhova OV, Babiychuk VS, Andrukhov OY, Babiychuk EB, Danilova VM (2005) The effect of nitric oxide on the catalytic activity of 5'-nucleotidase in the structure of smooth muscle cell membrane rafts. *Ukr.Biohim.Zh* 77:56-60.
69. Sobieszek A, Andruchov OY, Grabarek Z, Kulikova N, Liebetrau C, Matusovsky OS (2005). Modulation of myosin filament activation by telokin in smooth muscle Liberation of myosin kinase and phosphatase from supramolecular complexes. *Biophys Chem.* 113: 25-40
70. Galler S, Hopflinger MC, Andruchov O, Andruchova O, Grassberger H (2005). Effects of vanadate, phosphate and 2,3-butanedione monoxime (BDM) on skinned molluscan catch muscle. *Pflugers Arch* 449:372-383.
71. Andruchov O, Andruchova O, Wang Y, Galler S. (2004) Kinetic properties of myosin heavy chain isoforms in mouse skeletal muscle: Comparison with rat, rabbit and human and correlation with amino acid sequence. *Am J Physiol Cell Physiol*, 287:C1725-C1732.
72. Andruchov O, Wang Y, Andruchova O. Galler S. (2004) Contractile characteristics of rabbit skeletal and heart muscle fibres containing α -cardiac myosin heavy chain. *Pflugers Arch* 448:44-53.
73. Puchert E, Andruchov O, Wagner A, Grassberger H, Lahnsteiner F, Sobieszek A, Galler S. Slowing effects of Mg^{2+} on contractile kinetics of skinned preparations of rat hearts depending on myosin heavy chain isoform content. *Pflugers Arch* 447: 135-141.
74. Andruchov O, Andruchova O, Wang Y, Galler S. (2003) Functional differences in type-I fibres from two slow skeletal muscles of rabbit. *Pflugers Arch.* 446(6):752-759.
75. Danilova VM, Andrukhova OV, Babiychuk VS, Andrukhov OY, Babiychuk EB (2003) Physico-chemical characteristics of 5'-nucleotidase in the structure of smooth muscle cell membrane rafts *Ukr.Biohim.Zh* 75(3):71-76.
76. Andrukhov OY., Danylova VM, Babiichuk VS, Sagach VF The effect of nitric oxide on the smooth muscle actomyosin ATPase activity. *Ukr.Biohim.Zh.* 74(2):120-122.
77. Andrukhov OY, Sagach VF (2001): The mechanism of the effect of nitric oxide on the sensitivity of the contractile apparatus of the vascular smooth muscles to Ca^{2+} . *Fiziol Zh.* 47(5):41-46.
78. Andrukhov OY, Sagach VF (2000): Effects of nitric oxide on the contractile activity of the skinne rat portal vein and papillary muscle. *Neurophysiology.* 32(2):242-243.
79. Sagach VF, Andrukhov OY (2000): The effect of nitric oxide on the contractile activity of skinned preparations of the smooth muscles of the rat portal vein. *Fiziol Zh.* 46(1):3-9.
80. Sagach VF, Andrukhov OY, Babiichuk EB, Babiichuk VS, Danylova VM, Draeger A (1999). The effect of annexins on the contractile activity of the smooth muscles in the rat portal vein. *Fiziol Zh.* 45(5): 3-8.
81. Sobieszek A, Andruchov OY, Nieznanski K (1997): Kinase-related protein (telokin) is phosphorylated by smooth-muscle myosin light-chain kinase and modulates the kinase activity. *Biochemical J (Lond).* 328: 425-30

1. Andrukhover O, Behm C, Blufstein A, Rausch-Fan X. Immunomodulatory properties of dental-derived mesenchymal stem cells: IntechOpen. Periodontology and Dental Implantology, ISBN 978-953-51-6717-4