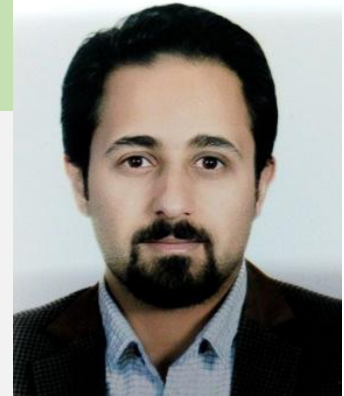


# Seyed Mousa Mousavi-Kouhi



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Google Scholar: <https://scholar.google.com/citations?user=u18lwPIAAAAJ&hl=en>

## Personal Details

Birthplace	Date of birth	Marital status
Minudasht, Golestan province, Iran	1983/04/21	Married

## Education

Degree	Graduated in	Major	University
BSc	2006	Biology	University of Guilan, Iran
MSc	2009	Plant Physiology	Urmia University, Iran
Ph.D	2015	Plant Physiology	Ferdowsi University of Mashhad, Iran

**MSc Thesis:** Effects of Salicylic Acid on some physiological and biochemical properties of Basil (*Ocimum basilicum* L.) under Ultraviolet-C Radiation

**Ph.D. Thesis:** Comparative Effects of Zinc oxide (ZnO) nanoparticles, bulk ZnO and Zn<sup>2+</sup> on some anatomical, ultrastructural, physiological and biochemical properties of rapeseed (*Brassica napus* L.)

## Employment Information

position	Faculty/Department	University	City/Country
Associate Professor	Faculty of Science, Department of Biology	University of Birjand	Birjand, Iran

## Research areas and interests

1. Phytoremediation of polluted soils and water using plants.
2. Interaction of plants with heavy metals and metal-based nanoparticles.
3. Effect of abiotic stresses, especially salinity, on plants.

## Academic Courses Taught

### A. Theoretical Courses

1. Plant Physiology I, II & III
2. Plant Growth and Development
3. Plant Ecophysiology
4. Plant Cell and Tissue Culture
5. Plant Development 1 & 2
6. Plant Morphogenesis and Organogenesis
7. Plant Biochemistry: Metabolism
8. Principles of Research in Biology

### B. Laboratory Courses

1. Plant Physiology Lab I & II
2. Plant Cell and Tissue Culture Laboratory
3. Laboratory skills in biology

## Publications

### I. Journal Papers (Oldest to newest)

1. **Mousavi Kouhi SM**, Khara J, Heydari R. (2009). Effects of salicylic acid on photosynthetic pigment content in *Ocimum basilicum* L. under UV-C radiation stress. Ferdowsi University International Journal of Biological Sciences (Now, Journal of Cell and Molecular Research), 1(1): 57-60.
2. **Mousavi Kouhi SM**, Lahouti M, Ganjeali A, Entezari MH. (2014). Comparative phytotoxicity of ZnO nanoparticles, ZnO microparticles, and  $Zn^{2+}$  on rapeseed (*Brassica napus* L.): investigating a wide range of concentrations. Toxicological and Environmental Chemistry, 96 (6): 861-868.
3. **Mousavi Kouhi SM**, Lahouti M, Ganjeali A, Entezari MH. (2015). Long-term exposure of rapeseed (*Brassica napus* L.) to ZnO nanoparticles: anatomical and ultrastructural responses. Environmental Science and Pollution Research, 22(14): 10733-43.
4. **Mousavi Kouhi SM**, Lahouti M, Ganjeali A, Entezari MH. (2015). Comparative effects of ZnO nanoparticles, ZnO bulk particles, and  $Zn^{2+}$  on *Brassica napus* after long-term exposure: Changes in growth, biochemical compounds, antioxidant enzyme activities, and Zn bioaccumulation. Water, Air, and Soil Pollution, 15 (226): 364-375.
5. **Mousavi Kouhi SM**, Lahouti M, Ganjeali A, Entezari MH. (2016). Anatomical and ultrastructural responses of *Brassica napus* after long-term exposure to excess zinc. Turkish Journal of Biology, 40(3), 652-660.
6. **Mousavi Kouhi, S. M.**, & Lahouti, M. (2018). Application of ZnO nanoparticles for inducing callus in tissue culture of rapeseed. International Journal of Nanoscience and Nanotechnology, 14(2), 133-141.
7. Rasti Sani, M., Ganjeali, A., Lahouti, M., & **Mousavi Kouhi, S. M.** (2018). Morphological and physiological responses of two common bean cultivars to drought stress. Journal of Plant Process and Function, 6(22), 37-46.

8. BeykKhormizi, A., Sarghein, S. H., Sarafraz Ardakani, M. R., Moshtaghioun, S. M., & **Mousavi Kouhi, S. M.** (2018). Alleviation of salinity stress by vermicompost extract: a comparative study on five fennel landraces. *Communications in soil science and plant analysis*, 49(17), 2123-2130.
9. Khosravi, Mohammad Sadegh, Reza Hehdari, Rashid Jami, **Mousavi Kouhi, S. M.**, and Maryam Moudi. (2018). Comparative growth and physiological responses of tetraploid and hexaploid species of wheat to flooding stress. *Acta agriculturae Slovenica* 111, no. 2: 285-292.
10. **Mousavi Kouhi, S. M.**, Sarafraz Ardakani, M. R., & BeykKhormizi, A. (2019). Irrigation of *Helianthus annuus* with Pb-polluted water: Improvement of phytoremediation using vermicompost. *Journal of Plant Process and Function*, 8(31), 77-83.
11. BeykKhormizi, A., Hosseini Sarghein, S., Sarafraz Ardakani, M. R., Moshtaghioun, S. M., & **Mousavi Kouhi, S. M.** (2019). Interaction of Saline Water and Vermicompost on Growth and Absorption of Some Mineral Nutrients in Four Landraces of Fennel, *Foeniculum vulgare*. *Journal of Water Research in Agriculture*, 33(1), 39-52. (In Persian).
12. **Mousavi Kouhi S M**, Moudi M, Soltani Moghadam E, Sarchahi moghadam H. (2019). The investigation of sodium accumulation in some halophytic species of Zygophyllaceae, Polygonaceae, Asteraceae and Amaranthaceae, *Nova Biologica Reperta* 6 (1): 96-105. (In Persian).
13. Ghorbani, M., Ramazani, S. H. R., Fallahi, H. R., & **Mousavi Koohi, S. M.** (2019). Effect of Drought Stress and Bio-fertilizer on Yield and Yield Components of Guar *Cyamopsis tetragonoloba* (L.) Taub. *Journal of Medicinal plants and By-product*, 8(1), 13-19.
14. **Mousavi Kouhi, S. M.**, & Erfanian, M. (2020). Predicting the present and future distribution of medusahead and barbed goatgrass in Iran. *Ecopersia*, 8(1), 41-46.
15. **Mousavi Kouhi, S. M.**, & Moudi, M. (2020). Assessment of phytoremediation potential of native plant species naturally growing in a heavy metal-polluted saline-sodic soil. *Environmental Science and Pollution Research*, 27(9), 10027-10038.

16. Sagharyan, M., Ganjeali, A., Cheniany, M., & **Mousavi Kouhi, S. M.** (2020). Optimization of callus induction with enhancing production of phenolic compounds production and antioxidants activity in callus cultures of *Nepeta binaloudensis* Jamzad (Lamiaceae). Iranian Journal of Biotechnology, 18(4), 47-55.
17. Taghavizadeh Yazdi ME, Darroudi M, Amiri MS, Hosseini HA, Nourbakhsh F, Mashreghi M, Farjadi M, **Mousavi Kouhi SM**, Mousavi SH. (2020). Anticancer, antimicrobial, and dye degradation activity of biosynthesised silver nanoparticle using *Artemisia kopetdagensis*. Micro & Nano Letters, 15(14), 1046-1050.
18. Ganjeali, A., **Mousavi Kouhi, S. M.**, Beyk Khormizi, A., & Hossaini, S. V. (2020). Effect of seed priming on germination and morphophysiological traits of Rice transplants (*Oryza sativa* L.cv. Hashemi) under different moisture regimes. Iranian Journal of Seed Sciences and Research, 7(4), 433-445. (In Persian).
19. **Mousavi Kouhi, S. M.**, Lahouti, M., & Ganjeali, A. (2020). Effect of ZnO Nanoparticles application on mineral absorption in rapeseed. Journal of Plant Research (Iranian Journal of Biology), 33(2), 485-495. (In Persian).
20. BeykKhormizi, A., Hosseini Sarghein, S., Sarafriz Ardakani, M. R., Moshtaghioun, S. M., & **Mousavi Kouhi, S. M.** (2020). Effect of Vermicompost on Membrane Lipid Peroxidation and some Morphophysiological Characteristics of Fennel (*Foeniculum vulgare* Mill.) Landraces under Salt Stress. Plant production technology, 12(2), 115-129. (In Persian).
21. Moudi, M., **Mousavi kouhi, S. M.**, Ghollasi mood, S., & Ayoobi, A. (2021). DNA barcoding of *Ziziphus jujuba* Mill. in Iran using chloroplast genes (rbcL and matK). Journal of Plant Production Research, 28(2), 115-130. (In Persian).
22. **Mousavi-Kouhi, S. M.**, Beyk-Khormizi, A., Amiri, M. S., Mashreghi, M., & Yazdi, M. E. T. (2021). Silver-zinc oxide nanocomposite: From synthesis to antimicrobial and anticancer properties. Ceramics International, 47(15), 21490-21497.
23. Mollaei, H., Karimi, F., Ghorbany, M., Hosseinzadeh, M. S., Moudi, M., & **Mousavi-Kouhi, S. M.** (2021). Investigating Cytotoxic Effect and Molecular Mechanisms of Quinoa

Seed Extract Against Human Lung Cancer Cell Line. Jentashapir Journal of Cellular and Molecular Biology, 12(4).

24. Sagharyan, M., Ganjeali, A., Cheniany, M., & **Mousavi-Kouhi, S. M.** (2021). Studies on Seed Germination, Plant Regeneration, and Soil Acclimatization of *Nepeta binaloudensis* Jamzad (Lamiaceae). Iranian Journal of Science and Technology, Transactions A: Science, 45(6), 1915-1924.
25. Mollaei, H., **Mousavi-Kouhi, S. M.**, Moudi, M., Hosseinzadeh, M. S., & Ghorbany, M. (2022). Evaluation of Anticancer Effects and Molecular Mechanisms of Pomegranate Peel Extract in the Mouse Cellular Model (4T1) of Breast Cancer. Gene, Cell and Tissue, 9(3): e117831.
26. Mollaei H, Moudi M, Ghorbany M, **Mousavi-Kouhi S.M**, Hosseinzadeh M.S. (2022). Anti-cancer effects and molecular mechanisms of sour tea (*Hibiscus sabdariffa*) in the human cellular model (A549) of lung cancer. Journal of Birjand University of Medical Sciences, 29(1): 12-20. (In Persian).
27. **Mousavi-Kouhi, S. M.**, Ghorbani, M., & Hammami, H. (2022). Up-Regulated Gene Sets of *Arabidopsis Thaliana* in Response to Nanoparticles: An In Silico Approach Based on the Microarray Data. International Journal of Nanoscience and Nanotechnology, 18(3), 209-217.
28. **Mousavi-Kouhi, S. M.**, Beyk-Khormizi, A., Mohammadzadeh, V., Ashna, M., Es-haghi, A., Mashreghi, M., ... & Taghavizadeh Yazdi, M. E. (2022). Biological synthesis and characterization of gold nanoparticles using *Verbascum speciosum* Schrad. and cytotoxicity properties toward HepG2 cancer cell line. Research on Chemical Intermediates, 48(1), 167-178.
29. **Mousavi-Kouhi, S. M.**, Beyk-Khormizi, A., Amiri, M. S., Mashreghi, M., Hashemzadeh, A., Mohammadzadeh, V., ... & Taghavizadeh Yazdi, M. E. (2023). Plant gel-mediated synthesis of gold-coated nanoceria using *ferula gummosa*: Characterization and estimation of its cellular toxicity toward breast cancer cell lines. Journal of Functional Biomaterials, 14(7), 332.

30. Beyk-Khormizi, A., Sarafraz-Ardakani, M. R., Hosseini Sarghein, S., Moshtaghioun, S. M., **Mousavi-Kouhi, S. M.**, & Taghavizadeh Yazdi, M. E. (2023). Effect of Organic Fertilizer on the Growth and Physiological Parameters of a Traditional Medicinal Plant under Salinity Stress Conditions. *Horticulturae*, 9(6), 701.
31. Ashna, N., Ganjeali, A., & **Mousavi-Kouhi, S. M.** (2023). Allelopathic effects of apricot (*Prunus armeniaca* L.) root on some crops and weeds. *Plant Process and Function* 2023; 11 (52) : 5.
32. Beyk-Khormizi, A., Hosseini Sarghein, S., Sarafraz-Ardakani, M. R., Moshtaghioun, S. M., **Mousavi-Kouhi, S. M.**, & Ganjeali, A. (2023). Ameliorating effect of vermicompost on *Foeniculum vulgare* under saline condition. *Journal of Plant Nutrition*, 46(8), 1601-1615.
33. Beyk-Khormizi, A., Sarghein, S. H., Sarafraz-Ardakani, M. R., Moshtaghioun, S. M., & **Mousavi-Kouhi, S. M.** (2023). Evaluation of osmotic regulation, total phenol, protein and antioxidant enzymes in four fennel populations under saline treatments using vermicompost. *Nova Biologica Reperta*, 10(2), 129-142. (In Persian).
34. Khodadadi, Z., Moudi, M., **Mousavi-Kouhi, S. M.**, & Hosseinzadeh, M. S. (2024). Investigating the interaction effect of salinity stress and heavy metal copper on the growth and phytoremediation potential of *Bassia Scoparia* L. *Journal of Soil and Plant Interactions-Isfahan University of Technology*, 19-20. (In Persian).
35. Hussain, Q. M., Hayati Roodbari, N., Yousefi, E., **Mousavi-Kouhi, S. M.**, & Eshaghi, A. (2024). Biosynthesis and characterization of selenium nanoparticles using *Ceratonia Siliqua* and evaluation of its antimicrobial properties. *Nanomedicine Research Journal*, 9(2), 195-205.
36. Khodadadi, Z., **Mousavi Kouhi, S. M.**, & Hosseinzadeh, M. S. (2024). A review of Phytoremediation using some medicinal and aromatic plant species. *Journal of Biosafety*, 17(1), 17-36. (In Persian).
37. **Mousavi-Kouhi, S. M.** (2025). Phytoremediation of nanoparticles, as future water pollutants, using aquatic and wetland plants: Feasibility, benefits and risks, and research gaps. *Environmental Science and Pollution Research*, 1-30.

## II. Full-text Papers in Conferences

1. **Mousavi Kouhi S. M.** Benefits and Biological hazards of genetically modified plants. 1st International Joint Conference on New Trends In Biotechnology. University of Sistan and Baluchesahedan, Zahedan, Iran, April 18-19, 2017. (In Persian).
2. **Mousavi Kouhi, S. M.**, Lahouti, M., Ganjeali, A., & Entezari, M. H. Comparative Effects of Zinc oxide (ZnO) Nanoparticles and Microparticles on Some Vegetative Traits of Rapeseed. The fourth national conference on nanotechnology in agriculture. Karaj, Iran, July 4, 2017. (In Persian).
3. Beyk-Khormizi, A., Hosseini Sarghein, S., Sarafraz-Ardakani, M. R., Moshtaghioun, S. M., **Mousavi-Kouhi, S. M.** The effect of vermicompost organic fertilizer on the initial growth of fennel medicinal plant populations (*Foeniculum vulgare* Mill). The third national Conference of Organic Cultivation and Propagation of Medicinal Plants. Urmia University, Iran, July 10, 2018. (In Persian).
4. **Mousavi Kouhi S. M.**, Ghorbani M., Kaveh F., Ftahi Z. Comparative investigation of germination and early growth of 16 plant species under salinity of Persian Gulf water. The 6th Iranian Conference of Plant Physiology. Yazd University, Iran, October 23-24, 2019. (In Persian).
5. **Mousavi Kouhi S. M.**, Moudi M., Soltani Moghadam E. Effects of industrial cleaning wastewater on seed germination and early growth of 15 plant species. The 6th Iranian Conference of Plant Physiology. Yazd University, Iran, October 23-24, 2019. (In Persian).
6. Beyk-Khormizi, A., Hosseini Sarghein, S., Sarafraz-Ardakani, M. R., Moshtaghioun, S. M., **Mousavi-Kouhi, S. M.** Interaction of worm-produced fertilizer and osmotic stress on the plant growth, membrane stability and antioxidant compounds of fennel (*Foeniculum vulgare* Mill). The 6th Iranian Conference of Plant Physiology. Yazd University, Iran, October 23-24, 2019. (In Persian).
7. Hosseinzadeh F., Fallah R., **Mousavi Kouhi S. M.**, Khorashadizadeh S. M. Effect of air and nitrogen plasma on the germination of *Portulaca oleracea* and *Ocimum bacilicum*

seeds. 8th Conference on Plasma Engineering and Plasma Physics. University of Mazandaran, Iran, July 14, 2021. (In Persian).

8. **Mousavi Kouhi S. M.** Investigating the use of aquatic plants in the phytoremediation of water contaminated with heavy metals. 2nd National and 1st International Conference on Modeling and New Technologies in Water Management. University of Birjand, Iran, February 21-22, 2023. (In Persian).
9. Khodadadi Z., Moudi M., **Mousavi Kouhi S.M.**, Hosseinzadeh M.S. Phytoremediation: A cost effective and environmentally friendly technique for removing heavy metals. 3<sup>rd</sup> National Conference on New Biological Findings. University of Sistan and Baluchesahedan, Zahedan, Iran, May 24-26, 2023. (In Persian).
10. Khodadadi Z., Moudi M., **Mousavi Kouhi S.M.**, Hosseinzadeh M.S. The role of tree plants on Phytoremediation of heavy metals in soil. 3<sup>rd</sup> National Conference on New Biological Findings. University of Sistan and Baluchesahedan, Zahedan, Iran, May 24-26, 2023. (In Persian).
11. Hosseinzadeh F., Fallah R., Khorashadizadeh S. M., **Mousavi Kouhi S. M.** Effect of cold plasma-activated water treatment on the seed germination indices of Fennel and Thyme seeds. The 10th Iranian Plasma Engineering and Plasma Physics Conference. Science and Research Branch of Islamic Azad University, Iran, July 12-13, 2023. (In Persian).
12. **Mousavi Kouhi S.M.**, Zarifi A. A comparative study on the growth of oat (*Avena sativa*) in hydroponic culture with two culture beds: perlite and expanded polystyrene. The 6th National Congress on Hydroponic and Greenhouse Products. Shahrekord University, Iran, November 12-13, 2024. (In Persian).
13. **Mousavi Kouhi S.M.**, Gholami P. A comparative study of perlite and expanded polystyrene culture beds in the culture of *Celosia argentea* (*Celosia argentea* L.). The 6th National Congress on Hydroponic and Greenhouse Products. Shahrekord University, Iran, November 12-13, 2024. (In Persian).
14. **Mousavi Kouhi S.M.**, Nabatian A. Comparing the growth of basil (*Ocimum basilicum* L.) in perlite and styrofoam culture beds. The 6th National Congress on Hydroponic and Greenhouse Products. Shahrekord University, Iran, November 12-13, 2024. (In Persian).

### III. Conference Abstracts & Presentations

1. **Mousavi Kouhi SM**, Khara J, Heydari R. Effect of UV-A on some growth and metabolic parameters of basil (*Ocimum basilicum* L.). The First National Conference on Plant Biology. Payam Noor University of Talesh, Iran, August 13-15, 2008.
2. **Mousavi Kouhi SM**, Khara J, Heydari R. Effects of salicylic acid on some morphological parameters and antioxidant enzymes activity of basil (*Ocimum basilicum* L.) under UV-A. The First National Conference on Plant Biology. Payam Noor University of Talesh, Iran, August 13-15, 2008.
3. **Mousavi Kouhi SM**, Khara J, Heydari R. Effects of Salicylic Acid on Some Morphological Parameters and Antioxidant Activities of Basil Under Ultraviolet Irradiation. The 15th National Congress and the 3rd International Congress of Iranian Biology, University of Tehran, Iran. August 19-21, 2008.
4. **Mousavi Kouhi S.M.**, Lahouti M. Effect of zinc oxide nanoparticles on callogenesis and shoot regeneration in tissue culture of rapeseed. The 2nd National Conference on Modern Biological Sciences and Technologies, University of Malayer, Iran, May 2016.
5. Moodi M., **Mousavi Kouhi S.M.**, Ghollasi Moud S., Ayobi A. Genetic distance analysis of different *Ziziphus jujuba* ecotypes in Iran. The 2nd International and 10th National Biotechnology Congress, Iranian Biotechnology Society, Iran, September 2017.
6. Moodi M., **Mousavi Kouhi S.M.**, Ghollasi Moud S., Ayobi A. Haplotype network analysis of different *Ziziphus jujuba* ecotypes using chloroplast genes. The 2nd International and 10th National Biotechnology Congress, Iranian Biotechnology Society, Iran, September 2017.
7. Beyk-Khormizi, A., Hosseini Sarghein, S., Sarafraz-Ardakani, M. R., Moshtaghioun, S. M., **Mousavi-Kouhi, S. M.** Effect of vermicompost on the nutrient elements of the fennel shoot under saline conditions. 20th National and 8th International Congress of Biology, University of Maragheh, Iran, 22-24 August 2018.
8. **Mousavi-Kouhi, S. M.**, Sarafraz-Ardakani, M. R., Beyk-Khormizi, A. Investigation of interaction between lead and vermicompost on morphological traits, photosynthetic

pigments, protein content and mineral elements of sunflower. 20th National and 8th International Congress of Biology, University of Maragheh, Iran, 22-24 August 2018.

9. Beyk-Khormizi, A., Hosseini Sarghein, S., Sarafraz-Ardakani, M. R., Moshtaghioun, S. M., **Mousavi-Kouhi, S. M.** Effect of vermicompost on the growth, chlorophyll, carotenoid, phenol, sugar, and relative water content in different landraces of fennel. 20th National and 8th International Congress of Biology, University of Maragheh, Iran, 22-24 August 2018.
10. **Mousavi-Kouhi, S. M.**, Sagharyan, M. The effect of heavy metal zinc (Zn) on germination characteristics of *Haloxylon ammodendron*. 23th National and 11th International Iranian Biology Congress, University of Tehran, Iran, September 9-11, 2024.
11. **Mousavi-Kouhi, S. M.**, Ghorbani M. Evaluation of seed dormancy in some native species and the effect of cold and heat treatment on dormancy breaking of dormant seeds. 23th National and 11th International Iranian Biology Congress, University of Tehran, Iran, September 9-11, 2024.

## IV. Books

### A. Academic

1. **Mousavi-Kouhi, S. M.**, Gholamian A. (2012). Textbook of Plant Metabolism. Modarresan Sharif Publication, Tehran. ISBN: 978-964-11-1363-4. (In Persian).
2. **Mousavi-Kouhi, S. M.**, Ghaempanah S. (2012). Textbook of Plant Anatomy. Modarresan Sharif Publication, Tehran. ISBN: 978-964-11-1363-8. (In Persian).
3. Taiz L, Zeiger E. (2013). Plant Physiology. (Lahouti M, Bishehkalai R, **Mousavi-Kouhi SM**, Ghaempanah S, Trans.). Vazhegan Kherad, Mahshad. (In Persian).

### B. Artistic

1. **Mousavi-Kouhi, S. M.** (2020). Robaeiat (Poem). Fasle Panjom Publication, Tehran, Iran. (In Persian).
2. **Mousavi-Kouhi, S. M.** (2022). Unighersity (Novel). Name Mehr Publication, Tehran, Iran. (In Persian).

## V. Research Projects

1. Lahouti M., **Mousavi Kouhi S.M.** (2014). Effect of zinc oxide nanoparticles on callogenesis and shoot regeneration in tissue culture of rapeseed. Ferdowsi University of Mashhad.
2. **Mousavi Kouhi, S. M.**, Moudi, M. (2017). Investigation of heavy metals accumulation in plants grown in the region of the effluent entry of Qaleh-Zari mine in South Khorasan. University of Birjand.
3. **Mousavi Kouhi, S. M.**, Sarafriz Ardakani, M. R., BeykKhormizi, A. (2018). Effect of vermicompost on improving phytoremediation of lead contaminated soil by sunflower. University of Birjand.
4. Ghorbany, M., Ramazani, S. H. R., Fallahi, H. R., **Mousavi Kouhi, S. M.** (2018). Effect of drought stress, mycorrhizal and rhizobium bio-fertilizers on yield and yield components of guar. University of Birjand.
5. Mollaei, H., Moudi, M., Ghorbany, M., **Mousavi Kouhi, S. M.**, Hosseinzadeh, M. S. (2020). Evaluation of anti-cancer effects and molecular mechanisms of pomegranate peel extract in mouse cellular model (4T1) of breast cancer. University of Birjand.
6. Moudi, M., **Mousavi Kouhi, S. M.**, Ghollasi, Sh., Ayubi A. (2021). DNA Barcoding among different ecotypes of genus *Ziziphus jujuba* Mill. in South Khorasan based on chloroplast DNA (matK, rbcL). University of Birjand.
7. Mollaei, H., Moudi, M., Ghorbany, M., **Mousavi Kouhi, S. M.**, Hosseinzadeh, M. S. (2021). Evaluation of anti-cancer effects and molecular mechanisms of sour tea (*Sabdariffa Hibiscus*) in human cellular model (A549) of lung cancer. University of Birjand.
8. **Mousavi Kouhi, S. M.**, Ghorbany, M., Hammami H., Mollaei, H. (2024). Investigating the long-term effect of paddy cultivation on the accumulation of heavy metals in tree plants around rice farm. University of Birjand.

## VI. Gene sequencing

- Registration of 54 gene sequences in the NCBI database, listed with GenBank ID in the following table:

MF574630.1	MF574629.1	MF574627.1	MF574625.1	MF574624.1
MF574631.1	MF574632.1	MF574633.1	MF574634.1	MF574635.1
MF574675.1	MF574648.1	MF574676.1	MF574649.1	MF574650.1
MF574623.1	MF574651.1	MF574652.1	MF574653.1	MF574626.1
MF574654.1	MF574655.1	MF574628.1	MF574656.1	MF574657.1
MF574658.1	MF574661.1	MF574662.1	MF574659.1	MF574660.1
MF574663.1	MF574636.1	MF574638.1	MF574664.1	MF574637.1
MF574665.1	MF574666.1	MF574639.1	MF574667.1	MF574640.1
MF574668.1	MF574641.1	MF574669.1	MF574642.1	MF574670.1
MF574643.1	MF574671.1	MF574644.1	MF574672.1	MF574645.1
MF574673.1	MF574646.1	MF574674.1	MF574647.1	

## Peer Review Activities

- **Served as reviewer for +50 manuscripts in JCR and ISC journals, including:**
  1. Ecotoxicology and Environmental Safety.
  2. Environmental Pollution.
  3. Journal of Environmental Management.
  4. Journal of Integrative Agriculture.
  5. BMC Plant Biology.
  6. International Journal of Environmental Health Research.

7. ACS Omega.
8. Landscape and Ecological Engineering.
9. Turkish Journal of Botany.
10. Caryologia.
11. Plant Process and Function (In Persian).
12. Iranian Journal of Pulses Research (In Persian).
13. Iranian Journal of Seed Research (In Persian).
14. Environmental Stresses in Crop Sciences (In Persian).
15. Crop Science Research in Arid Regions (In Persian).

## **Workshops Designed and Instructed**

1. Plant Tissue Culture Workshop. University of Birjand, 2017
2. Introduction to Bioinformatics Workshop. University of Birjand, 2019 & 2024
3. Introductory Excel for Biology Students. University of Birjand, 2022 & 2023
4. Effective Scientific Presentations: PowerPoint Basics. University of Birjand, 2022
5. Essential Office Software for Biology Students. University of Birjand, 2023

## **Lectures**

1. Interaction of Nanoparticles with Plants. University of Birjand, 2015.
2. Phytochemistry and Pharmaceutical Applications of Saffron, University of Birjand, 2016.
3. Benefits and Biosafety Risks of Transgenic Plants. University of Birjand, 2017 & 2020.
4. Environment and the COVID-19 Pandemic: Challenges and Opportunities. University of Birjand, 2021.

## Executive Experiences

1. Director of Entrepreneurship Hub and Industry Liaison Office, Faculty of Science, University of Birjand, 2021-2023.
2. Design and Establishment of a Hydroponic Culture Laboratory, University of Birjand, 2022.
3. Question Design for Regional/Provincial Student Olympiad Examinations. University of Birjand, 2018-2024.
4. Periodic Monitoring Visits by the Quality Assurance, Evaluation and Accreditation Committee to Higher Education Institutions in South Khorasan Province, 2021-2024
5. Research Needs Assessment and Compilation of Priority Research Topics for South Khorasan Department of Environment, 2021
6. Faculty Advisor for Undergraduate Students (2015, 2018, and 2022 Cohorts)
7. Faculty Advisor for Biology Scientific Association. University of Birjand, 2018-2024.