

Shokofeh Shahrzad

B.Sc. Plant Biology

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SUMMARY

I am a scientist with several years of professional experience in plant biotechnology. I participated in many projects as a plant tissue culturist with extensive knowledge in micropropagation of endangered plant species (forest species specially), cryopreservation of plant organs (seed, bud and the masses of cell), making variation in some plant species, Poplar species hybridization and embryogenesis of some plant species. I received my B.Sc. from Oroumieh University in Iran. After working as a senior scientist for 22 years at Research Institute of Forests and Rangelands, I decide to establish my own company; the aim of our knowledge-based company is to produce commercial micropropagation protocols for valuable plant species.

EXPERIENCE

CEO and Owner of “Cellule Fanvar Daru Co. “ at Science and Technology Park of University of Tehran,

Karaj, Iran __ 2013-present

- Finalized of several research projects as a project manager:
 1. Commercial protocol for micropropagation of several rootstocks (MM106, GF677, GnX and pear Dwarf)
 2. Commercial protocol for micropropagation of seven *Vitis* sp.
 3. Commercial protocol for micropropagation of *Ficus religiosa*.
 4. Commercial protocol for micropropagation of *Rosa*×*Damascena*.
 5. Commercial protocol for micropropagation of medicinal plants (*Stevia rebaudiana*, *Moringa oleifera*, *Centella asiatica*, *Withania coagulance*)
 6. Commercial protocol for micropropagation of *Rubus* sp.
 7. Commercial protocol for micropropagation of several Ornamental plants (*Anthurium* sp., *Dionaea muscipula*, *Rosa* sp., *Saintpaulia* sp.)

Senior Scientist, Plant Tissue Culture and *In Vitro* Breeding Laboratory in the Research Institute of Forests and Rangelands, Tehran, Iran — 1990- 2012

Senior scientist and director of the laboratory. In addition of working on my own projects, I monitored the progress of other plant biotechnologist and guided them in their research. I taught at tissue culture workshops where trained a large number of students and plant biologists. I mentored several students at different levels (undergraduates and graduate) during their research projects.

Accomplishments

- Organized plant cryopreservation technique for first times in Iran with two of my colleagues.
- Finalized of seven research projects as the principal investigator, successfully:
 1. *In vitro* propagation of *Populus euphratica* by tissue culture.
 2. *In vitro* propagation of *Tilia platyphyllos* by tissue culture.
 3. Micropropagation of *Sequoia sempervirens*.
 4. An investigation acclimatization of tissue cultured plantlets *Tilia platyphyllos* and *Sequoia sempervirens*.
 5. Cell suspensions cryopreservation of some of the forest and non-forest trees.
 6. Cell suspension cryopreservation of some of the range and desert species.
 7. Micropropagation hybrids of *Populus euphratica* and *P. alba* by tissue culture
- Trained junior biotechnologist to improve their laboratory techniques and safety practices.
- Collaborated in more than 20 other projects:
 1. Study on, possibility of cryopreservation of apical and auxiliary buds of the forest species.
 2. Study on, possibility of cryopreservation of apical and auxiliary buds of the range and desert species.
 3. Study on, possibility of cryopreservation of seeds of the range and desert species.
 4. Study on, possibility of cryopreservation of seeds buds of the forest species.
 5. *In vitro* propagation of *Juglans regia* by tissue culture.
 6. *In vitro* propagation of *Populus caspica* by tissue culture.
 7. Investigation of possibility of *Ulmus carpinifolia* micropropagation.
 8. Investigation of asexual propagation of *Eucalyptus grandis* and *E. globules*.
 9. Propagation of *Populus tremula* by tissue culture.

10. Micropropagation of *Eucalyptus microtheca*.
 11. Asexual propagation of Lezzory (*Sorbus torminalis*) through cutting and tissue culture.
 12. Vegetative propagation of *Ulmus glabra* by tissue culture, micrografting and cutting.
 13. Micropropagation of *Eucalyptus cammaldulensis*.
 14. *In vitro* propagation of *Phoenix dactylifera*.
 15. Investigation of *Acer cinerasense* micropropagation.
 16. Asexual propagation of *Thuja orientalis* by tissue culture.
 17. Investigation of inter specific *Populus nigra* and *P. caspica* hybrid induction using exotic and native poplar in order to introduce best colons in poplar culturing.
 18. Adaptation of inter specific Poplar hybrids (*Populus euphratica* and *P. alba*) in different climatic condition of Iran.
 19. Investigation of genetic variation of *Bunium persicum* in Iran.
 20. Investigation of using from micropropagation new method in photo autotrophic situation in agreeable and important *Eucalyptus* species.
- Published 28 scientific papers in different magazines.
 - Presented 10 posters in international scientific meetings.
 - Acquired a great deal of knowledge in the field of plant tissue culture.
 - Initiated of plant tissue culture workshops.

EDUCATION

- B. Sc. in plant biology, University of Oroumieh, Iran — 1986-1990

SKILLS and STRENGTHS

- Excellent knowledge in plant tissue culture and micropropagation of endangered plant species (forest species specially), cryopreservation of plant organs (seed, bud and the masses of cell), making variation in some plant species, Poplar species hybridization and embryogenesis of some plant species
- Very good in English (reading, writing and speaking)
- Fluent in Farsi (Persian) language.
- Highly skilled in computer software such as Microsoft Word, Excel, PowerPoint, and Explorer
- Capable of multitasking, very good in organizational skills, excellent in problem solving

REFERENCES

- 1- Mohamad Hasan Assareh, Ph.D. Professor. Department of Biotechnology, Research Institute of Forests and Rangelands. Email: asareh@gmail.com. Mobile phone: 011-98-9122645020
- 2- Fatemeh Sefidkon, Ph.D. Research assistant. Research Institute of Forests and Rangelands. Email: sefidkon@rifr-ac.ir. Phone: 011-98- 21- 44580221

LIST OF PUBLICATIONS

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- 2- Mofidabadi, A. J., Jorabchi, A., Shahrzad, Sh. and Mahmodi, F., 2001, New Genotypes Development of *Populus euphratica* OLIV. Using Gametoclinal Variation. Silva Genetica, 50 (5-6): 275- 279.
- 3- Emam, M., Shahrzad, Sh., 2002. Micropropagation of *Populus caspica*. Pajouhesh- va- Sazandegi In Natural Resources, 53: 84-90.
- 4- Jafari Mofidabadi, A, Shahrzad, Sh., 2003. Sexual propagation of *Sequoia sempervirens* using mature zygotic embryo culture.

- 5- Sefidkon, F., Meshkizadeh, S. and Shahrzad, S., 2003. Comparison between oil composition of *Sequoia sempervirens* from tissue culture and main sample. Iranian Journal of Medicinal and Aromatic Plants, 18: 23- 42.
- 6- Assareh, M.H., Gorbanli, M., Allahverdi Mamaghani, B., Ghamari Zare, A., and Shahrzad, Sh., 2004, Effects of culture media and plant growth regulators on *in vitro* shoot proliferation of Damask rose (*Rosa damascene* Mill). Pajouhesh- va- Sazandegi In Natural Resources, 72: 45- 57.
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- 9- Emam, M., Shahrzad, Sh., Naraghi, T.S., Khanhasani, M., Hamzepoor, I., 2006. Regeneration of *Acer cinerasense* by embryo culture. Iranian Journal of Rangelands and Forests Plant Breeding and Genetic Research, 14 (3): 170- 174.
- 10- Emam, M., Shahrzad, Sh., Naraghi, T.S., 2007. *In vitro* propagation of *Ulmus carpinifolia* by bud culture. Iranian Journal of Rangelands and Forests Plant Breeding and Genetic Research, 15 (4): 296- 304.
- 11- Ghamari Zare, A., Ghorbanli, M., Hoseini, Sh. and Shahrzad, Sh., 2007. *In vitro* micropropagation of *Denderostellera lessertii* Van Tiegh. Pajouhesh- va- Sazandegi In Natural Resources, 75: 173- 178.
- 12- Shahrzad, Sh., Ghamari Zare, A., Ahmadi, R., Ghamari Zare, A. and M.A. Naderi Shahab., 2009. *In vitro* callus induction and cryopreservation of *Secale montanum* embryonic cell follicles. Review of Forests, Wood Products and Wood Biotechnology of Iran and Germany. Goettingen University, Part III: 135- 148.
- 13- Shabannejad Mamaghani, M., Assareh, M.H., Omid, M., Matinizadeh, M., Ghamari Zare, A., Shahrzad, Sh. and M. Forootan., 2009. The effect of thiazuron level on *in vitro* regeneration type and peroxidase Profile in *Eucalyptus microtheca* F. Muell, Plant Growth Regul, 59: 199-205
- 14- Emam, M., Assareh, M.H., Shahrzad, Sh., Khojir, K., 2009 .Asexual regeneration of *Eucalyptus grandis* by tissue culture. Iranian journal of Rangelands and Forests Plant Breeding and Genetic Research, 18: 35- 43.
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- 22- Ghorbanli, M., Bonyadi, R., Ghamari Zare, A. and Shahrzad, Sh., 2009. Effect of vitrification on survival of *Medicago polymorpha* L. cryopreserved seeds. Quarterly Journal on Plant Sciences Researches. Islamic Azad University. Gorgan Branch. Third year, 12 (1): 48- 56.
- 23- Serri, F., Ghamari Zare, A. and Shahrzad, Sh., 2011. Micropropagation of *Salvia leriifolia* (Norouzak) from shooting and rooting of seedlings under in vitro conditions Quarterly Journal on Plant Sciences Researches. Islamic Azad University. Gorgan Branch. Fifth year, No 4: 10- 17.
- 24- Serri, F. S., Ghamari Zare, A., Shahrzad, Sh., Naderi Shahab, M.A. and Kalate Jary, S., 2012, Effect of physic-chemical treatments on seed germination of *Salvia leriifolia* BenthI. Iranian Journal of Medicinal and Aromatic Plants, 27 (4): 659- 667.
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- 26- Shahrzad, Sh., Emam, M., 2012. Micropropagation of *Populus euphratica* and *P. alba* hybrids by tissue culture. Iranian Journal of Rangelands and Forests Plant Breeding and Genetic Research, 19 (2): 336- 343.
- 27- Ghadiri Sardrood, S., Ghamari Zare, A., Assareh, M., Shahrzad, Sh. and Bakhshi Khaniki, Gh., 2012. Effect of TDZ and 2,4-D growth regulators on callus production and organogenesis in *Eucalyptus rubida*. Iranian Journal of Rangelands and Forests Plant Breeding and Genetic Research, 20 (2): 304- 313.
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POSTER PRESENTATIONS

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- 2- Shahrzad, Sh., 2003. Micropropagation of *Tilia platyphyllos*. Proceeding of The 3rd National Congress of Biotechnology. Mashhad, Iran, 9- 11 Sep. 2003, V (2): 226- 228.
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- 7- Kolahdoozan, M., Ghamari Zare, A., Shahrzad, Sh. and Kiarostami, Kh., The 5th National Biotechnology congress of Iran. Tehran, Iran, 24- 26 Nov. 2007: 229.

- 8- Rajaei, M., Ghamari Zare, A., Sharzad, Sh. and Majd, A., Production the Sterilized Seedling of *Ferula gummosa* Plant. The 6th National Biotechnology Congress of I.R. Iran Aug. 2009.
- 9- Rajaei, M., Ghamari Zare, A., Sharzad, Sh., Naderi Shahab, M. A. and Majd, A., Cryopreservation of embryonic axes of *Ferula gummosa*: A tool for germplasm conservation and germination improvement. International Symposium on Medicinal and Aromatic Plants. ISHS Acta Horticulturae. Shiraz, Iran, July. 2010. 964: 153- 159.
- 10- Rajaei, M., Ghamari Zare, A., Shahrzad, S., Naderi Sahab, M.A. and Majd, A., Cryopreservation of Embryonic Axes of *Ferula gummosa* International conference on "Preparing Agriculture for Climate Change" 2011 Punjab-India
- 11- Rajaei, M., Ghamari Zare, A., Sharzad, Sh. and Majd, A., cryopreservation of embryo axes, seeds and pollen grains of *Ferula gummosa* A Tool for its Germplasm Conservation. The 13th IABG Conference Secretariat, South China Botanical Garden, CAS-2012.

ORAL PRESENTATION

Sharzad, Sh., Micropropagation of Iranian forest trees, Oral Presentation on 19th September 2006 at Georg- August University of Göttingen, Germany (as an invited scientist).