

PERSONAL INFORMATION

- **Date of Birth:** April 21, 1986, Nowdesheh, Kermanshah, Iran.
- **Languages:** Hawrami (Native) Kurdish and Persian (Fully fluent), English (Fluent).
- **Marital Status:** Single.

EDUCATION

Doctor of Philosophy (Ph.D.) in Plant Cell-Developmental Biology (09/2013-09/2018)
Department of Biology, Faculty of Science, Bu Ali Sina University. GAP: 18.56 of 20

✓ *Thesis:* Evaluation of cellular and developmental responses induced by ZnO and CeO₂ nanoparticles in *Phaseolus vulgaris* L., Supervisor: Prof. Abdolkarim Chehregani Rad

Master of Science (M.Sc.) in Plant Systematics and Ecology (09/2010-01/2013)
Department of Biology, Faculty of Science, Bu Ali Sina University. GAP: 18.15 of 20

✓ *Thesis:* Biosystematical and biodiversity study of *Achillea tenuifolia* Lam and *Achillea biebersteinii* Afan in the province of Hamedan and Kurdistan., Supervisor: Prof. Abdolkarim Chehregani Rad

Bachelor of Science (B.Sc.) in Plant Science (09/2005-05/2009)
Department of Biology, Faculty of Science, Bu Ali Sina University. GAP: 17.60 of 20

RESEARCH INTERESTS

My research areas include, but not limited to:

- Metabolomics, Metabolic engineering
- Signaling networks, Molecular biology, Stress physiology
- Proteomics
- Plant Embryology
- Nano-based delivery systems
- Nano-toxicity

PUBLICATIONS

Peer-reviewed journal articles:

1. **Salehi H**, Chehregani Rad A, Raza A, Chen J-T. **2021**. Foliar application of CeO₂ nanoparticles alters generative components fitness and seed productivity in bean crop (*Phaseolus vulgaris* L.). *Nanomaterials*.
2. **Salehi H**, De Diego N, Chehregani Rad A, Benjamin JJ, Trevisan M, Lucini L. **2021**. Exogenous application of ZnO nanoparticles and ZnSO₄ distinctly influence the metabolic response in *Phaseolus vulgaris* L. *Science of the Total Environment*. 778, 146331.
3. Benjamin JJ, Miras-Moreno B, Araniti F, **Salehi H**, Bernardo L, Parida A, Lucini L. **2020**. Proteomics revealed distinct responses to salinity between the halophytes *Suaeda maritima* (L.) Dumort and *Salicornia brachiata* (Roxb). *Plants*.
4. **Salehi H**, Miras-Moreno B, Chehregani Rad A, Pii Y, Mimmo T, Cesco S, Lucini L. **2020**. Relatively low dosages of CeO₂ nanoparticles in the solid medium induce adjustments in secondary metabolism and ionic balance of bean (*Phaseolus vulgaris* L.) roots and leaves. *Journal of Agricultural and Food Chemistry*. 68, 67–76.
5. **Salehi H**, Chehregani A, Lucini L, Majd A, Gholami M. **2018**. Morphological, proteomic and metabolomic insight into the effect of cerium dioxide nanoparticles to *Phaseolus vulgaris* L. under soil or foliar application. *Science of The Total Environment*. 616, 1540-1551.
6. **Salehi H**, Chehregani A, Majd A, Gholami M. **2018**. The comparison and evaluation of ZnO and CeO₂ nanoparticles effects on the element accumulation, growth and biochemical parameters in *Phaseolus vulgaris* L. *Journal of Plant Researches (Iranian Journal of Biology)*, 1: 1-17.

7. Chehregani Rad A, **Salehi H**, Mohsenzadeh F. **2017**. Karyomorphological Analysis on Several Diploid Populations of *Achillea biebersteinii* Afan. (Asteraceae) from Iran. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.*, 1-10.
8. Chehregani Rad A, **Salehi H**. **2016**. Male and female gametophyte development in *Achillea tenuifolia* (Asteraceae), *Progress in Biological Sciences*, 6, 1, 85-94.
9. Chehregani Rad A, **Salehi H**, Mohsenzadeh F. **2014**. Investigations on chromosome variation in *Achillea tenuifolia* Lam and *A. biebersteinii* Afan (Asteraceae) from Hamedan and Kermanshah in the West of Iran. *Journal of Cell and Molecular Research*, 6, 1, 13-21.
10. **Salehi H**, Chehregani Rad A, Atri M, Mohsenzadeh F. **2013**. The study of biodiversity using DSS method and seed storage protein comparison of populations in two species of *Achillea* L. in the west of Iran. *Taxonomy and Biosystematic*, 5, 16, 55-68.
11. Chehregani Rad A, **Salehi H**, Mohsenzadeh F. **2011**. The study of development of reproductive organs (stamen and ovule) in *Achillea biebersteinii* Afan. *Developmental Biology (Iranian Journal)*, 3, 10, 63-74.

Conference Papers:

1. **Salehi H**. Evaluation of physiological and biochemical responses of bean (*Phaseolus vulgaris* L.) plant exposed to zinc oxide and cerium oxide nanoparticles. PhD-winter school, of the Italian Society of Agricultural Chemistry, Feb. 13-16, **2017**. Piacenza, Italy. Speech Presentation
2. **Salehi H**, Chehregani A, Lucini L, Majd A, Gholami M. Cerium Oxide Nanoparticles lead to modification in proteome and metabolome of bean plant as an important ingredient in human diet. 2nd nanomedicine and nanosafety conference, Nov. 29-30, **2017**, Tehran University of medical science.
3. **Salehi H**, Chehregani Rad A, Gholami M, Majd A. Evidence of Translocation, Physiological and Biochemical Impacts of Foliar Applied CeO₂ Nanoparticles on bean (*Phaseolus vulgaris* L.) Plants, The 19th National & International 7th Congress of Biology, Tabriz, Iran, **2016**.
4. **Salehi H**, Chehregani Rad A, Gholami M, Majd A. Evaluation of physiological and biochemical responses of bean (*Phaseolus vulgaris* L.) plant exposed to zinc oxide nanoparticles and zinc sulfate salt (ZnSO₄), The 19th National & International 7th Congress of Biology, Tabriz, Iran, **2016**.
5. **Salehi H**, Chehregani Rad A, Atri M, Mohsenzadeh F. Biosystematic study of 12 populations of *Achillea tenuifolia* Lam in Iran, The 17th National and 5th International Congress of Iranian Biology, Kerman, Iran, **2012**.
6. **Salehi H**, Chehregani Rad A, Atri M, Mohsenzadeh F. Study of biodiversity in the species *Achillea biebersteinii* Afan in province Hamadan with emphasis on chromosomal characteristics and condition of habitats, The 17th National and 5th International Congress of Iranian Biology, Kerman, Iran, **2012**.
7. Zamanpour K, Atri M, **Salehi H**. Study of Floristic- Ecologic *Consolidia orientalis* (J.Gay) schroding in west and northwest of Iran, The 17th National and 5th International Congress of Iranian Biology, Kerman, Iran, **2012**.
8. **Salehi H**, Chehregani Rad A, Atri M, Mohsenzadeh F. Application of seed storage protein in intra-specific variation in nine population of *Achillea biebersteinii* Afan. The 17th National and 5th International Congress of Iranian Biology, Kerman, Iran, **2012**.
9. **Salehi H**, Chehregani Rad A, Atri M, Mohsenzadeh F. Study of intraspecific biodiversity in *Achillea biebersteinii* Afan using Floristic-Ecologic in province Hamadan and Kurdistan. The 1th National Congress of Biology, Falavarjan, Iran, **2011**.
10. **Salehi H**, Chehregani Rad A, Atri M, Mohsenzadeh F. The investigation of developmental characteristics of Stamen, Anther and Pollen grains in *Achillea tenuifolia* Lam. The 1th National Congress of Biology, Falavarjan, Iran, **2011**.

EMPLOYMENT HISTORY

- Teaching *Plant Biochemistry* at Payam-e-Nour University, Paveh Branch, Kermanshah, Iran, fall 2013.
- Teaching *Biology* as a private tutor, Hamadan-Kermanshah, Iran, 2014-present.
- Preparing and Teaching an educational package (videos) of *Plant development biology*, FaraDars institute, Tehran, Iran, 2019-2021.

SKILLS

Computer Related:

- **General:** Microsoft Office, Microsoft Windows, etc.

MEMBERSHIP

- **Reviewer:** Journal of Plant Researches (Iranian Journal of Biology), 2014-Present.
- **Reviewer:** Scientific Reports, 2020-Present
- **Reviewer:** International Journal of Plant & Soil Science, 2021-Present
- **Reviewer:** The 5th International Conference on Biology and Ecology, Tehran, Iran, 2016

CERTIFICATE & TRAINING COURSES

- **The basic principle of western blot and SDS-PAGE** (*Theoretical and Practical*). 5-6 Jan, **2019**, Iran University of Medical Science, Tehran, Iran (**Participant**).
- **The Real time PCR principle.** (*Theoretical and Practical*). 24 Dec, **2018**, Bu Ali Sina University, Hamadan, Iran (**Participant**).
- **Cytotoxicity, genotoxicity and hemocompatibility of nanomaterials.** 29 Nov, **2017**, Tehran university of medical science, Tehran (**Participant**).
- **Diagnostic systems using microarray systems.** 29 Nov, **2017**, Tehran university of medical science, Tehran (**Participant**).
- **Bioinformatics:** computer methods in molecular and systems biology. 26-30 June, **2017**, International Center for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy (**Participant**).
- **HPLC.** February 25, **2016**. Tehran University of Medical Science Core Facility (TCF) (**Participant**).
- **Primer Design.** February 4, **2016**, Iranian Academic Center For Education, Culture and Research, Hamedan, Iran (**Participant**).
- **PCR.** August 13, **2015**, Bu Ali Sina University, Hamedan, Iran (**Participant**).
- **Fundamental of Cell Culture.** December 10, **2011**, BIO-IDEA Company Research and Bu Ali Sina University, Hamedan, Iran (**Participant**).

HONORS & AWARDS

- **2009:** Ranked 2nd in BSc course among 70 students of Plant Science, Bu Ali Sina University.
- **2010:** Awarded the MSc position from Talent Office of Bu Ali Sina.
- **2013:** Ranked 10th in Ph.D. Test amongst 121 applicants, in The National Entrance Examination of the Ph.D. programs in Iranian universities.
- **2016-2017:** Received Ph.D. scholarship award from Ministry of Science, Iran, 2016-2017, Università Cattolica del Sacro Cuore, Italy
- **2019:** Nominated as the selected Ph.D. student of educational- research in Bu Ali Sina University.

HOBBIES

Conducting research, trading on stock market, attending social events, mountain climbing, travelling, watching movies and reading books.

REFERENCES

Academic:

- **Prof. Abdolkarim Chehregani Rad**
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PERSONAL DATA

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