

Curriculum Vitae

Mahdi Ayyari (PhD. of Phytochemistry)

* Associate Professor of Medicinal Plants, Department of Horticultural Science, Tarbiat Modares University (TMU)

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Birthday: 05/26/1983 Marital Status: Married, Three sons



Educational Background

Ph.D.: Phytochemistry, Medicinal Plants and Drugs Research Institute, Shahid Beheshti University, Tehran, Iran, 2008- 2013.

Supervisor: Prof. Dr. Peyman Salehi **Adviser:** Dr. Mahdi Moridi Farimani

Visiting Scholar: Phytochemistry and Natural Products Lab, Facoltà di Farmacia Dipartimento di Scienze del Farmaco, Università del Piemonte Orientale, Novara, Italy, 2012-2013

Under supervision: Prof. Dr. Giovanni Appendino

M.Sc.: Phytochemistry, Medicinal Plants and Drugs Research Institute, Shahid Beheshti University, Tehran, Iran, 2006- 2008.

Supervisor: Prof. Dr. Peyman Salehi **Adviser:** Dr. Ali Sonboli

B.Sc.: Pure Chemistry, Department of Chemistry, Sharif University of Technology, Tehran, Iran, 2001- 2006.

Title of the PhD Thesis

- 1- Phytochemical and Biological Investigation of *Moringa peregrina*
- 2- Semisynthesis of Natural Products from Dehydroabietylamine and Zerumbone

Degree: Excellent

Title of the M.Sc. Thesis

- 1- Application of 1-octyl-3-methyl imidazolium tetrafluoroborate ionic liquid for the analysis of essential oil components of *Rosmarinus officinalis* L. by hydrodistillation- headspace solvent micro extraction
- 2- Phytochemical investigation of *Thymus persicus* and its antioxidant activity

Degree: 19.64

Honors and Achievements and Visiting

- ❖ First ranked among my peers in M.Sc
- ❖ First ranked among my peers in comprehensive PhD exam
- ❖ Invited speaker at 1st-3rd one belt and Road International Conference on Traditional Medicine, Beijing and Wuhan, 2016-2019.

Research Publications

1. Shamshiri M, Sánchez C, Rico S, Mokhtassi-Bidgoli A, **Ayyari M**, Rezadoost H, et al. Molecular, Metabolic, and Physiological Responses to Progressive Biotic Stress Caused by Cucumber Mosaic Virus and Turnip Mosaic Virus in Saffron. *Horticulturae*. 2025;11(1).
2. Shafaei-Cherush Z, Arzani K, Ahmadi N, Mokhtassi-Bidgoli A, **Ayyari M**, Abdollahi H. Improving pear (*Pyrus* spp.) harvest maturity assessment: Integration of color composite indicators and sophisticated multivariate analysis techniques. *Journal of Agriculture and Food Research*. 2025;19.
3. Norani M, Ebadi MT, **Ayyari M**. Eco-phytochemical Properties of Ten *Dorema ammoniacum* Populations in Different Climates of Iran. *International Journal of Horticultural Science and Technology*. 2025;12(4):1117–42.
4. Mohammadzadeh Z, Shojaeiyan A, Mahfeli M, **Ayyari M**, Tohidfar M, Mokhtassi-Bidgoli A, et al. Predictive modeling of CIELAB color parameters in okra accessions based on phytochemical composition and antioxidant activity: A non-destructive Imagej and RSM approach. *LWT*. 2025;228.
5. Karami M, Bakhshi B, Ebadi MT, **Ayyari M**. Identification of volatile compounds in the hydrosol of *Nepeta crispa* Willd. from the three natural habitats of Iran. *Iranian Journal of Medicinal and Aromatic Plants Research*. 2025;41(1):20–31.
6. Hakimi F, Eidi A, Ehsani E, **Ayyari M**, Shahpasand K. Neuroprotective Effects of *Rosa damascena* Essential Oil Against Ethanol-Induced Toxicity in Neural Progenitor Cells. *Jundishapur Journal of Natural Pharmaceutical Products*. 2025;20(3).
7. Ghasemi G, **Ayyari M**, Azimi MH, Ebadi MT. Rapid alternative of the post-harvest process to enhance the irones content in *Iris germanica* L. *Journal of Agriculture and Food Research*. 2025;20.
8. Al-Zobaidi I, Ebadi MT, Ghomi H, **Ayyari M**. Optimisation of disinfection and packaging methods for the preservation of Persian shallot (*Allium hirtifolium* L.). *International Journal of Food Science and Technology*. 2025;60(1).
9. Shamshiri M, **Ayyari M**, Mokhtassi-Bidgoli A, Shams-Bakhsh M. Effect of viral-inoculation on the morphology, physiology, and phytochemistry of parsley (*Petroselinum crispum*). *Physiological and Molecular Plant Pathology*. 2024;134.
10. Shahininejad H, Rahimi S, Karimi Torshizi MA, Arabkhazaeli F, **Ayyari M**, Behnamifar A, et al. Comparing the effect of phytobiotic, coccidiostat, toltrazuril, and vaccine on the prevention and treatment of coccidiosis in broilers. *Poultry Science*. 2024;103(5).
11. Saadati M, Azaryan A, Ayyari Noushabadi M, Shams-Bakhsh M. Screening of coriander (*Coriandrum sativum* L.) genotypes to beet curly top virus-severe and beet curly top Iran virus infection. *Physiological and Molecular Plant Pathology*. 2024;129.
12. Norani M, Ebadi MT, Yadegari M, **Ayyari M**. Study of Essential Oil and Effect of Temperature and Seed Appendages (pappus) on Germination Characteristics in Coltsfoot. *Journal of Medicinal Plants and By-Products*. 2024;13(3):538–44.
13. Norani M, Ebadi MT, **Ayyari M**. Volatile compounds variation and phytochemicals of leaf and stem of *Dorema ammoniacum* D. Don. Wild populations. *Journal of Medicinal Plants*. 2024;23(91):42–63.
14. Mahmoudi A, Ebadi MT, **Ayyari M**. Qualitative changes of Blue eryngo (*Eryngium planum* L.) phytochemicals as affected by different drying methods. *Journal of Applied Research on Medicinal and Aromatic Plants*. 2024;40.

15. Mahdavia F, Ebadi MT, Shojaeiyan A, **Ayyari M**, Falahati-Anbaran M. Genetic variation and structure of endemic and endangered wild celery (*Kelussia odoratissima* Mozaff.) quantified using novel microsatellite markers developed by next-generation sequencing. *Frontiers in Plant Science*. 2024;15.
16. Abdulkareem BM, Mokhtassi-Bidgoli A, **Ayyari M**, Keshtkar E, Eyni-Nargeseh H. Enhancing cotton sustainability: Multi-factorial intercropping, irrigation, and weed effects on productivity, quality and physiology. *Heliyon*. 2024;10(5).
17. Abbod M, Safaie N, Gholivand K, **Ayyari M**. Potential of new fungicide production from phthalides of *Kelussia odoratissima*. *Journal of Crop Protection*. 2024;13(3):215–23.
18. Saadati M, **Ayyari M**, Shams-Bakhsh M. The effect of beet curly top virus on growth and phytochemical constituents of coriander (*Coriandrum sativum* L.). *South African Journal of Botany*. 2023;162:804–12.
19. Norani M, Crawford A, Tahamtani Y, Ebadi MT, **Ayyari M**. Extraction and Essential Oils Profiling of Different *Dorema ammoniacum* D. Don. Organs and Evaluation of Antioxidant Capacity. *Journal of Agricultural Science and Technology*. 2023;25(3):701–17.
20. Moradi-Sadr J, Ebadi MT, **Ayyari M**, Ghomi H. Optimization of ultrasonic Bath and cold plasma pre-treatments in the spearmint essential oil isolation process. *Food Science and Nutrition*. 2023;11(4):1904–15.
21. Mohammadzadeh Z, Shojaeiyan A, **Ayyari M**, Tohidfar M, Mokhtassi-Bidgoli A, Atighi MR. Comparative analysis of bioactive compounds in various organs of Iranian okra accessions. *South African Journal of Botany*. 2023;160:682–96.
22. Jandoust S, Shojaeiyan A, **Ayyari M**, Tohidfar M, Ahmadi H, Ebrahimi SN. Using artificial neural network for prediction of accumulation of bioactive compounds in *Momordica charantia* through application of different elicitors. *Industrial Crops and Products*. 2023;192.
23. Ghorbaninejad Z, Eghbali A, Ghorbaninejad M, **Ayyari M**, Zuchowski J, Kowalczyk M, et al. Carob extract induces spermatogenesis in an infertile mouse model via upregulation of *Prm1*, *Plzf*, *Bcl-6b*, *Dazl*, *Ngn3*, *Stra8*, and *Smc1b*. *Journal of Ethnopharmacology*. 2023;301.
24. Ghasemi G, **Ayyari M**, Azimi MH, Ebadi MT. Orris root diversity and quality assessment: Multivariate analysis of phytochemicals and antioxidant properties. *Industrial Crops and Products*. 2023;202.
25. Shokoohi F, Ebadi MT, Ghomi H, **Ayyari M**. Changes in qualitative characteristics of garden thyme (*Thymus vulgaris* L.) as affected by cold plasma. *Journal of Applied Research on Medicinal and Aromatic Plants*. 2022;31.
26. Mokhtarikhah G, Ebadi MT, **Ayyari M**. Agro-morphological and phytochemical studies of spearmint landraces (*Mentha spicata* L.) in Iran. *Industrial Crops and Products*. 2022;176.
27. Jangi F, Ebadi MT, **Ayyari M**. Qualitative characteristics of hyssop (*Hyssopus officinalis* L.) under the influence of harvest time and drying methods. *Drying Technology*. 2022;40(13):2696–709.
28. Jangi F, Ebadi MT, **Ayyari M**. Qualitative changes in hyssop (*Hyssopus officinalis* L.) as affected by cold plasma, packaging method and storage duration. *Journal of Applied Research on Medicinal and Aromatic Plants*. 2021;22.
29. Aminkar S, Shojaeiyan A, Rashidi Monfared S, **Ayyari M**, Nasirzadeh M, editors. Isolation of cycloeucaenol cycloisomerase (CYC1) by expressed sequence tag mining in fenugreek (*Trigonella foenum-graecum*). *Acta Horticulturae*; 2021.
30. Mokhtarikhah G, Ebadi MT, **Ayyari M**. Qualitative changes of spearmint essential oil as affected by drying methods. *Industrial Crops and Products*. 2020;153.
31. Hosseini M, **Ayyari M**, Meyfour A, Piacente S, Cerulli A, Crawford A, et al. Cardenolide-rich fraction of *Pergularia tomentosa* as a novel Antiangiogenic agent mainly targeting endothelial cell migration. *DARU, Journal of Pharmaceutical Sciences*. 2020;28(2):533–43.
32. Ghiasy-Oskoei M, AghaAlikhani M, Sefidkon F, Mokhtassi-Bidgoli A, **Ayyari M**. Blessed Thistle Growth, Essential Oil Content, Yield and Composition as Influenced by Plant Density and Nitrogen Fertilizer. *Journal of Essential Oil-Bearing Plants*. 2020;23(2):276–91.
33. Roshan-Bakhsh A, Pourjam E, **Ayyari M**, Pedram M. Biocontrol properties of some agricultural waste extracts on three nematode species in in vitro and in vivo conditions. *Nematology*. 2019;21(8):837–46.
34. Norani M, Ebadi MT, **Ayyari M**. Volatile constituents and antioxidant capacity of seven *Tussilago farfara* L. populations in Iran. *Scientia Horticulturae*. 2019;257.
35. Movahedi R, Shojaeiyan A, Falahati-Anbaran M, **Ayyari M**. Genetic Variation and Structure in Natural Populations of a Medicinal Vegetable, *Satureja bachtiarica*, Inferred from Microsatellite Markers Developed Using Next-Generation Sequencing. *Plant Molecular Biology Reporter*. 2019;37(1-2):14–23.
36. Masoumi M, Moharramipour S, **Ayyari M**. Acaricidal activity of *Eruca sativa* seed oil and its methanolic extract on *Tetranychus urticae* (Red form)(Acari:Tetranychidae). *Journal of Entomological Society of Iran*. 2019;39(1):81–92.
37. Hosseini SH, Masullo M, Cerulli A, Martucciello S, **Ayyari M**, Pizza C, et al. Antiproliferative Cardenolides from the Aerial Parts of *Pergularia tomentosa*. *Journal of Natural Products*. 2019;82(1):74–9.

38. Ghiasy-Oskoe M, AghaAlikhani M, Mokhtassi-Bidgoli A, Sefidkon F, **Ayyari M**. Seed and biomass yield responses of blessed thistle to nitrogen and density. *Agronomy Journal*. 2019;111(2):601–11.
39. Seifi R, Moharramipour S, **Ayyari M**. Acaricidal activity of different fractions of *Moringa peregrina* on two spotted spider mite *Tetranychus urticae* (Acari: Tetranychidae). *Industrial Crops and Products*. 2018;125:616–21.
40. Pahlavan S, Tousi MS, **Ayyari M**, Alirezalu A, Ansari H, Saric T, et al. Effects of hawthorn (*Crataegus pentagyna*) leaf extract on electrophysiologic properties of cardiomyocytes derived from human cardiac arrhythmia-specific induced pluripotent stem cells. *FASEB Journal*. 2018;32(3):1440–51.
41. Hosseini SH, Azarnivand H, **Ayyari M**, Chahooki MAZ, Erfanzadeh R, Piacente S, et al. Modeling potential habitats for *Pergularia tomentosa* using maximum entropy model and effect of environmental variables on its quantitative characteristics in arid rangelands, southeastern Iran. *Journal of Ecology and Environment*. 2018;42(1).
42. Ghiasy-Oskoe M, AghaAlikhani M, Sefidkon F, Mokhtassi-Bidgoli A, **Ayyari M**. Blessed thistle agronomic and phytochemical response to nitrogen and plant density. *Industrial Crops and Products*. 2018;122:566–73.
43. Eftekhari M, Yadollahi A, Ahmadi H, Shojaeiyan A, **Ayyari M**. Development of an artificial neural network as a tool for predicting the targeted phenolic profile of grapevine (*Vitis vinifera*) foliar wastes. *Frontiers in Plant Science*. 2018;9.
44. Alirezalu A, Salehi P, Ahmadi N, Sonboli A, Aceto S, Maleki HH, et al. Flavonoids profile and antioxidant activity in flowers and leaves of hawthorn species (*Crataegus* spp.) from different regions of Iran. *International Journal of Food Properties*. 2018;21(1):452–70.
45. Ahmadian M, Ahmadi N, Babaei A, Naghavi MR, **Ayyari M**. Comparison of volatile compounds at various developmental stages of tuberose (*Polianthes tuberosa* L. cv. mahallati) flower with different extraction methods. *Journal of Essential Oil Research*. 2018;30(3):197–206.
46. Minaei S, Kiani S, **Ayyari M**, Ghasemi-Varnamkhasti M. A portable computer-vision-based expert system for saffron color quality characterization. *Journal of Applied Research on Medicinal and Aromatic Plants*. 2017;7:124–30.
47. Kiani S, Minaei S, Ghasemi-Varnamkhasti M, **Ayyari M**. An original approach for the quantitative characterization of saffron aroma strength using electronic nose. *International Journal of Food Properties*. 2017;20:S673–S83.
48. Hosseini Kahnouj SH, **Ayyari M**, Azarnivand H, Piacente S, Zare Chahouki MA. *Pergularia tomentosa*, from traditional uses to ecology and phytochemistry. *Journal of Medicinal Plants*. 2017;16(63):108–18.
49. Eftekhari M, Yadollahi A, Ford CM, Shojaeiyan A, **Ayyari M**, Hokmabadi H. Chemodiversity evaluation of grape (*Vitis vinifera*) vegetative parts during summer and early fall. *Industrial Crops and Products*. 2017;108:267–77.
50. Salehi P, Abedini N, Sonboli A, Aliahmadi A, **Ayyari M**. Chemical composition and antimicrobial activity of *Ajania semnanensis* essential oil in two growing stages. *Journal of Essential Oil Research*. 2015;27(2):96–100.
51. Ghasemi M, Mirlohi A, **Ayyari M**, Shojaeiyan A. *Kelussia odoratissima* Mozzaff. a rich source of essential fatty acids and phthalides. *Journal of HerbMed Pharmacology*. 2015;4(4):115–20.
52. Fattahi F, Shojaeiyan A, Askari H, Naghdi Badi H, **Ayyari M**, Mokhtassi-Bidgoli A, et al. Quantitative assessment of hyoscyamine and scopolamine tropane alkaloids in root and shoot of *hyoscyamus* spp. from Iran. *Journal of Medicinal Plants*. 2015;14(56):105–14.
53. Appendino G, Minassi A, Collado JA, Pollastro F, Chianese G, Taglialatela-Scafati O, et al. The Thia-Michael Reactivity of Zerumbone and Related Cross-Conjugated Dienones: Disentangling Stoichiometry, Regiochemistry, and Addition Mode with an NMR-Spectroscopy-Based Cysteamine Assay. *European Journal of Organic Chemistry*. 2015;2015(17):3721–6.
54. Zade AMK, Ghalam JZ, Sonboli A, **Ayyari M**, Manaheji H. Effects of hydroalcoholic and chloroformic extracts of *Salvia Candidissima* on hyperalgesia and edema during adjuvant-induced arthritis. *Koomesh*. 2014;16(2):239–45.
55. Salehi P, **Ayyari M**, Bararjanian M, Ebrahimi SN, Aliahmadi A. Synthesis, antibacterial and antioxidant activity of novel 2,3-dihydroquinazolin-4(1H)-one derivatives of dehydroabietylamine diterpene. *Journal of the Iranian Chemical Society*. 2014;11(3):607–13.
56. Bakhtiar Z, Mirjalili MH, Sonboli A, Farimani MM, **Ayyari M**. In vitro propagation, genetic and phytochemical assessment of *Thymus persicus* - a medicinally important source of pentacyclic triterpenoids. *Biologia (Poland)*. 2014;69(5):594–603.
57. **Ayyari M**, Salehi P, Ebrahimi SN, Zimmermann S, Portmann L, Krauth-Siegel RL, et al. Antitrypanosomal isothiocyanate and thiocarbamate glycosides from *moringa peregrina*. *Planta Medica*. 2014;80(1):86–9.
58. Raiesi S, Nadjafi F, Hadian J, Kanani MR, **Ayyari M**. Autecological and Phytochemical Studies of *Kelussia odoratissima* Mozzaff. An Endangered Ethnomedicinal Plant of Iran. *Journal of Biologically Active Products from Nature*. 2013;3(4):285–94.

59. Esmaeili MA, Sonboli A, Ayyari Noushabadi M. Antioxidant and protective properties of six *Tanacetum* species against hydrogen peroxide-induced oxidative stress in K562 cell line: A comparative study. *Food Chemistry*. 2010;121(1):148–55.
60. Pourjavadi A, **Ayyari M**, Amini-Fazl MS. Taguchi optimized synthesis of collagen-g-poly(acrylic acid)/kaolin composite superabsorbent hydrogel. *European Polymer Journal*. 2008;44(4):1209–16.
61. Pourjavadi A, Amini-Fazl MS, **Ayyari M**. Optimization of synthetic conditions CMC-g-poly (acrylic acid)/Celite composite superabsorbent by Taguchi method and determination of its absorbency under load. *Express Polymer Letters*. 2007;1(8):488–94.

Oral Presentations

1. Phytopharmaceuticals from ornamental resources: from Traditional medicine to biodiscovery platforms **(October 2025-XXVIth International Congress PHYTOPHARM- Saint-Petersburg, RUSSIA)**
2. Phytochemistry and biodiscovery and Biodiscovery Zebrafish Platform to Unveil the Secret of Traditional Antidiabetic **(May 2024, 11th National Congress on Medicinal Plants, Yazd, Iran)**
3. Similarity in chemical composition and *in vivo* bioactivity of the phthalide-producing medicinal plants *Kelussia odoratissima* and *Angelica sinensis*, **(October 2019, IMPLAD, Beijing, China)**
4. Potential of Commercialization of Essential Oils in Aromatherapy and Other Application, (The Belt and Road International Symposium on the Industry development of traditional Medicine, **November 2019, Wuhan, China)**
5. Biodiscovery Platform, a Promising Step toward New Bioactive Natural Products (The 2nd One-Belt and One-Road International Conference on Traditional Medicine, **November 2018, Wuhan, China)**
6. *Kelussia Odoratissima* Mozaff. (Apiaceae): Insights from Ethnobotany to Phytochemistry and Biological Activity **(November 2018, IMPLAD, Beijing, China)**
7. A wide diversity in the application of natural products **(November 2018, IMPLAD, Beijing, China)**
8. *Kelussia Odoratissima* Mozaff. (Apiaceae): Insights from Ethnobotany to Phytochemistry and Biological Activity **(May 2018, 7th NCMP, Shiraz, Iran)**
9. Secondary metabolite profiling in Horticultural crops, Advantages and disadvantages **(September 2017, IrHC2017, Tehran, Iran)**
10. Antitrypanosomal isothiocyanate and thiocarbamate glycosides from *Moringa peregrina* (Forssk.) Fiori, **(The 1st One-Belt and One-Road International Conference on Traditional Medicine, November 2016, Wuhan, China)**
11. Antitrypanosomal isothiocyanate and thiocarbamate glycosides from *Moringa peregrina* **(May 2014, 3rd NCMP, Mashad, Iran)**

Published abstracts (International conferences)

11th International Symposium on Chromatography of Natural Products, Lublin, Poland, June 4-7th, 2018

- 1- Identification of phthalides in different parts of *kelussia odoratissima* mozaff. with GC/MS
- 2- Royan biodiscovery initiative using zebrafish in vivo and other in vitro assays for identification of bioactive natural products

The 5th AFERP International Conference, 17-19th July 2017 Angers, France

- 3- Secondary metabolite profiling and isolation of an antiangiogenic phthalide from the Iranian medicinal plant *kelussia odoratissima* mozaff. (apiaceae): insights from zebrafish and HUVEC bioassays

First International Conference & 10th National Horticultural Science Congress of Iran (IrHC2017), 4-7 September 2017, Tehran, Iran

- 4- The Use of ESTs-database for identification of NIC gene in trigonelline pathway in *Trigonella foenum-graecum* L.
- 5- Isolation and characterization of CYC1 gene by expressed sequence tag mining in Fenugreek (*Trigonella foenum-graecum* L.)
- 6- Different Drying Methods Affect the Quality of Hyssop (*Hyssopus officinalis* L.)

9th Joint Natural Products Conference, Copenhagen, Denmark, 2016 (Poster and published in *Planta Medica* 81, S 01)

- 7- Enhancement of diosgenin extraction from Fenugreek (*Trigonella foenum-graecum*) with a new ionic liquid-based assisted method
- 8- Fungicidal activity of phthalides isolated from *Kelussia odoratissima* against *Macrophomina phaseolina* (Tassi) Goid.
- 9- Effects of *Crataegus pentagyna* on Cardiomyocytes (CMs) differentiated from CPVT1 patient-derived induced pluripotent stem cells (iPSCs)

Published abstracts (National conferences)

11th Congress of Iranian Horticultural Science, Urmia, Iran, 2019

1. Comparison of four-population volatile compounds of *Eryngium noeanum* Boiss.
2. Effect of infrared and air flow drying on quantity and quality of German chamomile essential oil (*Matricaria chamomilla* L.)
3. Effect of Drying Methods on Color Characteristics and Essential Oil Content of *Ziziphora tenuior* L.
4. Qualitative and Quantitative Evaluation of *Pistacia atlantica* Desf. Essential Oil from Two Regions of Sistan and Baluchestan Province, Iran

8th National Congress of Medicinal Plants, Tehran, Iran, 2019

5. *Descurainia sophia* L. Webb. Extract: insight from nematicidal activity, metabolite profiling and nanocomposite formulation (Oral presentation by Mr. Roshanbakhsh)
6. Comparison of water soluble and non-soluble of *nepeta crispa* L. Volatile components
7. Comparison of volatile oil in wild and cultivated *nepeta crispa* L.
8. Essential oil analysis of three different accessions of *eryngium thyrsoideum* Boiss. From Iran
9. Chemical composition of essential oils in *eryngium billardieri* F. Delaroche from three different regions in Iran
10. Effect of chemical characteristics of soil on total phenol and flavonoid content of *clematis irapahanica* in Bavanat and Mehriz regions of Fars and Yazd provinces
11. Analysis of *tussilago farfara* smoke by GC/MS: a phytochemical approach to a traditional remedy
12. Comparison of chemical composition of essential oils and floral water in the leaves, roots and flowering organs of *ferula gummosa* Boiss.

7th National Congress of Medicinal Plants, Shiraz, Iran, 2018

- 10- Leaves and Flowers of *Tussilago Farfara* from Seven Region of Iran as a Source of Antioxidant and Phenolic Compounds
- 11- Packaging Methods and Storage Duration Affect Essential Oil Content and Composition of Hyssop (*Hyssopus officinalis* L.)

5th National Congress of Medicinal Plants, Isfahan, Iran, 2016. (Posters)

- 12- Comparison the chemical composition of essential oil from fresh and dried *plectranthus amboinicus* L.
- 13- Ionic liquid assisted extraction of diosgenin from fenugreek (*Trigonella foenum-graecum* L.)
- 14- Ionic liquid assisted extraction of trigonelline from fenugreek (*Trigonella foenum-graecum* L.)
- 15- Effects of *crataegus pentagyna* on the electrophysiological properties of cardiomyocytes derived from lqts3-ipsc
- 16- Antifungal activity of some plant extracts against a plant pathogen *macrophomina phaseolina* (Tassi) Goid.
- 17- A computer vision system and computational intelligence techniques for color-based saffron quality characterization
- 18- Quantification of pentacyclic triterpenoids in some *thymus* species from Iran
- 19- Optimized techniques for mitotic studies in holy thistle (*Cnicus benedictus* L.)
- 20- Cytogenetic study of *cnicus benedictus* as a medicinal plant

4th National Congress of Medicinal Plants, Tehran, Iran, 2015.

- 21- Genetic, phytochemical and morphological evaluation of hawthorn (*Crataegus* spp.) Grown in Iran, (Oral presentation by Dr. Alirezalu).
- 22- Quantification of seven phenolic compounds in *Crataegus azarolus* var. aronia fruits, leaves and flowers by HPLC
- 23- Antibacterial activity of isolated compounds from *Moringa peregrina*
- 24- Artecanin a sesquiterpene lactone from the aerial part of *Ajania semnanensis* sonboli
- 25- Cytotoxicity of novel 2, 3-dihydroquinazolin-4(1h)-one derivatives of dehydroabietylamine diterpene against k562 and hl60 cancer cell line
- 26- Essential oil composition of three ecotypes of *Kelussia odoratissima* mozaff.
- 27- Comparative *kelussia odoratissima* essential oils obtained from the various parts of the cleverger-type apparatus
- 28- Comparative analysis of the phthalide components of *kelussia odoratissima* mozaff. using hydrodistillation and HS-SPME techniques
- 29- Comparison the effects of antibiotic and medicinal plants, on immune system, blood biochemical parameters, microbial population and performance of broilers

3rd National Congress of Medicinal Plants, Mashad, Iran, 2014

- 30- Chemical composition and antimicrobial activity of *Ajania semnanensis* essential oil in two growing stages
- 31- Phenolic acids extract of *prosopis farcta*: composition identification by HPLC, biologically activities investigation

2nd National Congress of Medicinal Plants, Tehran, Iran, 2013

- 32- Recent Advances in Semi-Synthesis of Natural Compounds, (Oral presentation by Prof. Salehi).

- 33- Cell Suspension Culture Establishment of *Thymus Persicus* for the Production of Medicinally Important Triterpenoids, (Oral presentation by Dr. Mirjalili).
- 34- In vitro callus induction and production of antitumor triterpenoids in callus culture of *salvia sahendica*
- 35- In vitro radical scavenging activity of *Zataria multiflora* accessions in relation to their rosmarinic acid content,
- 36- Variability in concentration of phenolic acid derivatives among wild *Zataria multiflora* accessions from Iran.
- 37- Determination and quantification of pentacyclic triterpenoids in wild mature and in vitro regenerates of *Thymus persicus*: a comparative study
- 38- HPLC Determination of Phenolic Acids In Four *Salvia* Species With Their Antioxidant Activities

1st National Congress of Medicinal Plants, Kish Island, 2012

- 39- HPLC analysis of phenolic acids in aerial parts and root of *Thymus persicus*
- 40- Essential oil composition of different plant parts of *kelussia Odoratissima* mozaff. From Iran

Research Projects

1. Physiological and phytochemical studies of several native medicinal plants containing antiepileptic compounds, National Science Foundation, Contract No. 98002070, Tehran, Iran, 2019-2021.
2. Investigation on Effect of Optimum Cultivation Conditions, Harvest Time and Drying Method on Morphological and Phytochemical Characteristics of *Nepeta crispa* L., National Science Foundation, Contract No. 98004166, Tehran, Iran, 2019-2021
3. HPLC analysis of phenolic acids in aerial parts and root of *Thymus persicus*, Research and Technology Council of Shahid Beheshti University, Contract No. 600/1126, Aug 2012.
4. Investigation the effect of herbal Immunosupport drug in comparison with similar compounds on immune system, intestinal morphology and microflora and performance of broiler chickens, Tarbiat Modares University, 2014.
5. Optimization of anticancer drug ursolic acid production in cell suspension culture of *Thymus persicus*, Iran National Science Foundation, 92013885, Coworker of executive: Dr. Mirjalili, 2014.
6. In vitro study of cardiac pharmacological effects of indigenous Iranian *Crataegus* species using cardiomyocytes derived from Catecholaminergic Polymorphic Ventricular Tachycardia-specific induced pluripotent stem cells, Royan Institute, 2014 ing).
7. Screening of herbal extracts in beta cell regeneration using transgene ins GFP.NTR zebrafish model, Royan Institute, 2014
8. Antiarrhythmic Effects of Some Iranian native *Crataegus* Species Extract on LQTS3-induced pluripotent stem cell-derived cardiomyocytes, Royan Institute, 2015

Teaching Courses

- ❖ 2020 till now: Novel concepts in Breeding of Medicinal Plants (PhD students), Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran
- ❖ 2017 till now: Phytochemistry and Pharmacognosy (PhD students), Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran
- ❖ 2017 till now: Extraction and Identification methods of active compounds in medicinal plants (MSc students), Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran
- ❖ 2016-2017: Phytochemistry (PhD students), Faculty of Agriculture and food Industry, Shahrekord Azad University.

- ❖ 2014 till now: Complementary Plant Biochemistry (PhD student), Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran
- ❖ 2014 till now: Plant Growth Regulators (MSc student, with Prof. Arzani), Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran
- ❖ 2015 till now: Physiology of Medicinal Plants (MSc students with Dr. Ebadi) Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran
- ❖ 2015: Plant Hormones and culture differentiation (MSc students with Dr. Soltani) Department of Plant Biotechnology, Tarbiat Modares University, Tehran, Iran
- ❖ 2015: Secondary metabolites in the cell culture and micropropagation (MSc student, with Dr. Babaei), Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran.

Teaching Workshop

- ❖ 2019-2020: Essential oils, Analysis and interpretation with GC/MS; Science park of Tarbiat Modares University, September, Tehran, Iran
- ❖ 2017: Essential oil analysis, interpretation and GC/MS; IrHC2017, 8 September 2017
- ❖ 2016: Essential oil analysis and interpretation, Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran,
- ❖ 2016: Scientific writing; Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran.
- ❖ 2015 and 2018: Endnote Reference Manager Software Workshop; Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran.
- ❖ 2012: Gas Chromatography (GC) Workshop; Food, Drugs and Natural Products Department, Measurement Unit Laboratory, Sharif University of Technology
- ❖ 2012: High Performance Liquid Chromatography (HPLC) Workshop; Food, Drugs and Natural Products Department, Measurement Unit Laboratory, Sharif University of Technology
- ❖ 2011: Endnote Reference Manager Software Workshop; Food, Drugs and Natural Products Department, Measurement Unit Laboratory, Sharif University of Technology and Shahid Beheshti University

Attending Workshop

- ❖ 2015: Natural cream and ointment preparation workshop, Research Institute of Forests and Rangelands, Tehran
- ❖ 2013: Application of medicinal plants in cosmetic industries, Shahid Beheshti University, Tehran
- ❖ 2012: Chiral and Preparative HPLC in natural products, Medicinal Plants and Drugs Research Institute, Shahid Beheshti University, Tehran
- ❖ 2011: Preparative HPLC for isolation of natural products, YMC Co., Shimi Tajzie Sina, Tehran
- ❖ 2010: Ultra Pressure Liquid Chromatography (UPLC) Workshop, Behan Co, Shahid Beheshti University
- ❖ 2010: Scientific Writing Workshop, ACECR, Tehran
- ❖ 2009: Good Laboratory Practice (GLP), New Technologies and Energy Engineering, Shahid Beheshti University
- ❖ 2008: Nanotechnology in Liquid Chromatography and Mass Spectrometry, Iran polymer and petrochemical Institute
- ❖ 2006: Natural products separation and identification, Research Institute for Islamic and Complementary Medicine, Tehran, Iran

Research Area

- ❖ Natural Products Drug Discovery using zebrafish *in vivo*

- ❖ Essential Oil Bioactivity and profiling
 - ❖ Medicinal plants research, Cultivation and Post harvest
 - ❖ Bioactive natural products
 - ❖ Natural Agrochemicals
 - ❖ Bioassay guided fractionation
 - ❖ Metabolite profiling with GC/MS and LC/MS
 - ❖ Antiepileptic, Antidiabetic and Antiangiogenic natural products
 - ❖ Natural smokes in traditional remedies
 - ❖ Extraction, separation, isolation and structure elucidation of natural products
 - ❖ Stem cells and natural product toxicity
 - ❖ Iranian Traditional Medicine
 - ❖ Chromatography, analytical and preparative
 - ❖ Quantification of compounds with the HPLC and GC
 - ❖ Ionic liquids and their effect in natural product analysis
 - ❖ Column Chromatography and Vacuum Liquid Chromatography
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Laboratory Research Skills

- ❖ **GC-MS** (Gas chromatography- Mass Spectrometry)
 - ❖ **GC-FID** (Gas chromatography- Flame Ionization Detector)
 - ❖ **HPLC** (High Performance Liquid Chromatography)
 - ❖ **Flash Chromatography**
 - ❖ **IMS** (Ion Mobility spectrometry)
 - ❖ **Prep- HPLC** (Preparative High Performance Liquid Chromatography (Prep- HPLC)
 - ❖ **HPTLC** (High Performance Thin Layer Chromatography)
 - ❖ **FTIR** (Fourier transform infrared spectroscopy)
 - ❖ **UV-vis spectrophotometer**
 - ❖ **Polarimetry**
 - ❖ **Powerwave Microplate spectrophotometer**
 - ❖ LC/MS interpretation for metabolite profiling
 - ❖ Synthesis and semisynthesis
 - ❖ Column chromatography
 - ❖ Vacuum Liquid chromatography
 - ❖ Thin Layer Chromatography
 - ❖ Preparative Thin Layer Chromatography
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Reviewer of Journals

- ❖ Industrial crops and products
- ❖ Journal of Applied Research on Medicinal and Aromatic Plants
- ❖ Natural product Research

- ❖ Scientia Horticulture
- ❖ Pharmaceutical Biology
- ❖ Journal of Agricultural Science and Technology (JAST)
- ❖ Journal of Crop Protection
- ❖ International Journal of Horticultural Science and Technology
- ❖ Iranian Journal of Medicinal and Aromatic Plants

Member of Societies

- ❖ Society for Medicinal Plant and Natural Product Research (GA)
- ❖ International Society for Horticultural Science (ISHS)
- ❖ Iranian Society for Horticultural Science (IrSHS)
- ❖ Iranian Medicinal Plants Society

Other Scientific and organizing works

- ❖ Deputy of Education at Tarbiat Modares University, January 2025 till now (Admission of international students in Tarbiat Modares University)
- ❖ Director of Central laboratory at faculty of Agriculture, 2023-2025
- ❖ Public figure in medicinal plants talks. Over 70 medicinal plant scientific talk has been organized and done
- ❖ Director of Department of Horticultural Science, Faculty of Agriculture, Tarbiat Modares University, 2020-2022.
- ❖ Several workshops and events on medicinal plants in different area
- ❖ Royan Biodiscovery Initiative, Royan Institute for Stem Cell Biology and Technology (RI-SCBT)-2015 till now
- ❖ Representative of Department of Horticultural Science in the Research Council of Faculty of Agriculture, Tarbiat modares University, October 2014 till 2016.
- ❖ Organizing member of Faculty of Agriculture section in the Second Festival of Medicinal Plants, Natural Products and Traditional Medicine of Iran, 29 Sep-2 Oct 2014 Tehran.
- ❖ Member of Organizing Committee for 1st to 8th National Congress of Medicinal Plants, 2012-2019
- ❖ Head of Food, Drugs and Natural Product Department, Laboratory measurement Unit, Sharif University of Technology, 2010-2012
- ❖ Scientific member of Institute of Medicinal Plants, ACECR, 2010-2011
- ❖ Holding of HPLC, GC and Endnote workshops, Sharif University of technology, 2011-2012
- ❖ Essential oil Analysis of several plant species in academic and industrial projects.
- ❖ Assay analysis of different plant extract for pharmaceutical companies.

Theoretical Courses were passed in M.Sc and PhD

Separation and Identification of Natural Products	Plant Biochemistry
Advance in Mass Spectrometry	Chemistry of Natural Products
Pharmacognosy	Stereochemistry
Advance Organic Chemistry	Plant Physiology
Advance Analytical Chemistry	

Other Skills

- ❖ Microsoft Office

- ❖ Endnote Reference Manager
 - ❖ Chem Office
 - ❖ Pharmacopeia
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References

- ❖ **Prof. Peyman Salehi** (M.Sc. and PhD. Supervisor), Department of Phytochemistry, Medicinal Plants and Drugs Research Institute, Shahid Beheshti University, G. C., Evin, Tehran 1983963113, Iran.

Email: p-salehi@sbu.ac.ir

- ❖ **Prof. Giovanni Appendino**, Facoltà di Farmacia Dipartimento di Scienze del Farmaco, Largo Donegani 2, 28100 Novara, Italy.

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