

## *Amir Ali Khoddamzadeh*

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<https://ictb.fiu.edu/research/>

### **Work Experience**

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#### **Instructor**

August 2015

Department of Earth and Environment, Florida International University, 11200 SW 8<sup>th</sup> St.  
Miami, FL 33174

#### Affiliation:

- Agroecology Program
- International Center for Tropical Botany (ICTB)

#### Courses Taught

AGR 3930: Agriculture Colloquium: Medicinal, Aromatic, and Poisonous Plants (MAPs)  
AGR 3930: Agriculture Colloquium: Biotechnology Applications in Horticultural Crops  
AGR 4240: Modern Crop Production/AGR 5241 Advance Modern Crop Production  
AGR 6251: Sustainable Farming System  
EVR 1001: Introduction to Environmental Science & Sustainability  
EVR 4274: Sustainable Agriculture  
EVR 4905/EVR 5907 Independent Study  
EVR 4934/EVR 5935 Special Topics  
EVR 6970 Supervised Research  
HOS 3012 Introduction to Horticulture Sciences  
HOS 3012L Horticulture Science Lab  
Horticulture Professional Certificate Program (FNGLA)  
Orchid Professional Workshop

#### Service

Organic Garden Faculty Supervisor  
Department of Earth and Environment Undergraduate Committee  
Garden Club Faculty Advisor  
Poinsettia Sale Event  
Agroecology Curricular Development  
Sustainability Program Revision Committee  
Outstanding International Horticulturist Award Committee-American Society for  
Horticultural Science (ASHS)  
Graduate Student Activities Committee-ASHS  
Chair of Seed and Stand Establishment Working Group-ASHS  
Chair-elect of Ornamental Plant Breeding Working Group-ASHS  
Conservation Committee and Education Committee - Florida Native Plant Society (FNPS)

Dan Austin Award for Ethnobotany Committee-FNPS

**Research Scholar** June 2013 to July 2015  
Department of Horticulture and Landscape Architecture, Oklahoma State University

**Assistant Professor** September 2012 to June 2013  
Department of Plant Production Technology, Faculty of Agriculture and Natural Resources,  
Ferdowsi University of Mashhad

#### Courses Taught

Research methodology, Tissue culture (+ Lab), Plant propagation (+ Lab), General botany,  
Botany fundamental, General horticulture, Agronomy principles of medicinal and aromatic  
plants (+ Lab), Special agronomy of medicinal and aromatic plants, Trees and ornamental  
shrubs

**Assistant Professor** March-September 2012  
Agricultural Biotechnology Research Institute of Iran

**CEO and Team lead** June 2011 to June 2013  
Rose Biotech Knowledge-based Co., Technology Park, Ferdowsi University of Mashhad

**Graduate Teaching/Research Assistant** July 2007 to May 2011  
Department of Crop Science, University Putra Malaysia  
Ph.D in Agricultural Biotechnology **GPA: 3.94**

**Dissertation:** Induction of protocorm-like bodies (PLBs), synthetic seed production, and  
cryopreservation in *Phalaenopsis bellina* (Rehb.f.) Christenso.

#### Award

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**Garden Club's Prestigious Recognition Award** 2017  
College of Arts, Sciences, and Education, Florida International University

**Certification of Appreciation** 2017  
Council for Student Organizations, Florida International University

**First Place: Early Career Young Faculty Competition Award** 2015  
American Society for Horticultural Science Annual Conference, New Orleans, Louisiana.

#### ISI Journal Publication

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<https://scholar.google.com.my/citations?user=6nO5OPEAAAAJ&hl=en>

**Khoddamzadeh, A.A.** and Dunn, B.L. 2016. Application of canopy sensors for nitrogen  
assessment management in chrysanthemum. HortScience. 51 (7): 915-920.

Dunn, B.L., Shrestha, A., Goad, C. and **Khoddamzadeh, A.A.** 2015. Use of optical sensors  
to assess Gaillardia Foug. nitrogen status. Journal of Applied Horticulture. 17 (3):  
181-185.

**Khoddamzadeh, A.A.,** Sinniah, U.R., Lynch, P., Kadir, M.A., Kadzimin, S.B. and Maziah,  
M. 2011. Cryopreservation of Protocorm-Like Bodies (PLBs) of *Phalaenopsis bellina*

(Rchb.f.) Christenson by Encapsulation-Dehydration. *Plant Cell, Tissue & Organ Culture*. 107 (3): 471-481.

- Khoddamzadeh, A.A.**, Sinniah, U.R., Kadir, M.A., Kadzimin, S.B and Maziah, M. 2011. *In-vitro* Induction and Proliferation of Protocorm-Like Bodies (PLBs) from Leaf Segments of *Phalaenopsis bellina* (Rchb.f.) Christenson. *Plant Growth Regulation*. 65 (2): 381-387.
- James Antony, J.J., Sinniah, U.R., Ceong, C.L., Pobathy, R., **Khoddamzadeh, A.A.** and Sreeramanan, S. 2011. Selected potential encapsulation - dehydration parameters on *Dendrobium Bobby* Messina protocorm - like bodies using TTC analysis. *Australian Journal of Crop Sciences*. 5 (13): 1817-1822.
- Sreeramanan, S., Sinniah, U.R., **Khoddamzadeh, A.A.**, Periasamy, S. and James, J. 2011. Fundamental concept of cryopreservation using *Dendrobium sonia*-17 protocorm-like bodies by encapsulation-dehydration technique. *African Journal of Biotechnology*. 10 (19): 3902-3907.
- Khoddamzadeh A.A.**, Sinniah U.R, Kadir M.A, Kadzimin S.B, Maziah, M. and Sreeramanan, S. 2010. Detection of Somaclonal Variation by Random Amplified Polymorphic DNA Analysis During Micropropagation of *Phalaenopsis bellina* (Rchb.f.) Christenson. *African Journal of Biotechnology*. 4 (90): 6632-6639.
- Khoddamzadeh, A.A.**, Sinniah, U.R., Kadir, M.A., Kadzimin, S.B. and Maziah, M. 2011. Synthetic Seed Production: Establishment of a Short-term Storage Method via Encapsulation of PLBs in *Phalaenopsis bellina* (Rchb.f.) Christenson. *Seed Science and Technology*. 39 (3): 697-702.
- Zainudin, M., Julkifle, A.L., Pobathy, R., Sinniah, U.R., **Khoddamzadeh, A.A.**, James Antony, J.J. and Sreeramanan, S. 2011. Preliminary analysis on cryopreservation of *Dendrobium/ Bobby* Messina orchid using an encapsulation-dehydration technique with Evans blue assay. *African Journal of Biotechnology*. 10 (56): 11870-11878.

#### Under review

- Safarnejad, A., **Khoddamzadeh, A.A.**, Alamdari, S.B.L., Dunn, B.L. and Vendrame, W. Callus induction, multiplication and acclimatization of *Ficus carica* L.
- Safarnejad, A., Alamdari, S.B.L., **Khoddamzadeh, A.A.** and Dunn, B.L. Effect of different factors on micropropagation of *Ziziphus jujube* L.
- Khoddamzadeh, A.A.**, Dunn, B.L. and Taghvaeian, S. Super-absorbent Polymers supplication in grapevines with emphasis on water detection sensors in Oklahoma.
- Khoddamzadeh, A.A.** and Kadir, U.R. Effect of plant growth regulators on shoot induction from callus of medicinal plant *Chlorophytum Borivilianum*.

#### Non-ISI

- Khoddamzadeh, A.A.** 2007. Production technology of industrial and engine lubricant based on plants base oil. *BOC Magazine*, May-Jun. p17-21.
- Khoddamzadeh, A.A.** 2006. Soy Milk. *Agriculture and Stable Extension Journal*, Sep-Oct. p 17-21.

#### Book

- Vendrame, W and **Khoddamzadeh, A.A.** 2016. *Orchid Biotechnology*. Jules Janick (Ed.), Horticultural Reviews, Volume 44 (pp. 173-228)

## **Invited Speaker**

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- In-Vitro* Conservation of the Critically Threatened Floridian Orchids by Encapsulation-Dehydration. 2017. Florida Native Plant Society Annual Conference, River Ranch, Florida.
- Medium and Long-Term *In-Vitro* Conservation of South Florida Endangered Orchids. 2017. Florida Native Plant Society-Dade Chapter. Pinecrest Garden, Miami, Florida.
- Florida Cowhorn Orchid: an Alternative *Ex-situ* Conservation Method for the Endangered *Cyrtopodium punctatum*. 2017. Society of Wetland Scientists Annual Conference. San Juan, Puerto Rico.
- “Novel Challenges and Opportunities in Tropical Ornamental Horticulture: Orchid Biotechnology”. 2016. ASHS Annual Conference. Atlanta, Georgia. The title of the talk: Why Artificial/Synthetic Seed Technology in Orchids?
- Future of Orchid Research. 2016. ASHS Annual Conference. Atlanta, Georgia.
- Smart Application Technology for Sustainable Nursery Production Management. 2016. International Workshop on Agroecology and Sustainable Agriculture. Miami, FL.
- Sustainable Horticulture in the Subtropics. 2016. International Workshop on Agroecology and Sustainable Agriculture. Miami, FL.
- Embryo rescue and artificial seed encapsulation treatments in flowers. 2015. ASHS Annual Conference. New Orleans, Louisiana.
- Evaluating the impact of Superabsorbent Polymers on grapevine water management. 2015. ASHS Annual Conference. New Orleans, Louisiana.
- Plant genebanking in the Middle East and South East Asia, Its Potentials and Challenges. 2014. Keynote Speaker at International Division, American Society for Horticultural Science. ASHS Annual Conference. Orlando, Florida.
- Cryopreservation and synthetic seed production. 2012. Third Agricultural Biotechnology Conference. Keynote Speaker, Ferdowsi University of Mashhad.

## **Conference/Symposium/Workshop Director-Facilitator**

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- Orchid Professional Workshop. 2017. FIU-UF
- Cochran Fellowship Program- Eastern Europe and Eurasia. 2017. FIU
- Cochran Fellowship Program- Latin America and Caribbean. 2016. FIU
- International Workshop on Agroecology and Sustainable Agriculture. 2016. FIU.
- Agroecology Symposium: Fruit Production in the Tropics & Food Security. 2016. FIU.
- Propagation Techniques, 2015 and 2016. FIU Organic Garden.
- Medicinal Uses of Essential Oils & Herbs in Complementary Alternative Medicine. 2015. FIU.
- Artificial seed and cryopreservation in horticultural crops. 2014. ASHS Annual Conference. Orlando, Florida.

## **Professional Meeting**

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- Southeastern Partners in Plant Conservation (SePPCon) Meeting. 2016. Atlanta Botanic Garden.

- The North American Orchid Conservation Center (NAOCC) Florida-Georgia Regional Effort. 2015. Naples Botanic Garden.

### **Conference (Oral/Poster)**

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- Barraza, G.A., **Khoddamzadeh, A.A.**, Freidenreich, A., Riera, D., Jayachandran, K. and Shetty, K. 2017. Non-Destructive Handheld Sensors for Sustainable Fertilizer Management in *Justifia brandegeana*. Agroecology Symposium. Miami, FL.
- Riera, D., **Khoddamzadeh, A.A.**, Lewis, C., and Jayachandran, K. 2017. Florida Cowhorn Orchid: an Alternative *Ex-situ* Conservation Method for the Endangered *Cyrtopodium punctatum*. Florida Rare Task Force Conference. Naples, Florida.
- Rodriguez A., **Khoddamzadeh, A.A.**, Vendrame, W., Jayachandran K. and Freidenreich, A. 2017. Poinsettia Fertilizer Management: Application of Optical Sensor Technology. Agroecology Symposium. Miami, Florida.
- Marques. E., Soraes, C., Rahm, J., **Khoddamzadeh, A.A.** and von Wettberg, E. 2017. Seed Vigor Evaluation in Chickpea (*Cicer arietinum*) and Pigeon pea (*Cajanus cajan*). Agroecology Symposium. Miami, FL.
- Betancourt, E., Bhat, M. G., Jayachandran, K., Shetty, K and Khoddamzadeh, A. A. 2017 Innovative Curriculum for Agriculture Training and Career for Hispanics. Poster Presented at the USDA HSI National Project Directors Meeting, Albuquerque, New Mexico.
- Riera, D., **Khoddamzadeh, A.A.**, Lewis, C., and Jayachandran, K. 2016. *Ex-situ* Conservation Strategy: Cryopreservation of Threatened Floridian Orchids by Encapsulation-Dehydration. International Tropical Botany and Pine Rockland Conference. Miami, Florida.
- Duarte, E., Vandenberg, K., **Khoddamzadeh, A.A.**, Supurna, D., Mathee, K. and Jayachandran, K. 2016. Panax Ginseng Extracts as a Novel Antibiotic. ASHS Annual Conference. Atlanta, Georgia.
- Font, A., **Khoddamzadeh, A.A.**, Supurna, D., Mathee, K. and Jayachandran, K. 2016. Anti-Bacterial Properties of the Annona Montana. ASHS Annual Conference. Atlanta, Georgia.
- Barraza, G.A., **Khoddamzadeh, A.A.**, Riera, D. and Jayachandran, K, Shetty, K. Handheld Sensors Application for Fertilizer Management in Landscaping Ornamental *Justifia Brandegeana*. 2016. ASHS Annual Conference. Atlanta, Georgia.
- Riera, D., **Khoddamzadeh, A.A.**, Lewis, C., Vendrame, W. and Jayachandran, K. 2016 Commercial Orchid Production: Artificial/Synthetic Seed Approach. ASHS Annual Conference. Atlanta, Georgia.
- Riera, D., **Khoddamzadeh, A.A.**, Lewis, C., Vendrame, W. and Jayachandran, K. 2016 Orchids on Ice: Protecting Imperiled Floridian Orchids through Cryopreservation. ASHS Annual Conference. Atlanta, Georgia.
- Khoddamzadeh, A.A.** and Dunn, B.L. 2015. *In-vitro* Conservation Methods in Rain lilies. ASHS Annual Conference. New Orleans, Louisiana.
- Khoddamzadeh, A.A.** and Dunn, B.L. 2015. Cultivar evaluation and precision water assessment in grapevine. ASHS Annual Conference. New Orleans, Louisiana.
- Khoddamzadeh, A.A.** and Dunn, B.L. 2014. Embryo rescue and synthetic seed production in rain lilies. ASHS Annual Conference. Orlando, Florida.

- Khoddamzadeh, A.A.** and Dunn, B.L. 2014. Artificial seed and cryopreservation in horticultural crops. ASHS Annual Conference. Orlando, Florida.
- Khoddamzadeh, A.A.** and Dunn, B.L. 2014. Application of precision agriculture technology to determine N level in *Chrysanthemum*. ASHS Annual Conference. Orlando, Florida.
- Roustami, M., Rasam, G.A. and **Khoddamzadeh, A.A.** 2013. Investigations on the cardinal temperatures for germination of two weeds; *Xanthium strumarium* L. and *Hyoscyamus niger* L. 5<sup>th</sup> Iranian Weed Science Conference. August 24-26. Proceeding paper, University of Tehran.
- Khoddamzadeh, A.A.** and Safarnejad, A. 2012. Ornamental Preseravtions. 3<sup>rd</sup> Iranian Agricultural Biotechnology Conference. Sep 3-5. Proceeding paper, Ferdowsi University of Mashhad.
- Zarghami, R., Hesar, N., Seif, E. and **Khoddamzadeh, A.A.** 2012. Evaluation of different IBA hormone treatments on rooting of Elberta cultivar in Peach. 3<sup>rd</sup> Iranian Agricultural Biotechnology Conference. September 3-5. Proceeding paper, Ferdowsi University of Mashhad.
- Moghimi, Z, Safarnejad, A. and **Khoddamzadeh, A.A.** 2012. Calluse induction and proliferation and flavonoid compounds extraction in *Crataegus* spp. 3<sup>rd</sup> Iranian Agricultural Biotechnology Conference. September 3-5. Proceeding paper, Ferdowsi University of Mashhad.
- Khoddamzadeh, A.A.**, Sinniah, U.R and Ghafoori, M. 2010. Genetic, Analysis of Somaclonal Variation during Multiplication in Orchid. 16<sup>th</sup> National and 4<sup>th</sup> International Conference of Biology. September 14-16. Proceeding paper, Ferdowsi University of Mashhad.
- Khoddamzadeh, A.A.**, Sinniah, U.R, Kadir, M.A, Kadzimin, S.B and Maziah, M. 2009. Effect of different media with organic additives on growth of protocorm like bodies (PLBs) in *Phalaenopsis bellina*. Agriculture Congress. October 27-29. Proceeding paper, Selangor. Y57.
- Khoddamzadeh, A.A.**, Sinniah, U.R., Zarghami, R., Daneshian, J., Hamidi, I. and Hadi, H. 2007. Seed Quality of Soybean [*Glycine max* (L.) Merr] Cultivars and Lines harvested from plants subjected to drought stress. 5<sup>th</sup> seed symposium. IOI resort.
- Hadi, H., Daneshian, J., Jonubi, P., **Khoddamzadeh, A.A.** 2007. The relationship between sensitivity and drought tolerance of soybean genotypes under limited irrigation. Second National Conference of Drought Impacts and Management Strategies.
- Javadi, A., Dashti, A., **Khoddamzadeh, A. A.** and Sazandehchi, P. 2007. Production of Organic Sulphur Fertilizer from Hydrolyzed Bagasse. Second Sugar Cane Technologist Seminar.

## **Funding Activity**

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- Disney Conservation Grant, Co-PI  
Funding Source: Disney  
Total budget: \$50,000. 2017 (Pending)
- Cochran Fellowship Program, Co-PI  
Funding Source: USDA - Marketing of Agricultural Produce (Fruit and Vegetables) – Moldova  
Total budget: \$63,000. 2017 (Awarded)

- Innovative Curriculum for Agriculture Training and Career for Hispanics, Co-PI  
Funding Source: USDA NIFA HSI  
Total budget: \$2,049,601. 2016 (Awarded)
- Cochran Fellowship Program, Co-PI  
Funding Source: USDA  
Total budget: \$85,356.46. 2016 (Awarded)
- Cultivar Evaluation and Precision Water Assessment in Grapevine with the emphasis on Super-Absorbent Polymers, PI  
Funding Source: Oklahoma Viticulture and Enology  
Total budget: \$24,976. 2015 (Awarded)
- Effects of super-absorbent polymers on grapevine transplant cultivars, PI  
Funding Source: Oklahoma Viticulture and Enology  
Total budget: \$20,616. 2014 (Awarded)
- Callus induction, multiplication and acclimatization of fig tree, Co-PI  
Funding Source: Ferdowsi University of Mashhad's faculty startup grant  
Total budget: Approximately \$10,000. 2012 (Awarded)
- Investigations on the cardinal temperatures for germination of five medicinal plants, PI  
Funding Source: Iran's medicinal plant Association  
Total budget: Approximately \$2,000. 2012 (Awarded)
- Commercial saffron tissue culture protocol optimization (Co-PI) + tissue culture propagation of promising selected clones (PI) + selection of superior clone's regional experiment (Co-PI)  
Funding Source: Agricultural Biotechnology Research Institute  
Total budget: Approximately \$56,000. 2012-2015 (Awarded)
- Comprehensive study of drug metabolites and introduce the best jujube, PI  
Funding Source: Agricultural Biotechnology Research Institute  
Total budget: Approximately \$10,000. 2012-2013 (Awarded)
- Study of genetically potential of berberis in order to gene bank preservation, PI  
Funding Source: Agricultural Biotechnology Research Institute  
Total budget: Approximately \$11,000. 2012-2014 (Awarded)
- Introducing the finest berberis based pharmaceutical aspects and food ingredients, Co-PI.  
Funding Source: Agricultural Biotechnology Research Institute  
Total budget: Approximately \$10,000. 2012-2014 (Awarded)

## **Student Advising**

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Undergraduate Projects: 15 (Major advisor)

Graduate Dissertation/Thesis:

MS.c: 2 (Major advisor), 3 (Co-advisor)

Ph.D: 3 (Co-advisor)

## **Member of Groups and Association**

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- American Society for Horticultural Science
- Florida State Horticultural Society
- Florida Native Plant Society
- Society for *In-Vitro* Biology
- The Society for Conservation Biology

- American Seed Trade Association
- Genomic Association in Malaysia

### **Software Skill**

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- SAS analyzing software
- Gene Tools of Syn Gene package
- Bio-edit software
- Uvi Doc software
- NTsys pc 2.0, NTedit
- Microsoft Office

### **Research Experience and Interest**

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- Agroecology
- Sustainable Horticulture
- Organic Production
- Ornamentals
- Synthetic seed and seed technology
- Anti-Quorum Sensing
- Cryopreservation
- Orchids
- Tissue culture
- Precision Agriculture