



PharmDr. Sasan Khademnematolahi. Ph.D

Profile

I am a Pharm.D. and Ph.D. (expected Aug2025) in Natural Sciences With over a decade of experience across academic research, hospital pharmacy, and pharmaceutical R&D, my core expertise lies in preclinical pharmacology, drug formulation, and translational research, particularly in inflammation and autoimmune models. At the Slovak Academy of Sciences, I have led and contributed to internationally recognized studies involving in vivo/in vitro methods, biomarker analysis, and therapeutic evaluations, resulting in Q1 publications and international conference presentations. In the pharmaceutical industry, I have contributed to formulation development, quality control, and GMP-compliant product optimization. I thrive in collaborative, multidisciplinary environments and bring a proactive, solution-oriented approach to research and innovation.

Work Experience

Researcher (Post.doc) – Institute of Polymer, Slovak Academy of Sciences

September 2025 – Present | Bratislava, Slovakia
Department for Biomaterials Research (Poxy Med Group)

Researcher – Centre of Experimental Medicine, Slovak Academy of Sciences

February 2019 – Auguste 2025 | Bratislava, Slovakia

- Conduct pharmacological and toxicological research related to inflammation and disease models.
- Perform in vivo and in vitro experimentation, biomarker analysis, therapeutic assessments and Managed research design, animal handling, ELISA, histology, and data analytics.
- Collaborate on scientific publications and international grant projects.

R&D Associate – Ahanin Pajuh Ferdows Pharmaceutical Company

September 2016 – December 2018 | Tehran, Iran

- Worked on formulation development and stability testing.
- Assisted in product optimization and quality control procedures under GMP standards.

Details

Bratislava, Slovakia
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Links

[LinkedIn](#)

Skills

Teamwork
Communication
Effective Time Management
Microsoft Office
Leadership Skills

Languages

English
German
Slovak

Pharmacist, Public and Hospital Pharmacies

September 2013 — September 2018 | Tehran & Kerman, Iran

Student Researcher, Faculty of Pharmacy, Kerman

University of Medical Sciences

September 2012 — June 2015 | Kerman, Iran

- Collaborated with formulation scientists on drug characterization, ensuring the safety and efficacy of pharmaceutical products.
- Gained extensive experience in analytical techniques such as chromatography, spectroscopy, and mass spectrometry.

Education

Ph.D. in Natural Sciences

Comenius University Bratislava & Slovak Academy of Sciences

September 2021 — August 2025 | Bratislava, Slovakia

Thesis: Anti-arthritis effects of natural anti-inflammatory substances in experimental arthritis in rats

Supervisor: PharmDr. Katarina Bauerova, DrSc.

Doctor of Pharmacy (Pharm.D.), Kerman University of Medical Sciences

September 2009 — June 2015 | Kerman, Iran

Thesis: Formulation and physicochemical evaluation of antacid effervescent tablets

Expertise

- **Pharmacology & Toxicology:** Preclinical pharmacological screening, anti-inflammatory and antioxidant testing.
- **Laboratory Techniques:** Animal handling, ELISA, Western blot, histology, data analysis.
- **Regulatory Understanding:** Familiar with GLP and GMP principles in pharmaceutical settings.
- **Multidisciplinary Research:** Collaboration with biomedical scientists and clinicians.
- **Software & Tools:** MS Office, GraphPad Prism, statistical tools

Publications

Khademnematollahi, S., Ponist, S., Svik, K., Drafi, F., Slovak, L., Muchova, J., Mindang, E.L., Ahmad, W. and Bauerova, K., 2025. Therapeutic Effects of Two Different Molecular Weights of Orally Administered Hyaluronan, Both as

Monotherapy and in Combination with Methotrexate in a Rat Model of Arthritis. *International Journal of Molecular Sciences*, 26(9), p.3958. Q1

Chrastina, M., Dráfi, F., Pružinská, K., Poništ, S., Kamga, K.S., **Khademnematolah, S.**, Bilka, F., Novák, P., Pašková, L. and Bauerová, K., 2023. Crocus sativus L. extract (saffron) effectively reduces arthritic and inflammatory parameters in monotherapy and in combination with methotrexate in adjuvant arthritis. *Nutrients*, 15(19), p.4108. Q1

Pružinská, K., Chrastina, M., **Khademnematolah, S.**, Vyletelová, V., Gajdošová, L., Pastvová, L., Dráfi, F., Poništ, S., Pašková, L., Kucharská, J. and Sumbalová, Z., 2024. Astaxanthin, Compared to Other Carotenoids, Increases the Efficacy of Methotrexate in Rat Adjuvant Arthritis. *International Journal of Molecular Sciences*, 25(16), p.8710. Q1

Chrastina, M., Poništ, S., Dráfi, F., Švík, K., **Khademnematolah, S.**, Pružinská, K., Tchorbanov, A. and Bauerová, K., 2022. Effect of saffron extract, astaxanthin, and carnosic acid on the levels of matrix metalloproteinase-9 and on body weight changes in arthritis experiments. *European Pharmaceutical Journal*, 69(2), pp.26-33. Q4

Conferences

Khademnematolah, S., K. Bauerova, K. Pružinská, F. Drafi, S. Ponist, K. Švík, and J. Muchova. "AB0783 A PRECLINICAL STUDY FOCUSING ON OXIDATIVE STRESS IN ADJUVANT ARTHRITIS RAT MODEL TO EVALUATE THE EFFECT OF VARIOUS MOLECULAR WEIGHTS OF HYALURONIC ACID IN MONOTHERAPY AND IN COMBINATION WITH METHOTREXATE." *Annals of the Rheumatic Diseases* 83 (2024): 1684.

KHADEMNEMATOLAH, Sasan - KAMGA SILIHE, Kevine - PRUŽINSKÁ, Katarína - CHRASTINA, Martin - NDJENGUE MINDANG, Elisabeth Louise - DRÁFI, František - BAUEROVÁ, Katarína. Azaridachta Indica (Neem) Seed Oil Effect in Experimental Arthritis – Biochemical Parameters Assessment. In 13th Miniconference of PhD Students CEM SAS. - Bratislava : Centre of Experimental Medicine SAS, 2024, p. 6. ISBN 978-80-89991-15-0. (VEGA č. 2/0079/24

KHADEMNEMATOLAH, Sasan - DRÁFI, František - PONIŠT, Silvester - ŠVÍK, Karol - MUCHOVÁ, Jana - BAUEROVÁ, Katarína. The Effect of Hyaluronic Acid in Combination with Methotrexate Focussing on Oxidative Stress in Adjuvant Arthritis. In XII PhD Miniconference CEM SAS 2023 : book of abstracts. - Bratislava : Centre for Experimental Medicine Slovak Academy of Sciences, 2023, p. 11. ISBN 978-80-89991-11-2.

KHADEMNEMATOLAH, Sasan - TAGHDISIESFEJÍR, Mohsen - BAUEROVÁ, Katarína. The anti-arthritis effects of niosome loaded Melittin on experimental arthritis in rats – a preliminary study. In XI. Miniconference of PhD. students of Centre of Experimental Medicine. Book of Abstracts. 7th of July 2022. -

Bratislava: Centre of Experimental Medicine SAS, 2022, p. non. ISBN 978-80-89991-08-2.

PRUŽINSKÁ, Katarína - CHRASTINA, Martin - KHADEM NEMATOLAHİ, Sasan - TÓTHOVÁ, Nikola - TAGHDISIESFEJÍR, Mohsen - PONIŠT, Silvester - DRÁFI, František - PHAM, Ngoc Khanh - BAUEROVÁ, Katarína. Evaluation of Nelumbo Nucifera Leaves Effect on Experimental Arthritis. In XII PhD Miniconference CEM SAS 2023 : book of abstracts. - Bratislava : Centre for Experimental Medicine Slovak Academy of Sciences, 2023, p. 18. ISBN 978-80-89991-11-2.

PRUŽINSKÁ, Katarína - CHRASTINA, Martin - KHADEM NEMATOLAHİ, Sasan - PONIŠT, Silvester - DRÁFI, František - PHAM NGOC, Khanh - BAUEROVÁ, Katarína. The effect of Nelumbo nucifera leaves on rats with adjuvant arthritis : 09/2023. Katarína Pružinská, Martin Chrastina, Sasan Khademnematolahi, Silvester Poništ, František Dráfi, Pham Ngoc Khanh, Katarína Bauerová. In 2nd Collections of Seminars of PhD. Students: Year 2024 : Abstract book. - Bratislava : CEM SAV, 2024, p. 7. ISBN 978-80-89991-14-3. (Vega č. 2/0136/20

PRUŽINSKÁ, Katarína - CHRASTINA, Martin - PONIŠT, Silvester - DRÁFI, František - TAGHDISIESFEJÍR, Mohsen - KHADEM NEMATOLAHİ, Sasan - BAUEROVÁ, Katarína. Účinky karotenoidov hodnotené v predklinickej štúdií prostredníctvom modelu adjuvantnej artritídy. In Farmakodny Plzeň, 14. - 16.6.2023, 71. Česko-slovenské farmakologické dny. - Plzeň : Lékařská fakulta v Plzni, 2023, s. 65.

TÓTHOVÁ, Nikola - KAMGA SILIHE, Kevine - CHRASTINA, Martin - DRÁFI, František - KHADEM NEMATOLAHİ, Sasan - PRUŽINSKÁ, Katarína - PONIŠT, Silvester - BAUEROVÁ, Katarína. Azaridachta Indica (Neem) Seed Oil Effect in Experimental Arthritis – Clinical Parameters Assessment. In XII PhD Miniconference CEM SAS 2023 : book of abstracts. - Bratislava : Centre for Experimental Medicine Slovak Academy of Sciences, 2023, p. 20. ISBN 978-80-89991-11-2

Karailievova L, Puhova D, SASAN KHADEM NEMATOLAHİ, Puhova A, Macejova D, Brtko J, Liska J, Hlavacova N, Jezova D, Effect of chronic mild stress and treatment with eplerenone on behavioral responses to chemically induced tumorigenesis in rats, The 62nd Czech-Slovak Psychopharmacological Conference, 15-19 January 2020, Jeseník, Czech Republic.

Balagova L, Durkova D, SASAN KHADEM NEMATOLAHİ, Puhova A, Macejova D, Brtko J, Hlavacova N, Jezova D, Mineralocorticoid receptor blockade attenuates stress-related negative emotions during tumorigenesis in rats, 12th Symposium on Catecholamines and Other Neurotransmitters in Stress, 15-19 June 2019, Smolenice Castle, Slovakia.

Member of Executive Team for 15th seminar of Iranian pharmacy students, 13-15 Oct 2010, Kerman University of Medical Science student, Kerman, Iran.

Amin Mohammadi, SASAN KHADEM NEMATOLAHİ, Payam Khazaeli, Abbas Pardakhty, Formulation of Aloe vera polysaccharide gel niosomes. In the 16th Seminar of Iranian pharmacy students 15-17 Oct 2011, Tehran University of Medical Science, Tehran, Iran.

Hossein Alirezaiee, SASAN KHADEM NEMATOLAH, Mitra Mehrabani, Abbas Pardakhty, Formulation of Aloe vera polysaccharide gel niosomes, In the 1st International Congress of cosmetic and pharmaceutics, 7-9 May 2012, Isfahan University of Medical Science, Isfahan, Iran.

Hossein Alirezaiee, SASAN KHADEM NEMATOLAH, Mitra Mehrabani, Abbas Pardakhty, Formulation of Aloe vera polysaccharide gel niosomes, In the 17th seminar of Iranian pharmacy students, 7-9 Nov 2012, Kermanshah University of Medical Science, Kermanshah, Iran.

SASAN KHADEM NEMATOLAH, Payam Khazaeli, Gholamreza Dehghan Noudah, Formulation and physicochemical evaluation of antacid effervescent tablets, In the 18th Seminar of Iranian pharmacy students, 15-17 Oct 2014, Tabriz University of Medical Science, Tabriz, Iran.

SASAN KHADEM NEMATOLAH, Payam Khazaeli, Gholamreza Dehghan Noudah, Formulation and physicochemical evaluation of antacid effervescent tablets, In the 15th Annual research congress of Iranian medical student, OCT 2014, Mazandaran University of Medical Science, Sari, Iran.

Internship

15-day internship at the Herbal and Traditional Medicines Research Center, Kerman University of Medical Sciences, from February 3rd to 18th. His research on the anti-arthritis effects of natural anti-inflammatory substances aligns well with our ongoing work, and we look forward to the potential for collaboration.

Certificates

- Good Laboratory Practice (GLP) – Internal Workshop
- Research Ethics and Animal Handling – Slovak Academy of Sciences
- Microsoft Office – Advanced Certificate