Siamak Shirani Bidabadi (Ph.D.)

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• PERSONAL STATEMENT

An assistant professor of horticulture and plant biotechnology with a solid research background and teaching experience (2 years' experience as postdoctoral research on grapes and viticulture at Michigan State University). I am interested in developing a career which combines teaching and research, while maintaining my interest in public engagement with Horticultural Plant physiology, medicinal plants, sustainable agriculture (organic horticulture and plant - microbe interaction) and phytoremediation. A confident presenter at conferences and teacher in classrooms, able to explain complex information to audiences of all levels.

• EDUCATION

• University Putra Malaysia (2008-2011)

Ph.D. degree

Field of Study: Plant Biotechnology and Horticulture

Research titled '*In vitro* mutagenesis and somaclonal variation in banana to increase drought tolerance'. Supervisors: Professor Maziah Mahmood, Institute of Tropical Agriculture, ITA, University Putra Malaysia, 43400 Serdang, Selangor DE, Malaysia.

• Department of Horticulture, Michigan State University, East Lansing, MI 48824, USA. (June 2021- June 2023) (Full time). Postdoctoral researcher on Viticulture and Enology.

Canopy management strategies to improve grape specialized color metabolites synthesis and fruit quality.

Teaching Experience at Arizona State University

Courses Taught:

BIO 181 - General Biology I

Taught multiple sections with varying enrollment sizes, ranging from small groups to large classes of up to 196 students.

ABS 225 - Soils

Provided comprehensive instruction on soil science fundamentals, with a focus on practical applications.

Integrated classroom lectures with interactive lab sessions.

ABS 226 - Soils Laboratory

Supervised and guided students through hands-on experiments and lab activities related to soil properties and analysis.

ABS 460 - Organic Gardening

Conducted a course on organic gardening practices, emphasizing sustainable techniques and eco-friendly gardening.

Managed full-capacity classes, ensuring active participation and practical learning experiences.

ABS 360 - Southwest Home Gardening

Delivered content focused on gardening in arid environments, tailored to the unique climate of the Southwestern United States.

Engaged a diverse student body with class sizes ranging from small to large enrollments.

ABS 200 - Build Your Professional Self

Facilitated a professional development course designed to help students build essential career skills.

Managed multiple sections, adapting course content to the needs of students with various professional goals.

ABS 100 - Discovering the Professions

Guided students through the exploration of different career paths, helping them identify and pursue their professional interests.

Encouraged interactive discussions and peer engagement through well-structured class activities.

ABS 368 - Plant Propagation

Instructed students on the principles and techniques of plant propagation, combining theoretical knowledge with practical lab experiences.

ABS 260 - Sustainable Horticulture

Taught a course on sustainable horticultural practices, with a lab component that allowed students to apply learned concepts in real-world scenarios.

ABS 394 – Topic: Floriculture: Sustainable Production and Design

Teach an undergraduate course covering the principles and practices of floriculture, with emphasis on sustainable production, environmental management, and floral design. Integrate horticultural science with practical approaches to the production, handling, and use of floricultural crops.

ABS 367 – Medicinal Plants

Teaching an undergraduate course focused on medicinal plants, their identification, cultivation, bioactive compounds, traditional and contemporary uses, and their importance in horticulture and human health. Integrates principles of medicinal plant production with plant physiology, phytochemistry, and pharmacognosy.

- **PUBLICATIONS**

  - **Book**

1- **Shirani Bidabadi, S.** (2026). Medicinal Plants and Pharmacognosy: A Comprehensive Textbook for Undergraduate Students. Arizona State University. https://keep.lib.asu.edu/items/205144

  - **Book chapter**

1- Penna S, **Shirani Bidabadi S,** Jain SM (2023) https://doi.org/10.1007/978-981-16-9720-3_1

2- Shirani Bidabadi S, Abdel Latef AAH (2022) https://doi.org/10.1007/978-981-19-5121-3_14

3- Shirani Bidabadi S, Abdel Latef AAH (2022). https://doi.org/10.1007/978-981-19-5121-3_11

4- Shirani Bidabadi S, Sharifi P, Abdel Latef AAH (2021) https://doi.org/10.1201/9781003022879

  - **Articles**

1. Ghasemi Kamran, Souri Mohammad Kazem, Kiani Zahra, Ghasemi Yousef, Shirani Bidabadi Siamak (2026) The Effect of Foliar Spraying Sucrose on Source–Sink Relationship and Yield Improvement in Cauliflower. *Advances in Agriculture*. 2026; 2026:7978201. https://doi.org/10.1155/aia/7978201

2. Asadi Ghamishani Moslem, Mohammadi Meisam, Saidi Mehdi, Eghlima Ghasem, Shirani Bidabadi Siamak (2026) Exogenous Epibrassinolide Mitigates Chilling Injury in

Anthurium Cut Flowers Via GABA Shunt Regulation and Osmolyte Accumulation. J Plant Growth Regul 45, 1301–1315 (2026). https://doi.org/10.1007/s00344-025-11941-y

3. Akbari Arezoo, Barzegar Taher, Rabiei Vali, Nicola Silvana, Shirani Bidabadi Siamak (2025) Enhancing fruit quality of cold-stressed *physalis peruviana* during late-season through spraying with phenylalanine, cysteine, and selenium. BMC Plant Biol 25, 1408 (2025). https://doi.org/10.1186/s12870-025-07467-w
4. Mohammadi Meisam, Eghlima Ghasem, Aghamir Fateme, Nezamdoost Delaram, Bagnazari Majid, Shirani Bidabadi Siamak (2024). https://doi.org/10.1016/j.indcrop.2024.120089
5. Khandani Yaser, Sarikhani Hasan, Gholami Mansour, Chehregani Rad Abdlkarim, Shirani Bidabadi Siamak (2024) https://doi.org/10.1071/fp24059
6. Mohammad Mehralian, Siamak Shirani Bidabadi, Mahnaz Azad, Samad Nejad Ebrahimi, Mohammad Hossein Mirjalili (2023) https://doi.org/10.1016/j.indcrop.2023.117321
7. **Siamak Shirani Bidabadi**, Paolo Sabbatini*, Josh VanderWeide (2023) https://doi.org/10.1016/j.scienta.2023.111847
8. Parisa Sharifi, Reza Amirnia, **Siamak Shirani Bidabadi*** (2022) https://doi:10.1007/s10343-021-00617-8
9. Yin Yin Mon, **Siamak Shirani Bidabadi**, Kyaw Swar Oo, Si-Jun Zheng* (2021) https://doi.org/10.1016/j.pmpp.2021.101733
10. **Siamak Shirani Bidabadi,** Parisa Sharifi, Mohan Jain* (2021) doi:10.21926/obm.genet.2103137
11. Parisa Sharifi, Reza Amirnia, Mehran Torkian, **Siamak Shirani Bidabadi*** (2021) https://doi.org/10.1007/s42729-021-00554-5 (**Q1**)
12. Parisa Sharifi, **Siamak Shirani Bidabadi**, Abbu Zaid, Arafat Abdel Hamed Abdel Latef * (2021) https://authors.elsevier.com/sd/article/S0147-6513(21)00162-7 (**Q1**)
13. Alirezaei Z, Afazel M, **Shirani Bidabadi S*** (2020) https://doi.org/10.4236/jbm.2020.811019
14. Sharifi P, **Shirani Bidabadi S** (2020) https://doi.org/10.1007/s42452-020-03843-3
15. **Shirani Bidabadi S**, Jain SM* (2020) https://doi.org/10.3390/plants9060702 (**Q1**)
16. **Shirani Bidabadi S*,** Sharifi P (2020) https://doi.org/10.1007/s00344-020-10157-6 (**Q1**)
17. **Shirani Bidabadi S,** VanderWeide J, Sabbatini P* (2020) **https://doi.org/10.1038/s41598-020-63986-6 (Q1- Nature)**

18. Sharifi P*, **Shirani Bidabadi S** (2020) **https://doi.org/10.1016/j.indcrop.2020.112460 (Q1)**
19. **Shirani Bidabadi S*** (2020) https://doi.org/10.1080/15226514.2020.1759507 (**Q2**)
20. **Shirani Bidabadi S***, Mehralian M (2020) https://doi.org/10.1007/s10343-020-00499-2 (**Q2**)
21. **Shirani Bidabadi S***, Mehralian M (2019) https://doi.org/10.1007/s10343-019-00478-2 (**Q2**)
22. **Shirani Bidabadi S***, Sabbatini P (2019) https://doi.org/10.1080/15538362.2019.1652133 (**Q3**)
23. **Shirani Bidabadi S***, Sabbatini P (2019) https://doi.org/10.1016/j.hpj.2019.07.003 (**Q1**)
24. **Shirani Bidabadi S**, Zheng SJ (2018) https://doi.org/10.1016/j.hpj.2018.08.001 (**Q1**)
25. **Shirani Bidabadi S***, Abolghasemi R, Zheng SJ (2018) Grafting of watermelon (*Citrullus lanatus* cv. Mahbubi) onto different squash rootstocks as a means to minimize cadmium toxicity. ***International Journal of Phytoremediation***. 20(7): 730-738.(Q2)
26. Dehghanipoodeh S, Ghobadi C, Baninasab B, Gheysari M, **Shirani Bidabadi S** (2018) https://doi.org/10.1016/j.hpj.2018.09.004 (**Q1**)
27. **Shirani Bidabadi S*** (2018) Waste management using vermicompost derived liquids in sustainable horticulture. ***Trends in Horticulture***. doi: 10.24294/th..v1i2.175.
28. **Shirani Bidabadi S***, Masoumian M (2018) Arbuscular mycorrhizal symbiosis improves growth and antioxidative response of *Stevia rebaudiana* (Bert.) under salt stress. ***Trends in Horticulture.*** doi:10.24294/th.v1i2.549
29. **Shirani Bidabadi S***, Afazel M, Sabbatini P (2017) https://doi.org/10.1016/j.hpj.2017.11.002 (**Q1**)
30. **Shirani Bidabadi S***, Dehghanipoodeh S, Wright GC (2017) DOI 10.1007/s40093-017-0173-7 (**Q2**)
31. **Shirani Bidabadi S***, Afazel M, Dehghani Poodeh S (2016) DOI: 10.1007/s40093-016-0135-5 (**Q2**)
32. Dehghani Poodeh S, Ghobadi C, Baninasab B, Gheysari M and **Shirani Bidabadi S** (2015) DOI: 10.1080/01904167.2015.1086789 (**Q2**)

33. Rezai R, Orojloo M, **Shirani Bidabadi S**, Soleimanzadeh M (2013) Possible role of methyl Jasmonate in protection to NaCl – Induced salt stress in pepper cv. Green Hashemi. ***International Journal of Agriculture and Crop Sciences***, 6(17): 1235 – 1238.
34. **Shirani Bidabadi S**, Ashrafi N, Haghighi M, Boroomand A, Jafari M (2013) The possibility of applying effluent in tomato soilless culture. ***International Journal of Agriculture and Crop Sciences***, 5(23): 2858 – 2862.
35. **Shirani Bidabadi S**, Mehri H, Ghobadi C, , Baninasab B, Afazel M, Boroomand A (2013) Morphological, physiological and antioxidant responses of some Iranian grapevine cultivars to methyl jasmonate application. ***Journal of Crop Science and Biotechnology***, 16(4): 277 – 283. (**Q3**)
36. Shahgholi M, Naderi D, Etemadi N, Eghbalsaid S, **Shirani Bidabadi S (**2013) Salycylic acid and trinexapac – ethyl afecet on chlorophyll content and shoot properties of *Lolium perenne* cv. Speedy Green. ***International Journal of Agriculture and Crop Sciences***, 6(16): 1123 – 1126.
37. Maziah M, **Shirani Bidabadi S***, Ghobadi C, Gray DJ. 2012. Effect of methyl jasmonate treatments on alleviation of polyethylene glycol -mediated water stress in banana (*Musa acuminata* cv. 'Berangan', AAA) shoot tip cultures. ***Plant Growth Regulation***, 68: 161 – 169. (**Q1**)
38. **Shirani Bidabadi S**, Sariah M, Zakaria W, Subramaniam S, Maziah M (2012) *In vitro* selection and characterization of water stress tolerant lines among ethyl methanesulphonate (EMS) induced variants of banana (*Musa* spp., with AAA genome). ***Australian Journal of Crop Science***, 6(3): 567 – 575. (**Q3**)
39. **Shirani Bidabadi S**, Sariah M, Zakaria W, Subramaniam S, Maziah M (2012) Induced mutations for enhancing variability of banana (*Musa* spp.) shoot tip cultures using ethyl methanesulphonate (EMS). ***Australian Journal of Crop Science***, 6(3): 391 – 401.(**Q3**)
40. **Shirani Bidabadi S**, Maziah M, Baninasab B, Ghobadi C (2012) Influence of salicylic acid on morphological and physiological responses of banana (*Musa acuminata* cv. 'Berangan', AAA) shoot tips to in vitro water stress induced by polyethylene glycol. ***Plant Omics***, 5(1): 33 – 39 (**Q3**)
41. **Shirani Bidabadi S**, Maziah M, Sariah M, Zakaria W, Ghobadi S (2011) Evaluation of *in vitro* water stress tolerance among EMS – induced variants of banana (*Musa* spp.,

AAA), using morphological, physiological and molecular traits. ***Journal of Crop Science and Biotechnology***, 14(4): 255 – 263. (Q3)

42. **Shirani S**, Sariah M, Zakaria W, Maziah M (2010) https://doi.org/10.3844/ajabssp.2010.128.134 (**Q4**)
43. **Shirani Bidabadi S**, Sariah M, Zakaria W, Maziah M (2010) Study of genetic and phenotypic variability among somaclones induced by BAP and TDZ in micropropagated shoot tips of banana (*Musa* spp.) cultivars using RAPD markers. ***Journal of Agricultural Science***, 2(3): 49 – 60. (**Q2**)
44. **Shirani S**, Mahdavi F, Maziah M (2009) Morphological abnormality among regenerated shoots of banana and plantain (*Musa* spp.) after *in vitro* multiplication with TDZ and BAP from excised shoot tips. ***African Journal of Biotechnology***, 8(21):5755 – 5761.
45. Ghazvini R, **Shirani S (**2002) Study of the effects of somatic embryogenesis of unfertilized ovules from Mexican Lime (*Citrus aurantifolia* L) on different media. ***Journal of Science. and Technology of Agriculture and Natural Resources***, 6(2): 44 –