In the name of God

Curriculum Vitae

Masoomeh Jannesar

Assistant Professor

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Education:

Postdoc., Department of Plant Science, University of Cambridge (2023)
Ph.D., College of Science, Department of Plant Biology, Tehran University (2020)
M.S., Faculty of Biological Sciences, Botany and Plant Sciences, Alzahra University (2009)
B.S., Faculty of Biological Science, Botany and Plant Sciences, Alzahra University (2006)

Awards:

- Winning Dr. Ashtiani Award (2023)
- Winning Dr. Shahriari Award (2023)
- Winning grant of the Empowering Researcher for Innovation training course, University of Cambridge (2022)

Research Interests:

Computational biology**,** Synthetic biology, Genetics and Molecular biology, RNA-seq analysis, High throughput lncRNA and miRNA analysis, Marker-assisted selection, Post-harvest physiology

Projects:

Academy of Medical Sciences of the Islamic Republic of Iran

- A comparative study of policies and programs to retain and attract elites in several selected countries (2023)

The University of Cambridge, Department of Plant Science and Max-Planck Institute

- Evolution of receptor signaling specificity for symbiosis and development (2023)

National Institute of Genetic Engineering and Biotechnology

- Evaluation of a new generation of hybrid ISSR markers, designed based on High-Throughput data, to select salt tolerance trait in pistachio (*Pistacia vera* L.) (2021)

- High-Throughput sequencing of LncRNAs and use of sequencing data for designing genetic markers related to salinity tolerance in pistachio (*Pistacia vera* L.) (2020)

Asthma and Allergy Research Institute

- Evaluation of mutations in STX11 ' PRF1 and UNC13D genes in patients with hemophagocytic lymphohistiocytosis. Immunology, Asthma and Allergy Research Institute (2013)

Academic Teaching Experiences:

- Application of Bioinformatics in Plants (Ph.D), Plant Biology (B.Sc), Plant Biotechnology (Ph.D & B.Sc)

Academic Contributions:

- Member of Culture of Health working group, Academy of Medical Sciences, IR Iran
- Member of Talent working group, Academy of Medical Sciences, IR Iran
- Member of Scientific Leadership working group, Academy of Medical Sciences, IR Iran
- Reviewer the Journal of BMC Plant Biology
- Reviewer the Journal of Applied Biology
- Reviewer the Iranian Journal of Culture and Health Promotion
- Project manager at the Academy of Medical Sciences of the Islamic Republic of Iran
- Project fellow at the National Institute of Genetic Engineering and Biotechnology
- Project fellow in Immunology, Asthma, and Allergy Research Institute

Skills & Techniques:

- Synthetic biology
- Gene editing
- Marker-assisted selection
- Computational Biology: RNA-seq analysis, High throughput data analysis, systems biology, and high throughput data analysis in Linux-based system
- Programming languages such as Python and Perl
- Evolution and phylogenetic analysis by computational approach for high-performance analysis of big sequence data
- lncRNA data analyzing
- Measurement of various biochemical and physiological factors in plants
- RNA and DNA isolation and analysis by transcriptional profiling and by markers
- Molecular Cloning
- Designing functional markers primers based on high throughput sequencing data and their application

Publications:

1) Effat Ghadirzadeh-Khorzoghi, **Masoomeh Jannesar**, Zahra Jahanbakhshian-Davaran, Maryam Moazzam-Jazi, Abolfazl Lotfi, Ali Tajabadi Pour, and Seyed Mahdi Seyedi. (2022). The influence of environmental conditions on sex ratio in a dioecious plant

Pistacia vera L. **Plant Physiology Reports**. DOI: https://doi.org/10.1007/s40502-021-00614-z

2) **Masoomeh Jannesar,** Seyed Mahdi Seyedi, and Christopher Botanga. (2021). Targeted designing functional markers revealed the role of retrotransposon derived miRNAs as mobile epigenetic regulators in adaptation responses of pistachio. **Scientific reports.** DOI: https://doi.org/10.1038/s41598-021-98402-0
3) **Masoomeh Jannesar**, Seyed Mahdi Seyedi, Vahid Niknam, Effat Ghadirzadeh-Khorzoghi and Hassan Ebrahimzadeh. (2021). Salicylic acid, as a positive regulator of Isochorismate synthase, reduces the negative effect of salt stress on *Pistacia vera* L. by increasing photosynthetic pigments and inducing antioxidant activity. **Journal of Plant Growth Regulation**, 1-12. DOI: https://doi.org/10.1007/s00344-021-10383-6
4) **Masoomeh Jannesar**, Seyed Mahdi Seyedi, Maryam Moazzzam Jazi, Vahid Niknam, Hassan Ebrahimzadeh and Christopher Botanga. (2020). A genome-wide identification, characterization, and functional analysis of salt-related long non-coding RNAs in non-model plant *Pistacia vera* L. using transcriptome high throughput sequencing. **Scientific reports.** DOI: 10.1038/s41598-020-62108-6
5) Maryam Vahidi, Mohsen Badalzadeh, **Masoomeh Jannesar**, Marzieh Mazinani, Mohammad Reza Fazlollahi, Nazanin Khodayari Namini. et al. (2019). Clinical and genetic analysis of nine suspected familial Haemophagocytic lymphohistiocytosis patients for MUNC13-4 deficiency and introducing four novel mutations in UNC13D. **Iranian Journal of Allergy, Asthma and Immunology**. 18 (5): 487-492. DOI: 10.18502/ijaai.v18i5.1911
6) **Masoomeh Jannesar**, Maryam Sharif Shoushtari, Ahmad Majd and Zahra Pourpak. (2017). Bee pollen flavonoids as a therapeutic agent in allergic and immunological disorders. **Iranian Journal of Allergy, Asthma and Immunology**. 16(3):171-182.
7) **Masoomeh Jannesar**, Ahmad Majd, Maryam Sharif Shoushtari, and Mona Oraei. (2014). Effect of total flavonoid extract of *Tanacetum parthenium* L. (feverfew) pollen grains on immune system responses in Balb/C mice. **International Journal of Biosciences**. DOI: 10.12692/ijb/5.12.72-78
8) **Masoomeh Jannesar**, Khadije Razavi and Azra Saboora. (2014). Effects of salinity on expression of the salt overly sensitive genes in *Aeluropus lagopoides*. **Australian Journal of Crop Science**. 8(1):1-8.
9) **Masoomeh Jannesar**, Khadije Razavi and Azra Saboora. (2012). Expression pattern analysis of pyridoxal kinase gene from *Aeluropus lagopoides* (*alaSOS4*) under salinity, calcium and Abscisic acid treatments. **Advances in Environmental Biology**. 6: 2476-2479.

Papers in Persian:

1) **Masoomeh Jannesar**, and Seyed Mahdi Seyedi. (2023). A Multi-dimensional Look at Migration of Health Talents and Professionals in Iran. 7 (2): 224-232.
2) Seyed Mahdi Seyedi, **Masoomeh Jannesar**, and Ehsan Sharifipour. (2022). Statement of the Second Step of the Islamic Revolution and the Country's Scientific Roadmap. Iranian Journal of Culture and Health Promotion. 6(2): 229-238.
3) **Masoomeh Jannesar** and Seyed Mahdi Seyedi. (2020). Phylogenetic and genetic diversity of SARS-CoV-2 virus. **Iranian Journal of Culture and Health Promotion**. 4(1): 31-38.
4) **Masoomeh Jannesar**, Azra Saboora and Khadije Razavi. (2009). Effects of ABA and Ca on the changes of some biochemical compounds during adaptation to salinity in

Aeluropus lagopoides. **Iranian Journal of Rangelands and Forests Plant Breeding and Genetic Research.** 17: 15-28.

Book (In Persian):

Masoomeh Jannesar, Maryam Moazzzam Jazi and Seyed Mahdi Seyedi. (2017). **BIOINFORMATICS AND ITS APPLICATIONS**.

Published Abstracts and Posters:

1) Mohammad Javad Vahidi; Mohsen Badalzadeh; **Masoomeh Jannesar**, Marzieh Mazinani; Mohammad Reza Fazlollahi, Nazanin Khodayari Namini. et al. (2017). Report of a novel deletion-insertion in UNC13D gene in a prenatal diagnosis. **Allergy**, WILEY 111 RIVER ST, HOBOKEN 07030-5774, NJ USA, 255-255.
2) **Masoomeh Jannesar**, Maryam Sharif Shoushtari, Mona Oraei and Ahmad Majd. (2012). Immunomodulatory activity of Total flavonoid extract of *Tanacetum parthenium L.* (Feverfew) pollen grains. **The Second International Congress of Immunology, Asthma and Allergy**.
3) Mina Tabatabai, Khadije Razavi, Gurban Ali Nematzadeh and **Masoomeh Jannesar**. (2010). Identification and study of SOS1, SOS2, and SOS3 genes in Aeluropus plant species. **The 16th National and 1st International Conference of Biology**.
4) **Masoomeh Jannesar**, Khadije Razavi and Azra Saboora. (2009). Molecular cloning and characterization of SOS genes homologous from *Aeluropus lagopoides*. **Journal of The Iranian Chemical Society**.

Organized Workshops and Invited Speaker:

- An introduction to next-generation sequencing (NGS), Alzahra university, 2018
- Soil DNA extraction, PCR, and introduction of soil metagenomics, National Institute of Genetic Engineering and Biotechnology, 2016