

Curriculum Vitae (CV)

Mohammad-Taghi Ebadi (Ph.D)

Associate Professor of Medicinal Plants and Spices (Physiology and Breeding)

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Research Interests

- ✓ Eco-physiology and Production of Medicinal Plants and Spices
- ✓ Processing of Medicinal Plants and Spices

Education

Tarbiat Modares University (TMU), Tehran, Iran

Ph.D. in Physiology and Breeding of Medicinal Plants and Spices (2010-2015)

Thesis Title: Investigation of Organic Manures, Irradiation, Drying Methods and Packaging on Quantitative and Qualitative Characteristics of Active Ingredients of Lemon Verbena (*Lippia citriodora* Kunth.).

Supervisors: Prof. Majid Azizi & Prof. Fatemeh Sefidkon

Ferdowsi University of Mashhad (FUM), Mashhad, Iran

M.Sc. in Horticultural Science (Medicinal Plants) (2007-2009)

Thesis Title: Effect of Sowing Date and Seeding Levels on Growth Factors, Flower Yield, Essential Oil Content and Composition of Presov Chamomile (*Matricaria recutita* L.)

Supervisor: Prof. Majid Azizi

Shahid Bahonar University of Kerman, Kerman, Iran

B.Sc. in Horticultural Science (2005-2007)

Thesis Title: Review about Common Thyme (*Thymus vulgaris* L.).

Supervisor: Prof. Mohammad-Hasan Fooladi

Ferdowsi University of Mashhad (FUM), Shirvan Agriculture Faculty, Shirvan, Iran

Pre-B.Sc. in Cultivation and Utilization of Medicinal and Aromatic Plants (2003-2005)

Honors

- ✓ Distinguished Iran student Award in 2009, Ministry of Science, Research and Technology.
- ✓ Exceptional Talent Committee Winner for Ph.D. entrance, 2010.
- ✓ National Festival of Iranian Youth in 2010, Ministry of Youth and Sports.
- ✓ IFEAT Young Scientist Sponsorship in 2019. 50th International Symposium on Essential Oils. Vienna, Austria

Teaching Experiences

- **Ferdowsi University of Mashhad (FUM)**, Mashhad, Iran, 2008-2009. Cultivation of Medicinal and Aromatic Plants & Domestication of Medicinal and Aromatic Plants.
- **Ferdowsi University of Mashhad (FUM)**, Mashhad, Iran, 2009-2010. Cultivation of Medicinal and Aromatic Plants.
- **Giahdaneh School (Technical and Vocational Training Organization)**, Tehran, Iran, 2014. User of Essential oils.
- **Tarbiat Modares University (TMU)**, Tehran, Iran, 2016-2024. "Agro-industrial Design of Medicinal and Aromatic Plants", "Physiology of Medicinal Plants", "Identification and Introducing Native Medicinal Plants of Iran", "Eco-physiology of Seeds", "Plant Nutrition and Metabolism", "Physiology of Vegetable Crops", "Special Methods of Vegetable Growing", "Post-harvest Technology", "Marketing for Medicinal and Industrial Plants" and "Utilization and Processing of Medicinal and Industrial Plants".

Work Experiences

- Advisor of Project Entitled "Ecological Garden of Medicinal and Aromatic Plants". 2004 & 2007. Client: Ferdowsi University of Mashhad, Iran.
- Supervisor of Project Entitled "Cultivation and Processing of Medicinal and Aromatic Plants". 2008-2010.

- Editor of E-Newsletter. 2010- 2012. Iranian Medicinal Plants Society (IMPS).
- Editor of the Educational & News Network of Medicinal Plants (www.medplant.ir). 2012- Now.
- Advisor of Project Entitled "Garden Museum of Medicinal Plants". 2015-2016.
- Advisor of Some Companies for Cultivation, Processing and Trade of Medicinal and Aromatic Plants. 2008-Now.

Publications

Articles:

- Shahhoseini, R., Beyraghdar, A., Karimi, S. R., & Ebadi, M.T. (2013). Essential oil content and composition of lemon verbena (*Lippia citriodora* Kunth.) during different phenological stages. *Journal of Medicinal Plants and By-Products*, 2(2), 205-208.
- Hosseinkazemi, H., Biazar, E., Bonakdar, S., Ebadi, M.T., Shokrgozar, M. A., & Rabiee, M. (2015). Modification of PCL electrospun nanofibrous mat with *Calendula officinalis* extract for improved interaction with cells. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 64(9), 459-464.
- Ebadi, M.T., Azizi, M., Sefidkon, F., & Ahmadi, N. (2015). Influence of different drying methods on drying period, essential oil content and composition of *Lippia citriodora* Kunth. *Journal of Applied Research on Medicinal and Aromatic Plants*, 2(4), 182-187.
- Ebadi, M.T., Sefidkon, F., Azizi, M., & Ahmadi, N. (2017). Packaging methods and storage duration affect essential oil content and composition of lemon verbena (*Lippia citriodora* Kunth.). *Food Science & Nutrition*, 5(3), 588-595.
- Labruzzo, A., Carrubba, A., Di Marco, G., & Ebadi, M.T. (2017). Herbicidal potential of aqueous extracts from *Melia azedarach* L., *Artemisia arborescens* L., *Rhus coriaria* L. and *Lantana camara* L. *Allelopathy Journal*, 41(1), 81-92.
- Shahhoseini, R., Saeidi, K., Babaahmadi, H., & Ebadi, M.T. (2018). Effect of fertilizers and superabsorbent hydrogel on the yield, essential oil content and composition of lemon verbena (*Lippia citriodora* Kunth.) cultivated in Iran. *Journal of Essential Oil Bearing Plants*, 21(1), 230-236.
- Hoseini, S. S., Najafi, G., Ghobadian, B., Mamat, R., Ebadi, M.T., & Yusaf, T. (2018). Novel environmentally friendly fuel: The effects of nanographene oxide additives on the performance and emission characteristics of diesel engines fuelled with *Ailanthus altissima* biodiesel. *Renewable energy*, 125, 283-294.
- Hoseini, S. S., Najafi, G., Ghobadian, B., Yusaf, T., & Ebadi, M. (2018). The effects of *Camelina "Soheil"* as a novel biodiesel fuel on the performance and emission characteristics of diesel engine. *Applied Sciences*, 8(6), 1010.
- Hoseini, S. S., Najafi, G., Ghobadian, B., Mamat, R., Ebadi, M.T., & Yusaf, T. (2018). *Ailanthus altissima* (tree of heaven) seed oil: Characterisation and optimisation of ultrasonication-assisted biodiesel production. *Fuel*, 220, 621-630.
- Hoseini, S. S., Najafi, G., Ghobadian, B., Mamat, R., Ebadi, M.T., & Yusaf, T. (2019). Characterization of biodiesel production (ultrasonic-assisted) from evening-primroses (*Oenothera lamarckiana*) as novel feedstock and its effect on CI engine parameters. *Renewable energy*, 130, 50-60.
- Ebadi, M.T., Abbasi, S., Harouni, A., & Sefidkon, F. (2019). Effect of cold plasma on essential oil content and composition of lemon verbena. *Food science & nutrition*, 7(4), 1166-1171.
- Rezaei, S., Ghobadian, B., Ebadi, M.T., Jangi, F., & Ghomi, H. (2019). Effects of cold plasma on the color parameters of Hyssop (*Hyssopus officinalis* L.) using color imaging instrumentation and spectrophotometer. *Color Research & Application*, 45(1): 29-39.
- Hazrati, S., Ebadi, M. T., Mollaei, S., & Khurizadeh, S. (2019). Evaluation of volatile and phenolic compounds, and antioxidant activity of different parts of *Ferulago angulata* (schlecht.) Boiss. *Industrial Crops and Products*, 140, 111589.
- Norani, M., Ebadi, M. T., & Ayyari, M. (2019). Volatile constituents and antioxidant capacity of seven *Tussilago farfara* L. populations in Iran. *Scientia Horticulturae*, 257, 108635.
- Hoseini, S. S., Najafi, G., Ghobadian, B., Ebadi, M.T., Mamat, R., & Yusaf, T. (2020). Biodiesels from three feedstocks: The effect of graphene oxide (GO) nanoparticles diesel engine parameters fuelled with biodiesel. *Renewable Energy*, 145, 190-201.
- Hoseini, S. S., Najafi, G., Ghobadian, B., Ebadi, M.T., Mamat, R., & Yusaf, T. (2020). Performance and emission characteristics of a CI engine using graphene oxide (GO) nano-particles additives in biodiesel-diesel blends. *Renewable Energy*, 145, 458-465.
- Navab Safa, N., Dorraki, N., Ebadi, M.T., Maroofi, A., Ghasempour, A., & Ghomi, H. (2020). Decontamination of peppermint distillate using spark plasma: microbiological and physicochemical evaluation. *Journal of Food Science and Technology*, 57(9), 3314-3322.
- Hazrati, S., Govahi, M., Ebadi, M.T., & Habibzadeh, F. (2020). Comparison and evaluation of oil content, composition and antioxidant properties of *Pistacia atlantica* and *Pistacia khinjuk* grown as wild. *International Journal of Horticultural Science and Technology*, 7(2), 165-174.
- Mokhtarikhah, G., Ebadi, M. T., & Ayyari, M. (2020). Qualitative changes of spearmint essential oil as affected by drying methods. *Industrial Crops and Products*, 153, 112492.

- Hoseini, S. S., Najafi, G., Moazzez, A. F., Hazrati, S., Ebadi, M. T., & Yusaf, T. (2020). Potential of *Chrozophora tinctoria* seed oil as a biodiesel resource. *Applied Sciences*, 10(10), 3473.
- Mokhtarihah, G., Ebadi, M. T., & Ayyari, M. (2020). Qualitative changes of spearmint essential oil as affected by drying methods. *Industrial Crops and Products*, 153, 112492.
- Saebi, A., Minaei, S., Mahdavian, A., & Ebadi, M.T. (2021). Precision harvesting of medicinal plants: elements and ash content of hyssop (*Hyssopus officinalis* L.) as affected by harvest height. *Biological Trace Element Research Journal*, 199, 753–762.
- Saebi, A., Minaei, S., Mahdavian, A. R., & Ebadi, M.T. (2021). Quantity and quality of hyssop (*Hyssopus officinalis* L.) affected by precision harvesting. *International Journal of Horticultural Science and Technology*, 8(3), 271-284.
- Hazrati, S., Lotfi, K., Govahi, M., & Ebadi, M. T. (2021). A comparative study: Influence of various drying methods on essential oil components and biological properties of *Stachys lavandulifolia*. *Food Science & Nutrition*, 9(5), 2612-2619.
- Rezaei, S., Ebadi, M. T., Ghobadian, B., & Ghomi, H. (2021). Optimization of DBD-Plasma assisted hydro-distillation for essential oil extraction of fennel (*Foeniculum vulgare* Mill.) seed and spearmint (*Mentha spicata* L.) leaf. *Journal of Applied Research on Medicinal and Aromatic Plants*, 24, 100300.
- Jangi, F., Ebadi, M. T., & Ayyari, M. (2021). 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*, 22, 100289.
- Yadegari, H., Khammari, I., Fakheri, B., Nouri, A., & Ebadi, T. (2021). Flavonolignans of milk thistle (*Silybum marianum* L.) seeds affected by fertilization type and plant genotype. *International Journal of Horticultural Science and Technology*, 8(4), 371-384.
- Mousavi, S. A., Dalir, N., Rahnemaie, R., & Ebadi, M. T. (2021). Phosphate concentrations and methionine application affect quantitative and qualitative traits of valerian (*Valeriana officinalis* L.) under hydroponic conditions. *Industrial Crops and Products*, 171, 113821.
- Jangi, F., Ebadi, M. T., & Ayyari, M. (2022). Qualitative characteristics of hyssop (*Hyssopus officinalis* L.) under the influence of harvest time and drying methods. *Drying Technology*, 40(13), 2696-2709.
- Meftahizadeh, H., Ebadi, M. T., Baath, G. S., & Ghorbanpour, M. (2022). Variation of morphological and phytochemical traits in Roselle (*Hibiscus sabdariffa* L.) genotypes under different planting dates. *Acta Ecologica Sinica*, 42(6), 616-623.
- Rahmati, E., Khoshtaghaza, M. H., Banakar, A., & Ebadi, M. T. (2022). Decontamination technologies for medicinal and aromatic plants: A review. *Food Science & Nutrition*, 10 (3): 784-799.
- Mokhtarihah, G., Ebadi, M. T., & Ayyari, M. (2022). Agro-morphological and phytochemical studies of spearmint landraces (*Mentha spicata* L.) in Iran. *Industrial Crops and Products*, 176, 114367.
- Rahmati, E., Khoshtaghaza, M. H., Banakar, A., & Ebadi, M. T. (2022). Decontamination technologies for medicinal and aromatic plants: A review. *Food Science & Nutrition*, 10(3), 784-799.
- Didehvar, M., Ebadi, M. T., & Ayyari Nooshabadi, M. (2022). An Environmentally-Friendly Method for Exploitation of Oleo-Gum-Resin from *Pistacia atlantica* Desf. Trees. *Journal of Nuts*, 13(2), 153-165.
- Shokoohi, F., Ebadi, M. T., Ghomi, H., & Ayyari, M. (2022). Changes in Qualitative Characteristics of Garden Thyme (*Thymus vulgaris* L.) as Affected by Cold Plasma. *Journal of Applied Research on Medicinal and Aromatic Plants*, 100411.
- Hazrati, S., Hosseini, S. J., Ebadi, M. T., & Nicola, S. (2022). Evolution of Phytochemical Variation in Myrtle (*Myrtus communis* L.) Organs during Different Phenological Stages. *Horticulturae*, 8(9), 757.
- Norani, M., Crowford, A., Tahamtani, Y., Ebadi, M. T., & Ayyari, M. (2023). Extraction and Essential Oils Profiling of Different *Dorema ammoniacum* D. Don. Organs and Evaluation of Antioxidant Capacity. *Journal of Agricultural Science and Technology*, 25(3), 701-717.
- Almasi, S., Najafi, G., Ghobadian, B., & Ebadi, M. T. (2023). Waste to fuel: biodiesel production from bitter orange (*Citrus aurantium*) seed as a novel bio-based energy resource. *Biomass Conversion and Biorefinery*, 13(8), 6543-6552.
- Moradi-Sadr, J., Ebadi, M. T., Ayyari, M., & Ghomi, H. (2023). Optimization of ultrasonic Bath and cold plasma pre-treatments in the spearmint essential oil isolation process. *Food Science & Nutrition*, 11(4), 1904-1915.
- Zamani, S., Bakhshi, D., Sahraroo, A., & Ebadi, M. T. (2023). Improvement of phytochemical and quality characteristics of *Dracocephalum kotschyi* by drying methods. *Food Science & Nutrition*, 11(7), 4246-4262.
- Norani, M., Ebadi, M. T., Yadegari, M., & Ayyari, M. (2023). Study of essential oil and effect of temperature and seed appendages (pappus) on germination characteristics in coltsfoot. *Journal of Medicinal plants and By-product*, in Press.
- Ghasemi, G., Ayyari, M., Azimi, M. H., & Ebadi, M. T. (2023). Orris root diversity and quality assessment: Multivariate analysis of phytochemicals and antioxidant properties. *Industrial Crops and Products*, 202, 116935.
- Moradi-Sadr, J., Ebadi, M. T., & Ayyari, M. (2023). Steps to achieve carvone-rich spearmint (*Mentha spicata* L.) essential oil: a case study on the use of different distillation methods. *Frontiers in Plant Science*, 14, 1292224.
- Nikkhah, A., Nikkhah, H., Shahbazi, A., Zarin, M. K. Z., Iz, D. B., Ebadi, M. T., Fakhroeslam, M., & Beykal, B. (2024). Cumin and eucalyptus essential oil standardization using fractional distillation: Data-driven optimization and techno-economic analysis. *Food and Bioproducts Processing*, 143, 90-101.

- Shokoohi, F., Ebadi, M. T., Ghomi, H., Rezaeinezhad, A. R., & Faghieh Haghani, S. (2024). Increasing the efficiency of cumin essential oil extraction using cold plasma pretreatments. *Journal of the Science of Food and Agriculture*, in Press.
- Rahmati, E., Khoshtaghaza, M. H., Banakar, A., Ebadi, M. T., & Hamidi-Esfahani, Z. (2024). Continuous decontamination of cumin seed by non-contact induction heating technology: Assessment of microbial load and quality changes. *Heliyon*, in Press.
- Najafi, G., Shadidi, B., Mamat, R., Safieddin Ardebili, S. M., Hazrati, S., Ebadi, M. T., & Ghazali, M. F. (2024). Multi-objective optimization of the performance and emissions characteristics of a CI engine powered by *Pyrus glabra* biodiesel as a novel feedstock using response surface method. *Biofuels*, in Press.
- Mahdaviakia, F., Ebadi, M. T., Shojaeiyan, A., Ayyari, M., & Falahati-Anbaran, M. (2024). 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*, 15, 1301936.
- Saebi, A., Minaei, S., Mahdavian, A. R., & Ebadi, M. T. (2024). Development and Evaluation of a Prototype Precision Harvesting Unit for Medicinal Plants—Tested on *Hyssopus officinalis* L. *International Journal of Horticultural Science and Technology*, 11(3), 369-380.

Books:

- Nadjafi, F., Ebadi, M.T., Abbasian, J. 2011. *Medicinal and Aromatic Crops: Harvesting, Drying, and Processing* (Translation). Shahid Beheshti University Press. 380 pages.
- Safaie, N., Mahdzadeh, V., Ebadi, M.T., Saeedi, A. 2013. *Medicinal Plants Diseases*. Agricultural Extension and Education Press. 388 pages.
- Kafi, M., Homayouni, GH., Ebadi, M.T., Zare, A. 2014. *Application of Medicinal and Aromatic Plants in Landscape Design and Healing Gardens*. Agricultural Extension and Education Press. 384 pages.
- Ebadi, M.T., Qahari Kermani, F. 2017. *Herb Processing Facility* (Translation). Agricultural Extension and Education Press. 57 pages.
- Yadegari, H., Ebadi, M.T., Jalilian, N. 2018. *Medicinal Trees and Shrubs (Production, Exploitation and Processing)*. Agricultural Extension and Education Press. 246 pages.
- Ebadi, M.T., Fakhroleslam, M., 2023. *Standardization and Processing of Essential Oils*. Agricultural Extension and Education Press. 158 pages.

Exclusive Documentaries:

- Asareh, M.H., **Ebadi, M.T.**, Abbasian, J. 2014. Exclusive Documentary on the Second National Festival and Exhibition on Medicinal Plants, Natural Products and Iranian Traditional Medicine. 220 pages.
- Asareh, M.H., **Ebadi, M.T.**, Abbasian, J. 2016. Exclusive Documentary on the Third National Festival and Exhibition on Medicinal Plants, Natural Products and Iranian Traditional Medicine. 256 pages.
- Asareh, M.H., **Ebadi, M.T.**, Abbasian, J. 2018. Exclusive Documentary on the Forth National Festival and Exhibition on Medicinal Plants, Natural Products and Iranian Traditional Medicine. 238 pages.

Reviewer in International Journals

- Journal of Applied Research on Medicinal and Aromatic Plants. Elsevier
- Industrial Crops and Products. Elsevier
- Scientia Horticulturae. Elsevier
- Food Chemistry. Elsevier.
- Biocatalysis and Agricultural Biotechnology. Elsevier
- Biochemical Systematics and Ecology. Elsevier
- Journal of Ethnopharmacology. Elsevier
- International Journal of Horticultural Science and Technology. IrSHS

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