

Sahar Seyed Hassan Tehrani

Personal Information

Sahar Seyed Hassan Tehrani

Date of Birth: 06.12.1987
Current address: Lisbon, Portugal
Current Position: Postdoctoral Researcher at Immunoregulation Lab, Champalimaud Research
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Research Experience

20.05.2024 - Present **Postdoctoral Researcher** at Immunoregulation Lab, Champalimaud Research, Champalimaud Foundation, Lisbon, Portugal
Project: The impact of past inflammatory events on cDCpoiesis output
Advisor: Dr. Carlos Minutti

26.01.2023 - 30.06.2023 **Postdoctoral Researcher** at Lars Jansen Lab, Department of Biochemistry, University of Oxford, Oxford, UK
Project: Understanding the role of JAK-STAT signaling in long-term transcriptional memory
Advisor: Prof. Lars Jansen

01.08.2021 - 31.08.2022 **Researcher** at Lars Jansen Lab, Department of Biochemistry, University of Oxford, Oxford, UK
Project: Understanding the role of JAK-STAT signaling in long-term transcriptional memory
Advisor: Prof. Lars Jansen

03.01.2017-31.07.2021 **PhD Candidate:** PhD program in Integrative Biology and Biomedicine, Instituto Gulbenkian de Ciência, Oeiras, Portugal (03.01.2017-02.12.2018), Department of Biochemistry, University of Oxford, Oxford, UK (03.12.2018-31.07.2021)
Project: Determining the role of transcription and transcription factors in transcriptional memory
Supervisor: Prof. Lars Jansen

21.06.2015 - 21.10.2016 **Research Assistant** at the Department of Production, Research and Production Complex, Pasteur Institute of Iran, Tehran, Iran
Project: Evaluating quality control measures in cell therapy
Advisor: Dr. Maryam Shahali

21.04.2011 - 03.10.2012 **MSc Research Fellow** in Cellular and Molecular Biology, National Institute of Genetic Engineering and Biotechnology (NIGEB), Iran
Project: The effect of herbal medicine such as Peganum harmala extract and β -glucan on the cancer cell line
Supervisor: Dr. Sattar Tahmasebi-Enferadi

Education

03.01.2017- 26.10.2022 **PhD in Integrative Biology and Biomedicine IBB** | *NOVA University Lisbon, Instituto Gulbenkian de Ciência (IGC)*. Oeiras, Portugal
Dissertation: Determining the role of transcription and transcription factors in transcriptional memory
Supervisor: Prof. Lars Jansen

21.09.2010 -03.10.2012 **Master of Science (M.S.) in Cellular and Molecular Biology** majored in Molecular Genetics | *National Institute of Genetic Engineering and Biotechnology (NIGEB)*. Tehran, Iran.

Dissertation: The effect of Peganum harmala extract on the cancer cell line

Supervisor: Dr. Sattar Tahmasebi-Enferadi

GPA: 18.6/20 (3.87/4.00)

21.09.2006 – 25.07.2010 **Bachelor of Science (B.S.) in Cellular and Molecular Biology** majored in Microbiology | *Shahid Beheshti University (SBU)*, Tehran, Iran.
GPA: 17.9/20 (3.86/4.00)

Honors and Awards

03.01.2017-31.07.2021 **Fellowship** from the Portuguese Government, Fundação para a Ciência e a Tecnologia (FCT)

21.09.2010 -03.10.2012 **Scholarship** in Cellular and Molecular Biology with a major in Molecular Genetics, National Institute of Genetic Engineering and Biotechnology (NIGEB) (Master's Degree)

21.09.2006 – 25.07.2010 **Scholarship** in Molecular & Cellular Biology (Microbiology), Shahid Beheshti University (Bachelor's Degree)

Publication

Papers

Sahar S.H. Tehrani, Anna Kogan, Pawel Mikulski, and Lars E.T. Jansen. "Remembering Foods and Foes: Emerging Principles of Transcriptional Memory." *Cell Death & Differentiation*, Nature Research, Aug 2023. DOI: 10.1038/s41418-023-01200-6.

Pawel Mikulski, **Sahar S.H. Tehrani**, Anna Kogan, Izma Abdul-Zani, Emer Shell, Brent J. Ryan, and Lars E.T. Jansen. "Transcriptional Memory is Conferred by Combined Heritable Maintenance and Local Removal of Selective Chromatin Modifications." Under review, *bioRxiv*.

Sahar S.H. Tehrani, Pawel Mikulski, Izma Abdul-Zani, João F. Mata, Wojciech Siwek, and Lars E.T. Jansen. "STAT1 is Required to Establish but Not Maintain Interferon- γ -Induced Transcriptional Memory." *The EMBO Journal*, June 2023. DOI: <https://doi.org/10.15252/embj.2022112259>

Siwek W, **Tehrani S.S.H.**, Mata J.F., Jansen L.E.T. "Activation of Clustered IFN γ Target Genes Drives Cohesin-Controlled Transcriptional Memory." *Molecular Cell*, Nov 5, 2020; 80(3):396-409.e6. DOI: 10.1016/j.molcel.2020.10.005.

Somayeh Hashemi Sheikh Shabani*, **Sahar Seyed Hasan Tehrani***, Sattar Tahmasebi Enferadi, Zohreh Rabiei. "Peganum Harmala L.'s Anti-Tumour Effect on Breast Cancer Cell Line." *Biotechnology Reports*, August 2015. DOI: 10.1016/j.btre.2015.08.007. *equal contribution

Sahar Seyed Hasan Tehrani*, Somayeh Hashemi Sheikh Shabani*, Sattar Tahmasebi Enferadi, Zohreh Rabiei. "Growth Inhibitory Impact of Peganum Harmala L. on Two Breast Cancer Cell Lines." *Iranian Journal of Biotechnology*, March 2014. DOI: 10.5812/IJB.18562. *equal contribution

Presentations

Conferences

Sahar S.H. Tehrani, Pawel Mikulski, Izma Abdul-Zani, João F. Mata, Wojciech Siwek, and Lars E.T. Jansen. "STAT1 Induces a Transcriptionally Competent Chromatin State During IFN γ Priming but is Dispensable for Long-Term Transcriptional Memory." Cambridge Epigenetics Club Summer Symposium, Cambridge, UK. 19 July 2023. (**Oral presentation**)

Sahar S.H. Tehrani, Wojciech Siwek, Lars E.T. Jansen. "Determining the Role of STAT/IRF Transcription Factors in Long-Term Transcriptional Memory." *Transcription and Chromatin*, EMBL Heidelberg, 27-29 Aug 2020. (**Poster presentation**)

Sahar S.H. Tehrani, Wojciech Siwek, Lars E.T. Jansen. "The Role of Transcription Factors in Long-Term Transcriptional Memory in Human Cells." *New Frontiers in Innate Immune Memory*, Nijmegen, the Netherlands. 31 Oct - 1 Nov 2019. (**Poster presentation**)

Sahar S.H. Tehrani, Wojciech Siwek, Lars E.T. Jansen. "Determining the Role of STAT Transcription Factors in Long-Term Transcriptional Memory." The 14th Annual Meeting of Gulbenkian Students (AMeeGuS), 26-29 Jan 2020, Évora, Portugal. (**Oral presentation**)

Sahar S.H. Tehrani, Wojciech Siwek, Lars E.T. Jansen. "The Role of Transcription Factors in Long-Term Transcriptional Memory in Human Cells." The 13th and 12th Annual Meeting of Gulbenkian Students (AMeeGuS), 4-7 March 2018, Évora, Portugal; 23-31 Jan 2020, Azores, Portugal. (*Poster presentation*)

Sahar Seyed Hasan Tehrani, Somayeh Hashemi Sheikh Shabani, Sattar Tahmasebi Enferadi, Zohreh Rabiei, Reza Mirfakhraie, Mohammad Zaeifzadeh. "Induction of Apoptosis in Breast Cancer Cell Line Through the Alkaloid Extraction Treatment of Peganum Harmala." 17th National & 5th International Conference of Biology of Iran, 4-6 Sep 2012, Kerman, Iran. (*Poster presentation*)

Somayeh Hashemi Sheikh Shabani, Sattar Tahmasebi Enferadi, **Sahar Seyed Hasan Tehrani**. "The Anti-Cancer Role of Peganum Harmala L. Alkaloids." National Congress on Medicinal Plants, 16-17 May 2012, Kish Island, Iran. (*Poster presentation*)

Zohreh Rabiei, Sattar Tahmasebi Enferadi, Mohammad Zaeifzadeh, **Sahar Tehrani**, Fatemeh Hashemi, Gian Paolo Vannozzi. " β -glucan from Different Fungal and Yeast Sources for Pharmaceutical Uses." 2nd World Congress on Biotechnology, 29 Nov-1 Dec 2011, Philadelphia, USA. (*Poster presentation*)

Skills

Lab Skills

Basic Microbiology Laboratory Skills

Molecular Biology Laboratory Skills: PCR, Electrophoresis Isolation of DNA, Protein, and RNA; PCR; RT-PCR; cDNA synthesis; Real-time PCR; SDS-PAGE, cloning

Cell Biology Laboratory Skills: Mammalian Cell Culture, Lentiviral/Retroviral production; Knockout/Knock-in cell line generation; Western Blotting, MTT test

Chromatin methods: CUT&RUN, ATAC-sequencing, library preparation and analyzing the data Familiar with HPLC, FTIR, Mass spectrometry

Bioinformatics Skills: More than basic and routine skills in using few operating systems and many software's DNA analyzing computer, Oligo6 V, Primary and secondary databases

Computer Skills

Familiar with common Windows program, Microsoft Office, Photoshop

Courses:

Theory and practical Course in Laboratory Animal Science, meeting the requirements of Directive 2010/63 for working with Rodents (mouse and rat), (22/07/2024-26/07/2024, Champalimaud Foundation, Lisbon, Portugal)

Analysis of Differential Expression with RNAseq, (4-7 Dec, 2017, IGC, Oeiras, Portugal)

Basic principle of Good Manufacturing Practices (GMP), (10-11 Dec, 2014, Gandhi Hospital, Tehran, Iran)

Protein Visualization and Docking (2014, Faculty of Veterinary Medicine University of Tehran)

Scientific writing (2012, National Institute of Genetic Engineering and Biotechnology (NIGEB))

Primer designing (oligo6), (2012, National Institute of Genetic Engineering and Biotechnology)

Cell and Tissue culture, (2011, Faculty of Veterinary Medicine University of Tehran)

High-performance liquid chromatography (HPLC), (2012, Shahid Beheshti University (SBU))

First aid training (2007, IRAN Red Crescent)

Others

GMP, good manufacturing practice, Quality Control, Tehran, Iran

Environmental Monitoring, Tehran, Iran

Mindfulness, Oxford, UK

Mentoring Activities

Oxford shadowing day experience at the Department of Biochemistry of Oxford University. (2023 and 2019)

Student supervision for 3 months at the Department of Biochemistry of Oxford University. (2019)

Working in Arvin Bio Basis Company (Startup company in the development center of the Research and Production Complex of Pasteur Institute of Iran. (2014-2016)

Experiences

Invited speaker, Webinar at Khatam Al-Nabieen University, Kabul, Afghanistan (Topic: History of Biotechnology, 13.05.2024)

Visiting Lecturer, Tehran University of Medical Sciences. (Topics: Epigenetics and Advanced technology in science (Feb 2024-May2024))

Workshop instructor in CRISPR technology, International Institute of New Science. (November 2023)

Invited speaker at Tarbiat Moddaress University and Shahid Beheshti University, (topics: CRISPR, Epigenetics, Transcriptional memory), (September 2023-December 2023)

Internship in cell therapy center, Genocell Ideal, Tehran, Iran (2014-2015)

Teaching Science, Farhang E No school, Tehran, Iran (2014-2016)

Executive member of 6th International Congress of Laboratory and Clinic, 12-14 Feb 2014

Teaching: Biology and Physics, Mesbah E Noor high school, Tehran, Iran (2006-2007).

Volunteer teaching math to junior high school (3 months, 2010)

Internships in the Pathology lab (1 month, 2010)

Society and Committee Membership

Member of the Ph.D. delegates at Instituto Gulbenkian de Ciência (2017- 2018)

Member of the Iranian Society of Biology (since 2011)

Member of Nonobiothecnology of Shahid Beheshti University (2008-2010)

Other Interests and Hobbies

Cycling, Photography, Reading books, Volunteer teaching

Languages

Farsi: Native

English: TOEFL 101 (2013), IELTS 7.5 (2021)

Portuguese: A2

Arabic: Basic

References

- Lars Jansen, Professor, Department of Biochemistry, Oxford. Phone: +44 (0)18656-13428, Email: lars.jansen@bioch.ox.ac.uk
- Sattar Tahmasebi Enferadi, Assistant Professor, Department of Molecular Genetics, National Institute of Genetic Engineering and Biotechnology (NIGEB) Email: tahmasebi@nigeb.ac.ir
- Reza Mirfakhraie; Assistant Professor, Department of Genetics, Shahid Beheshti University of Medical Sciences, Email: r.mirfakhraie@sbmu.ac.ir