Sara Darakhshan

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Personal data

Date of birth: 21th September 1989

Place of birth: Kermanshah, Iran

Nationality: Persian

Education

Post-Doc researcher in Regenerative Medicine – 2020-2022

PhD of Cell & Molecular Biology – Razi University/Royan Institute – 2014-2020

MSc of Cell & Molecular Biology – Razi University – 2010-2013

BSc of Animal Biology – Razi University – 2006-2010

Work experience

- Researcher at Kermanshah University of Medical Sciences (KUMS) – Pharmaceutical Group (2015-2023)
- Lab manager at Shahid Beheshti University (2019-2020)
- Researcher at KUMS – Regenerative Medicine Center (2020-2022)

Publications

- Darakhshan S, Bidmeshki Pour A, Ghanbari A. Tranilast enhances the anti-tumor effects of tamoxifen on human breast cancer cells in vitro. Journal of Biomedical Science. 2013, 20:76.

- Darakhshan S, Bidmeshki Pour A, Khazaei M, Rabzia A, Ghanbari A. Synergistic effects of tamoxifen and tranilast on VEGF and MMP-9 regulation in cultured human breast cancer cells. Asian Pacific Journal of Cancer Prevention. 2013, 14 (11), 6869-6874.

- Darakhshan S, Bidmeshki Pour A, Ghanbari A, Hakhamaneshi M.S, Mansouri K. The effects of tamoxifen in combination with tranilast on CXCL12-CXCR4 axis and invasion in breast cancer cell lines. Iranian Journal of Pharmaceutical Research. 2014, 13 (2): 683-693.

- Darakhshan S, Ghanbari A, Gholami Rad F, Bidmeshki Pour A. Tamoxifen and tranilast show a synergistic effect against breast cancer in vitro. Bratislava Medical Journal. Bratisl Lek Listy. 2015, 116 (1).

- Darakhshan S, Bidmeshki Pour A. Tranilast: A Review of Its Therapeutic Applications. Pharmacological Research. 2015, 91:15-28.

- Darakhshan S, Bidmeshki Pour A, Hosseinzadeh Colagar A, Sisakhtnezhad S. Thymoquinone and its therapeutic potentials. Pharmacological Research. 2015, 95–96: 138–158.

- Darakhshan S, Bidmeshki Pour A, Kowsari-Esfahan R, Vosough M, Montazeri L, Ghanian MH, Baharvand H, Piryaei A. Generation of hepatic microtissues by liver-specific extracellular matrix, as a platform for toxicological studies. 2020, Tissue Engineering and Regenerative Medicine, 17(4): 459-475.

- Darakhshan S, Tahvilian R, Hosseinzadeh Colagar A. *Nigella sativa*: a plant with multiple therapeutic implications. International Journal of Pharmacognosy. 2015, 2(5): 190-214.

- Ganjuri M, Darakhshan S, Taghizad F. A review on pharmacological and therapeutic properties of *Echinacea*. International Journal of Pharmacovigilance. 2016, 1(1):18.

- Darakhshan S, Malmir M, Bagheri F, Safaei M, Sharifi R, Sadeghi M, Hatami M, HamidReza Mozaffari, Reza Tahvilian. The effects of pomegranate peel extract on recurrent aphthous stomatitis. Current Issues in Pharmacy and Medical Sciences. 2019, 32 (3).

- Darakhshan S, Bagheri F, Kakabaraei S, Tahvilian R. Topical formulation of tranilast improves hypertrophic scar in a rat model. Pharmacology & Physiology. Physiology and Pharmacology. 2021; 25: 242-250.

- Bagheri F, Darakhshan S, Mazloomi S, Shiri Varnamkhasti B, Tahvilian R. Dual loading of *Nigella sativa* oil-atorvastatin in chitosan–carboxymethyl cellulose nanogel as a transdermal delivery system. Drug development and industrial pharmacy. 2021; 47(4):569-78.

- Jalili C, Darakhsnan S, Ghanbari A, Azimi M. Mohammad Safari. Harmine attenuates liver injury induced by mercuric chloride in rats via the inhibition of oxidative stress. Research Journal of Pharmacognosy, 2021; 8(3): 13-23.

- Jalili C, Darakhsnan S, Safari M, Ghanbari A. Harmine has nephroprotective effect against methotrexate-induced injury in rats via the inhibition of oxidative stress. Research Journal of Pharmacognosy, 2021, 8(4): 9-19.

- Ghanbari A, Akhshi N, Nedaei SE, Mollica A, Aneva IY, Qi Y, Liao P, Darakhshan S, Farzaei MH, Echeverría J. Tribulus terrestris and female reproductive system health: A comprehensive review. Phytomedicine. 2021, 84: 153462.

- Darakhshan S, Goudarzi F, Mirzaie S, Karami A, Kiani A. Hemostatic polyurethane sponge containing kaolin, tannic acid, and tranexamic acid. Polymer Engineering & Science. 2023;63(9):3013-24.

- Goudarzi F, Elieh-Ali-Komi D, Derakhshan S, Rashidi K, Kiani A. Development and in vivo evaluation of a self-polymerizable tranilast-loaded silicone gel for scar modulation. 2026, 13:8853282261432810.

- Doosti H, Mohammadi P, Darakhshan S, Zhaleh, M. Tahvilian R. Bioactive hydrogel dressings incorporating decellularized sheep liver Extracellular matrix (ECM) for effective wound regeneration. BioMed Research International. 2026

- Darakhshan S, Mirzaie S, Hossinpour H, Zhaleh M, Kakebaraei S, Tahvilian. A Hydrophilic Polyurethane Foam Containing *Nigella sativa* Oil as a Wound Dressing. 2025, 30:2025:6627611.

Research expertise and Skills

Formulations of natural and synthetic therapeutic substances, Liver & Intestine tissue engineering, Organ-on-a-chip, Cell culture, qRT-PCR, Histology techniques, ELISA assay, Toxicity assessments, Clinical trial management, Microsoft Office, EndNote, GraphPad Prism, Image J, Photoshop, Scientific writing & speaking

Patents

Preparation a gel formulation from peel of pomegranate for aphtae and gingivitis (NARAK), 2017, National registration (No: 13970614-96625) [Its Production License is being obtained from Food & Drug Organization of Iran (FDO).]

Preparation a topical formulation from *Nigella sativa* oil for ulcers, 2020, Its registration is being obtained.

Design and preparation of tranilast-shikonin gel for scar treatment. 2021.

A hemostatic polyurethane sponge containing kaolin, tannic acid, and tranexamic acid. 2022

A topical silicone film-forming gel containing Tranilast. 2023