

Curriculum vita



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Professional Summary

An accomplished scientist and educational assistant with over twenty years' experience in biological research and theoretical formulation, in particular in plant cell physiology and biochemistry. Mastered in routine methods in plant cell histochemistry, organogenesis and plant cell-tissue culture i.e., Electromicroscopy (SEM, TEM) and UV-light microscopy. Specialist in advanced analytical methods in plant biochemistry, i.e., GC-MS, GC, HPLC and other chromatographic systems, UV-Visible Spectrophotometry, Atomic absorption spectroscopy, SEM-EDS, SEM-XRF, and Electrophoresis.

Awards

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| 2014 | Awarded Honors as a prominent professor in Tarbiat Modares University |
| 1991 | Awarded Honors as one of the most outstanding students in the nation as selected by the Ministry of Culture and High Education of Iran |
| 1991 | University Valedictorian, Department of Biology, Tarbiat Modares University, Iran |

Education and Training

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| 1998-2002 | <i>Shizuoka, Japan:</i> Shizuoka University, PhD in Plant Physiology and Biochemistry |
| 1989-1992 | <i>Tehran, Iran:</i> Tarbiat Modares University, MS, Plant Biology |

Academic Appointments

Tarbiat Modares University, Associate Professor in Plant Cell Physiology and Biochemistry, **1992~**
Member of American Society of Plant Biologists (ASPB) **2007~**
Member of Society of Medicinal Plant and Natural Product Research (GA) **2011~**
Member of the Board of Director of Iranian Society of Plant Physiologists **2011~**
Member of the Board of Director of Plant Stress Center of Excellence (PSCE) **2011~**

Member of Editorial board of Iranian Journal of Plant Biology (IJPB) **2009~**
Member of Editorial board of Science Journal of Kharazmi University **2010~**
Member of Editorial board of JMBS **2010~**

Published Books

- 1- Molecular Mechanisms of Function of Plant growth Regulator (with Prof. AA Ehsanpour, Dr. Noori Touranposhti, and Dr. K. Moradi), Isfahan University Press. 2018
- 2- Pollen Biology. Armus publications, qom-Iran, 2005

A Selection of Published papers

- ❖ Energy saving and improvement of metabolism of cultured tobacco cells upon exposure to 2-D clinorotation, *Journal of Plant Physiology* 234–235 (2019) 36–43
- ❖ The role of SIPK signaling pathway in antioxidant activity and programmed cell death of tobacco cells after exposure to cadmium, *Plant Science* 280 (2019) 416–423
- ❖ Pyrrolizidine Alkaloids-Free Extract from the Cell Culture of *Lithospermum officinale* with High Antioxidant Capacity, *Applied Biochemistry and Biotechnology* (2018) In press, DOI: 10.1007/s12010-018-2830-3
- ❖ On the mechanism of the cell cycle control of suspension-cultured tobacco cells after exposure to static magnetic field, *Plant Science* (2018) **277**: 139-144
- ❖ Possible role of iron containing proteins in physiological responses of soybean to static magnetic field, *Journal of Plant Physiology* (2018) **226**: 163-171
- ❖ Physiological Parameters of Silicon-Treated Maize Under Salt Stress Conditions, *Silicon* (2018) **10**: 2585-2592
- ❖ Techno-economic and environmental assessment of conceptually designed in situ lipid extraction process from microalgae *Algal Research* (2018) **35**: 547-560

- ❖ The contribution of cell wall composition in the expansion of *Camellia sinensis* seedlings roots in response to aluminum, *Planta* (2018) 247:381–392
- ❖ Effect of nutrients on the growth and physiological features of newly isolated *Haematococcus pluvialis* TMU1, *Bioresource Technology* 255 (2018) 229–237
- ❖ Comparison of sucrose metabolism in wheat seedlings during drought stress and subsequent recovery, *Biologia Plantarum* (2018), **62** (3): 595-599
- ❖ Fructan dynamics and antioxidant capacity of 4-day-old seedlings of wheat (*Triticum aestivum*) cultivars during drought stress and recovery, *Functional Plant Biology*, (2018). **45**, 1000–1008
- ❖ Exergy-based screening of biocompatible solvent for *in situ* lipid extraction from *chlorella vulgaris*, *Journal of applied phycology* (2017) 29:89–103
- ❖ Physiological effects of repeated foliar application of magnetite nanoparticles on maize plants, *J Agro Crop Sci.* (2017) 203: 592-603
- ❖ Effect of moderate static electric field on the growth and metabolism of *Chlorella vulgaris*, *Bioresource Technology* 218 (2016) 700–711
- ❖ Taxanes content and cytotoxicity of hazel cells extract after elicitation with silver nanoparticles. *Plant Physiology and Biochemistry* 110 (2017) 178-184
- ❖ Effect of moderate static electric field on the growth and metabolism of *chlorella vulgaris*, *Bioresource Technology* 218 (2016) 700-711
- ❖ Taxanes content and cytotoxicity of hazel cells extract after elicitation with silver Nanoparticles. *Plant Physiology and Biochemistry* *Plant Physiology and Biochemistry* 110 (2017) 178-184
- ❖ Change of antioxidant enzymes activity of hazel (*Corylus avellana* L.) cells by AgNPs, *Cytotechnology*, (2016) 68:525-530
- ❖ Effect of Fe₃O₄ nanoparticles and iron chelate on the antioxidant capacity and nutritional value of soil-cultivated maize (*Zea mays*) plants. *Crop & Pasture Science* (2016) 67: 621–628
- ❖ Effects of Magnetically Treated Water on Physiological Characteristics of *Lens culinaris* L. *Iran J Sci Technol Trans Sci.*, DOI 10.1007/s40995-016-0075-y
- ❖ Change of growth pattern, metabolism, and quality and quantity of maize plants after irrigation with magnetically treated water, *Electromagn Biol Med*, 2015; 34(3): 211–215
- ❖ Partial clarification of signaling pathway of taxanes increase biosynthesis by low intensity ultrasound treatment in hazel (*Corylus avellana*) cells. *South African Journal of Botany* 96 (2015) 65–70

- ❖ Ultrasonic irradiation effects on electrochemical synthesis of ZnO nanostructures. *Ultrasonics Sonochemistry*, 21 (2014) 1435–1440
- ❖ Metabolomic study reveals a selective accumulation of l-arginine in the d-ornithine treated tobacco cell suspension culture. *Process Biochemistry* 49 (2014) 140–147
- ❖ Modification of catalase and MAPK in *Vicia faba* cultivated in soil with high natural radioactivity and treated with a static magnetic field. *Journal of Plant Physiology* 171 (2014) 99– 103
- ❖ Phytotoxicity and cytotoxicity of disesquiterpene and sesquiterpene coumarins from *Ferula pseudalliacea* *Industrial Crops and Products*, 55 (2014): 43–48
- ❖ Effect of Methyl Jasmonate and Silver Nanoparticles on Production of Secondary Metabolites by *Calendula officinalis* L. (Asteraceae). *Tropical Journal of Pharmaceutical Research* November 13 (2014): 1783-1789
- ❖ The effects of ultraviolet B and C radiation on natural compounds of *Malva neglecta* Wallr. Calli. *Iranian Journal of Medicinal and Aromatic Plants* 30 (2014): 30-41
- ❖ Ornithine-induced increase of proline and polyamines contents in tobacco cells under salinity conditions. *Australian Journal of Crop Science* 8 (2014): 91 - 96
- ❖ Increase of seed germination, growth and membrane integrity of wheat seedlings by exposure to static and a 10-KHz electromagnetic field. *Electromagnetic Biology and Medicine* 32 (2013): 417 – 429
- ❖ Cold-induced Changes of Antioxidant Enzymes Activity and Lipid Peroxidation in Two Canola (*Brassica napus* L.) Cultivars. *Journal of Plant Physiology and Breeding* 3(2013): 1-11
- ❖ Effect of phenylalanine on Taxol production and antioxidant activity of extracts of suspension-cultured hazel (*Corylus avellana* L.) cells. *J Nat Med* 67 (2013):446–451
- ❖ Enhancement of antioxidant enzymes activity and expression of CAT and PAL genes in hazel (*Corylus avellana* L.) cells in response to low-intensity ultrasound, *Acta Physiologia Plantarum*, 35 (2013): 2847–2855
- ❖ Antioxidant activity and expression of catalase gene of (*Eustoma grandiflorum* L.) in response to boron and aluminum, *South African Journal of Botany*, 84 (2013) 13–18.
- ❖ Differential Effects of Ornithine Enantiomers on the Activity of Anti-oxidant Enzymes, Polyamine Content, and Growth of Tobacco Cells under Osmotic Stresses, *Chirality* 25 (2013): 583–588
- ❖ Selective Regulation of Nicotine and Polyamines Biosynthesis in Tobacco Cells by Enantiomers of Ornithine, *Chirality* 25 (2013): 22-7.

- ❖ Changes of major wall polysaccharides and glycoproteins of tobacco cells in response to excess boron. *Progress in Biological Sciences* 3 (2013): 27-38
- ❖ Antioxidative capacity of parsley (*Petroselinum crispum* L.) cells in relation to iron induced ferritin levels and SMF. *Electromagnetic Biology and Medicine*, 324 (2013): 430-441.
- ❖ Increase of seed germination, growth and membrane integrity of wheat seedlings by exposure to static and electromagnetic fields, 2013. *Electromagnetic Biology and Medicine*, in press
- ❖ Induction of Phenolic Compounds is Affected by Boron Supply in Marshmallow (*Althaea officinalis* L.) Cells. *Progress in Biological Sciences* 2 (2012): 68-75.
- ❖ Maintenance of membrane integrity and increase of taxanes production in hazel (*Corylus avellana* L.) cells induced by low-intensity ultrasound. *Biotechnol Lett* 34 (2012): 1137–1141
- ❖ Morphological and physiological response of soybean treated with the microsymbiont *Bradyrhizobium japonicum* pre-incubated with genistein. *South African Journal of Botany* 79 (2012) 9–18
- ❖ Antioxidant Activity, Total Phenolics and Taxol Contents Response of Hazel (*Corylus avellana* L.) Cells to Benzoic Acid and Cinnamic Acid. *Not Bot Horti Agrobot*, 40 (2012): 69-73
- ❖ Biological Effects of Weak Electromagnetic Field on Healthy and Infected Lime (*Citrus aurantifolia*) Trees with Phytoplasma, *The Scientific World Journal*, 2012, doi:10.1100/2012/716929
- ❖ Oxidative stress in broad bean (*Vicia faba* L.) induced by static magnetic field under natural radioactivity, *Mutation Research* 741 (2012): 116– 121.
- ❖ Interaction between boron and aluminum and their effects on phenolic metabolism Of *Linum usitatissimum* L. roots. *Plant Physiology and Biochemistry*, 49 (2011): 1377-1383
- ❖ Ultrasound potentiated salicylic acid induced physiological effects and production of Taxol in Hazel cell culture, *Ultrasound in Med. & Biol.*, 37 (2011): 1938–1947.
- ❖ Effect of Salinity on Growth, Xylem Structure and Anatomical Characteristics of Soybean. *Not Sci Biol*, 3 (2011): 41-45
- ❖ Growth promotion and a decrease of oxidative stress in maize seedlings by a combination of geomagnetic and weak electromagnetic fields, *Journal of Plant Physiology* 168 (2011): 1123–1128
- ❖ Hexaconazole induces antioxidant protection and apigenin-7-glucoside accumulation in *Matricaria chamomilla* plants subjected to drought stress, *Journal of Plant Physiology*, 168 (2011): 782-791.
- ❖ Static magnetic fields aggravate the effects of ionizing radiation on cell cycle progression in bone marrow stem cells, *Micron*, 4 (2010): 101-104.

- ❖ Cold-Induced Changes of Enzymes, Proline, Carbohydrates, and Chlorophyll in Wheat, *Russian Journal of Plant Physiology*, 57 (2010): 540–547
- ❖ Urease activity in Maize (*Zea mays* L. cv. 704) as affected by nickel and nitrogen sources. *Iranian Journal of Science & Technology, Transaction A*, 33 (2009).
- ❖ Two new morphotypes of *pinus eldarica*: Discrimination by macromorphological and anatomical traits, *Dendrobiology*, 61 (2009): 27-36.
- ❖ Investigation of the interaction between abscisic acid (ABA) and excess benzyladenine (BA) on the formation of shoot in tissue culture of tea (*Camellia sinensis*), *IJPP*, 3 (2009): 7-14.
- ❖ Effect of foliar application of pyridoxine on antioxidant enzyme activity, proline accumulation and lipid peroxidation of maize (*zea mays* L.) underwater deficit, *Not. Bot. Hort. Agrobot 37* (2009): 116-121.
- ❖ Significance of nickel supply for growth and chlorophyll content of wheat supplied with urea or ammonium nitrate, *Journal of Plant Nutrition*, 32 (2009): 1440-1450.
- ❖ Aluminum-induced growth inhibition and changes in cell wall components of suspension-cultured tobacco cells. *Journal of Science Kharazmi University*, 7 (2008): 855-864.
- ❖ Discrimination of *Pinus eldarica* MEDW and its two new species by epicuticular wax, lignin content, electrophoretic isozyme and activity of peroxidase. *Feddes Repertorium*, 7-8 (2008): 644-654
- ❖ Ability of polysaccharides of Tobacco (*Nicotiana tabacum* L. cv. Burley 21) callus cell wall to Ag absorption. *Journal of Basic Science of Isfahan university*, 28 (2008): 43-54.
- ❖ Study on the effect of Iron on essential oils content of *Ocimum basilicum*, *Journal of Science of Tehran University* (2008). 4: 49-53.
- ❖ Investigation on the effect of SMF on certain physiological and biochemical features of *Cicer arietinum*, *Pazhuheshva Sazandegi*, 21 (2008): 62-68.
- ❖ Comparison of epicuticular wax on needles and stems of *Pinus eldarica* with its two naturally generated forms. *Rostaniha*, 8 (2007): 150-159.
- ❖ Application of magnetic field and iron in order to change medicinal products of *Ocimum basilicum*. *Environmentalist*, 27 (2007): 429-434.
- ❖ Peroxidase activity, lignification and promotion of cell death in tobacco cells exposed to static magnetic field. *Environmentalist*, 27 (2007): 435-440.
- ❖ Effects of static magnetic field on the antioxidant enzymes activities of suspension-cultured tobacco cells, *Bioelectromagnetics*, 28 (2006): 42-46.

- ❖ The effects of salinity and potassium on vegetative and reproductive growth in two cultivars of barley Reyhan and Afzal (*Hordeum vulgare* L.) Journal of Science of Teacher Training University, 6 (2006): 686-696.
- ❖ Excitation of plant growth in dormant temperature by steady magnetic field. Journal of Magnetism and Magnetic Materials (2006) **302**: 105-108.
- ❖ Biosorption of Mercury by Biomass of Filamentous Algae *Spirogyra* Species. Journal of Biological Sciences, 6 (2006): 695-700.
- ❖ Absorption of Au by Polysaccharides Extracted from Tobacco (*Nicotiana tabacum* L. cv. Burley 21) Cell Walls in vitro. JUST 32(2006): 52-53,
- ❖ Improvement of Antioxidant System and Decrease of Lignin by Nickel Treatment in Tea Plant. Journal of Plant Nutrition 29 (2006): 1649-1661
- ❖ Equilibrium and Spectroscopic Studies on Biosorption of Mercury by Algae Biomass. Pakistan journal of Biological Sciences 9 (2006): 777-782.
- ❖ Changes in peroxidase activity and Lignin content of cultured Tea cells in response to excess manganese. Journal of Soil Science and Plant Nutrition 52(2006): 26-31.
- ❖ The effects of salinity and potassium on growth and proline accumulation in two barley cultivars. Journal of Agric. Science and Natural Resource. 13 (2006): 58-66.
- ❖ Changes in peroxidase activity and lignin content of cultured tea cells in response to excess manganese. Soil Science and Plant Nutrition, 52(2006):26-31.
- ❖ Study of Mycorrhizal Distribution of Medicinal Plants in Tandoureh National park. Iranian Journal of Medicinal and Aromatic Plants. 21(2006): 489-504.
- ❖ Methods for propagations of two *Aeluropus* species in controlled environments, Iran Journal of Biology 18(2005): 60-65.
- ❖ Effects of aluminum on the growth of tea plant and activation of antioxidant system. Plant and Soil. 276(2005):133-141.
- ❖ Study on Compatibility and Pollen Tube Growth of Some Asian Pear (*Pyrus serotina* Rehd) Cultivars. ISHS Journal of Acta Hort 671(2005): 159-163.
- ❖ Studies on the effects of some mineral and organic substances on pollen germination. Journal of Pajouhesh & Sazandegi, 69 (2005): 2-9.

- ❖ Deposition of Suberin in Roots of Soybean induced by Excess Boron. *Plant Science*, 168(2005): 397-405.
- ❖ Induction of Suberin and Increase of Lignin content By Excess Boron In Tobacco Cells. *Soil Science and Plant Nutrition* 48 (2002): 357-364
- ❖ Selection and Partial Characterization of a Boron Tolerant Tobacco Cell Line *Soil Science and Plant Nutrition* 47 (2001): 405-410.
- ❖ The Effect of Air Pollution on The Allergenicity Of *Pinus Elderica* (Pinacea) Pollen. *Grana* 34 (1995): 208-211.
- ❖ Ultra-Structural Variations In Certain Pollen Grains Exposed to Polluted Air (1994), *Aerobiology*, Oxford & IBH Publishing CO. New Delhi, 427-437.

Research Experience

- 2012-2018** Metabolomics of certain microalgae and developing new strategies in order to increase Target products
- 2008-2018** MAPK signaling pathways in relationship with Al, As, and Cd toxicity and Antioxidant enzymes
- 2008-2018** Metabolic pathway of Taxane production by Hazel cells and developing new strategies in order to increase Taxanes yield
- 2001-2015** Boron, effects on polysaccharide and glycoproteins composition of plant cell wall
- 2008-2013** Interaction between Boron and Aluminum and their effects on phenolic metabolism
- 2011-2015** Physiological mechanism of response of plant cells to ultrasound and infrasound
- 2003-2018** Effects of static magnetic and low electromagnetic fields (EMF) on the structure, ultrastructure, and physiological aspects of plant growth and development
- 2011-2014** Physiological responses and change of pharmaceutical compounds of certain medicinal plants to exogenous silver nanoparticles
- 2010-2013** Differential effects of exogenous ornithine enantiomers on cell growth, polyamine biosynthesis and anti-oxidant enzymes in tobacco cells
- 2006-2014** Cellular mechanism(s) of perception of EMF and SMF by plants and their

applications as tools to enhance natural products in medicinal plants

- 2006-2010** Ca signaling and its relationship with Al toxicity and Antioxidant enzymes
- 2005-2014** Antioxidant enzymes in certain wheat cultivars under salinity and drought stresses.
- 2005-2006** Relationships between Al tolerance and Al toxicity with cell wall polysaccharides
And cell membrane related fructans and flavonoides
- 2004-2005** Effects of UV radiation on wound-healing compounds in *Aloe vera*
- 2004-2005** Effects of Al, Ca and EDTA on pollen germination and pollen tube elongation and
Immunohistochemistry of cell wall of pollen tube of Olive (*Olea europea*)
- 2003-2005** Production of Au and Ag nanoparticles by wall polysaccharides of cultured tobacco
cells
- 2003-2005** Effects of EMF on the metabolism of phenolic compounds and essential oils of
Plants treated with different concentrations of iron
- 2003-2005** Oxidative bursts in plant cells induced by EMF and Heavy metals
- 2003-2005** Effects of B, Sucrose, saturated and unsaturated fatty acids on germination
and tube elongation of certain pollen grains
- 2003-2004** The potential of tobacco cell wall polysaccharides to absorb Ag and Au
in vitro and to convert them to nanoparticles
- 2003-2004** Effects of excess Ni and Mn on the antioxidant system of tea plants and
suspension-cultured tea cells
- 2000-2003** Effects of Aluminum on the antioxidant system of tea plants
- 2001-2003** Induction of suberin and increase of lignin in soybean roots and in suspension-
cultured tobacco cells by excess Boron
- 1998-2001** Boron-tolerance mechanisms of suspension-cultured tobacco cells
- 1996-1997** After effects of chloroculinchloride (a growth retardant) and gibberellic acid
(GA₃) on flower set, pollen grains germination and fruit set of three varieties
of pomegranate (*Punicagranatum* L.)
- 1996-1997** Anatomy and ontogeny of vegetative and reproductive meristems in some
gymnosperms compared to angiosperms.
- 1993-1995** Distribution and succession of mycorrhizae in north forests of Iran in
connection with heavy metals and radioactivity

1989-1990 Structural, ultra-structural, and allergenic variations of pollen grains due to polluted air

1989-1990 Diagnostic of Potassium deficiency in some crop plants

1986-1988 Determination of ontogenetic pattern of vessels in transition zone of root to shoot in apetalous plants

Invited Congress, Presentation and Lectureship

2018 *Tehran-Iran: 2nd* Iranian conference of Phycology. Head of Conference

2017 *Tehran-Iran:* Iranian conference of Bioelectromagnetics. Head of Conference

2016 *Tehran-Iran: 3rd* Iranian conference of Plant Physiology. Head of Conference

2016 *Tehran-Iran:* 3th Iranian conference of Bioelectromagnetics: (Title of presented paper: Magneto perception in plants).

2014 *Varna-Bulgaria:* 8th Workshop on Bio effects of Electromagnetic fields: (Title of presented paper: Iron status in wheat seedlings in response to static and electromagnetic fields)

2014 *Isfahan, Iran:* 3rd National conference of Plant Physiology of Iran: (Title of presented paper: Effect of ultrasound on growth and membrane integrity of suspension-cultured parsley cells)

2013 *Tehran, Iran:* 2nd Iranian conference of Bioelectromagnetics: (Title of presented paper: Improve of growth parameters of Maize by irrigation with magnetized water)

2013 *Tabriz, Iran:* 1st Tabriz International Lie Science Conference and 12th Iran Biophysical Chemistry Conference: (Title of presented paper: The role of signaling of H₂O₂ in resistance of suspension-cultured tea cells to aluminum)

2012 *Kish Island, Iran: International conference of Medicinal plants:* (Title of presented paper: Stereospecific biosynthesis of polyamines and related gene expressions of the enzymes of the nicotine biosynthesis pathway in tobacco)

2011 *Mumbai, India:* ICLST2011:(Title of presented paper: Effect of UV irradiation on viability, anthocyanin, and flavonoid contents of callus-cultured *Malvaneglecta* cells).

- 2011** *Mumbai, India*: ICLST2011: (Title of presented paper: Stimulation of taxol production By combined salysilic acid elicitation and sonication in *Taxus baccata* cell culture).
- 2010** *Zanjan, Iran*: 12th Iranian Pharmaceutical Sciences Congress (IPSC2010): (Title of presented paper: Production of taxol through cell culture of hazel (*Corylus avellana*) cells.
- 2010** *Bodrum, Turkey*: 6th International work shop on Biological Effects of EMF: (Title of presented paper: Static Magnetic field improved salysilic acid effect on Taxol production in suspension-cultured Hazel (*Corylus avellana*) cells.
- 2010** *Bodrum, Turkey*: 6th International work shop on Biological Effects of EMF: (Title of presented paper: Combined effects of SMF and methyl jasmonate on *Calendula officinalis*)
- 2010** *Bodrum, Turkey*: 6th International work shop on Biological Effects of EMF: (Title of presented paper: Study the effect of static Magnetic Field on chromosomal aberration on *Vicia faba* in area with high natural radioactivity
- 2009** *Shanghi, China*: 2009 International Symposium on environmental science and technology: (Title of Presented paper: Effect of aluminum on the activity of antioxidant system and growth stimulation in rooted cuttings of Lisianthus (*Eustoma grandiflora* L.)
- 2009** *Shanghi, China*: 2009 International Symposium on environmental science and technology: (Title of Presented paper: Investigation on the role of calcium in aluminum toxicity in cultured tobacco (Al sensitive) and Tea (Al tolerant)
- 2008** *Palermo, Italy*: 5th International work shop on Biological Effects of EMF : (Title of Presented paper: Study on the effect of static magneic field on antioxidant enzyme activity of *Vicia faba* in soils with natural radioactivity)
- 2008** *Palermo, Italy*: 5th International work shop on Biological Effects of EMF : (Title of Presented paper: Influence of static magnetic field on cell cycle progression in bone marrow stem cells)
- 2008** *Palermo, Italy*: 5th International work shop on Biological Effects of EMF : (Title of Presented paper: Change of PAL activity in response to electromagnetic field and Iron)
- 2008** *Palermo, Italy*: 5th International work shop on Biological Effects of EMF : (Title of Presented paper: Study on the effect of static magnetic field on the apoptosis of bone Marrow mesenchymal stem cells of rat
- 2008** *Palermo, Italy*: 5th International work shop on Biological Effects of EMF : (Title of Presented paper: The influence of static magnetic fields on gene expression of P21, ITPA and TGF- β in Hela cells
- 2008** *Monttreal, Canada*: Plants & Soils: (Title of Presented paper: Effect of Soil and Foliar

Application of Iron on Peanut (*Arachis hypogaea* L.) grown on calcareous soil.)

- 2008** *Montreal, Canada: Plants & Soils:* (Title of Presented paper: Effect of Soil and Foliar Application of Iron on Peanut (*Arachis hypogaea* L.) grown on calcareous soil.)
- 2008** *Montreal, Canada: Plants & Soils:* (Title of Presented paper: Effect of Aluminum on the Activity of Peroxidase and Content of Lignin in Rooted Cuttings of Lisianthus (*Eustoma grandiflora*).
- 2008** *Montreal, Canada: Plants & Soils:* (Title of Presented paper: Immunolabelling of Pectins in Cultured Tobacco and Tea Cell Walls that were Treated With Al, Ca, Al+Ca.)
- 2008** *Kerman, Iran: The 2nd National congress of Cellular & Molecular Biology,* (Title of Presented paper: Effect of aluminum on the activity of peroxidase and content of lignin in rooted cuttings of Lisianthus (*Eustoma grandiflora*)
- 2007** *Tehran, Iran: National specific conference of Biology, Payam Noor* (Title of Presented paper: Distribution of Mycorrhizae in National Park Khabr (Kerman Prefecture)
- 2007** *Tehran, Iran: National specific conference of Biology, Payam Noor* (Title of Presented paper: Effect of edaphic factors on distribution of vesicular-arbuscular Mycorrhizae in National Park Mooteh, Isfahan Prefecture)
- 2007** *Mexico, Mexico: The 7th Keel meeting on Aluminum, Life and Living in Aluminum Age* (Title of Presented paper: Changes in wall polysaccharide components of suspension-cultured tobacco cells by aluminum)
- 2006** *Crete, Greece: 4th International work shop on Biological Effects of EMF* (Title of Presented paper: Comparison of Arabinogalactan protein (AGP) content of cultured cells of tobacco and tea, treated with different concentrations of Al)
- 2006** *Crete, Greece: 4th International work shop on Biological Effects of EMF* (Title of Presented paper: influence of electeromagnetic field exposure on the growth of *Ocimum basilicum* and its essential oil)
- 2006** *Crete, Greece: 4th International work shop on Biological Effects of EMF* (Title of Presented paper: studying the effects of the static magnetic field on the enzymes catalase (CAT) and superoxide dismutase (SOD) activity in suspension-cultured tobacco cells)
- 2006** *Crete, Greece: 4th International work shop on Biological Effects of EMF* (Title of Presented paper: Investigation on the changes in the Composition of Aromatic Compounds of Red Cabbage in Response to Static Magnetic Field)

- 2006** *Crete, Greece: 4th International work shop on Biological Effects of EMF*
(Title of Presented paper: Increasing of cell death in suspension-cultured tobacco cells following exposure to static magnetic field).
- 2006** *Crete, Greece: 4th International work shop on Biological Effects of EMF*
(Title of Presented paper: Effect of magnetic field on some physiological biochemical aspects of growth of Pea (*Cicer arietinum*)).
- 2006** *Tehran, Iran: 2st International and 14th Iranian Biology Conference* (Title of Presented paper: Comparison of Arabinogalactan protein (AGP) content of cultured cells of tobacco and tea, treated with different concentrations of Al
- 2006** *Tehran, Iran: 2st International and 14th Iranian Biology Conference* (Title of Presented paper: Investigation of the Effect of Ultraviolet C Radiation on Some of the physiologic parameter of *Aloe vera* L.)
- 2006** *Tehran, Iran: 2st International and 14th Iranian Biology Conference* (Title of Presented paper: Changes in the growth and phenolic content of basil (*Ocimum basilicum*) in response to 21ppm iron)
- 2006** *Tehran, Iran: 2st International and 14th Iranian Biology Conference* (Title of Presented paper: Distribution of esterified and de-esterified pectin in pollen tube elongation of *Olea europaea* L., treated with aluminum or calcium.)
- 2006** *Tehran, Iran: 2st International and 14th Iranian Biology Conference* (Title of Presented paper: Ultrastructural Study on Wax and Cuticle on the Needles of *Pinus eldarica* and its two Naturally Derivatives)
- 2005** *Rasht, Iran: 1st International and 13th Iranian Biology Conference* (Title of Presented paper: Studies on the Effects of Ca, Al, and EDTA on Pollen Germination and Pollen Tube Elongation of Olive (*Olea europaea* L.)
- 2005** *Rasht, Iran: 1st International and 13th Iranian Biology Conference* (Title of Presented paper: Study on the Effect of Static Magnetic Field on the development of pea (*Cicer arietinum*) in the Vegetative Phase.
- 2005** *Rasht, Iran: 1st International and 13th Iranian Biology Conference* (Title of Presented paper: The Investigation on Static Magnetic Field on the Metabolism of Certain Aromatic Compounds and the Activity of Their Enzymes in Red Cabbage, *Brassica oleracea* L. cv. *saccata*)
- 2005** *Rasht, Iran: 1st International and 13th Iranian Biology Conference* (Title of Presented paper: Differential Responses of Two *Aeloropus* Species Toward Salt Stress
- 2005** *Rasht, Iran: 1st International and 13th Iranian Biology Conference* (Title of

Presented paper: The Effects of Ni on the Activation of Enzymes of Antioxidant System of Tea Plant)

- 2004** *Hamedan, Iran:* The 12th Iranian Biology Conference (Title of presented paper: Effect of Magnetic Field on the Germination of Seeds and the Metabolism of Phenolic Compounds in Red Cabbage, *Brassica oleracea*L. cv. *saccata*)
- 2004** *Sendai, Japan:* 6th International Symposium on Plant-Soil Interactions at Low PH (Title of presented paper: Growth Characteristics of Tea Plants and Tea Fields in Japan)
- 2004** *Tehran, Iran:*The 2nd International Congress on Traditional Medicine & Materia Medica (Title of presented paper: Anti-cancer compound from medicinal Mushrooms)
- 2004** *Mashad, Iran:* The 2nd Congress on Applied Biology (International Approach) (Title of presented paper: Influence of Exposing a magnetic field on SOD and Catalase activity in suspension-Cultured Tobacco Cells)
- 2004** *Mashad, Iran:* The 2nd Congress on Applied Biology (International Approach) (Title of presented paper: Magnetic Field Effect on the α -amylase and Polyphenoloxidase Activity in Red Cabbage, *Brassica oleracea*L. *saccata*)
- 2004** *Mashad, Iran:* The 2nd Congress on Applied Biology (International Approach) (Title of presented paper: Effect of Excess concentrations of Mn on the Activity of Antioxidant Enzymes in Suspension-Cultured Tea Cells)
- 2004** *Hamedan, Iran:* The 12thIranian Biology Conference (Title of presented paper: Effect of Magnetic Field on the Germination of Seeds and the Metabolism of Phenolic Compounds in Red Cabbage, *Brassica oleracea* L. cv. *saccata*)
- 2004** *Hamedan, Iran:* The 12th Iranian Biology Conference (Title of presented paper: Effect of Magnetic Field on Lipid Peroxidation and Lignin Content of *Cicer arietinum* L. cv. Hashem)
- 2004** *Hamedan, Iran:* The 12th Iranian Biology Conference (Title of presented paper: Effect of Different concentrations of Boron on Phenolic Compounds of *Zea mays* L. cv. 700)
- 2004** *Mashad, Iran:* The 2nd Congress on Applied Biology (International Approach) (Title of presented paper: Effects of EMF on the antioxidant system of Cultured Tobacco Cells)
- 2004** *Tehran, Iran:* The 12th Iranian Biology Conference (Title of presented paper: Effect of Excess concentrations of Manganese on the Activity of Antioxidant System in Tea plants)
- 2002** *Tehran, Iran:* 1st Iranian conference of Plant Science and Biodiversity (Title of presented paper: Survey on Anatomy and Ontogeny of Vegetative Meristems of Japanese cedar, *Cryptomeria japonica*)

- 2002** *Nagoya, Japan:* 48th Annual Meeting of Japanese Society of Soil Science and Plant Nutrition (Title of presented paper: Induction of Suberin Synthesis in Soybean by Excess Boron)
- 2002** *Nagoya, Japan:* 48th Annual Meeting of Japanese Society of Soil Science and Plant Nutrition (Title of presented paper: Effect of Aluminum on the Metabolism of Phenolic Compounds in Tea Plants)
- 2001** *Kouchi, Japan:* 47th Annual Meeting of Japanese Society of Soil Science and Plant Nutrition (Title of presented paper: Effect of Excess Boron on the Metabolism of Phenolic Compounds in Cultured Tobacco Cells)
- 1999** *Kermanshah, Iran:* The 8th Iranian Biology Conference (Title of presented paper: The Effect of Salinity and Chlorocholine Chloride (CCC) on Pomegranate Trees (*Punica granatum* L.))
- 1999** *Sapporo, Japan:* 45th Annual Meeting of Japanese Society of Soil Science and Plant Nutrition (Title of presented paper: Certain Cell Wall Features of Boron-Tolerant Tobacco Cells)
- 1994** *Bangalore, India:* 5th International Conference on Aerobiology (Title of presented paper: Ultrastructural Variations in Certain Pollen Grains Exposed to Polluted Air)
- 1993** *Tehran, Iran:* 2nd Convention of Iranian Society of Biology (Title of presented paper: Effects of Tehran Air Pollution on Allergenicity of *Lolium perenne* L., and *Rosa kanina* Pollen Grains)
- 1992** *Aix-en-Provence, France:* 8th International Palynological Congress (Title of presented paper: Les Effets de la Pollution Atmospherique sur le Developpement de l'allergie Pollinique)

◆ Proficiency in multiple languages: *English, French, Japanese, and Arabic(mother tongue: Persian)*
