Curriculum Vitae

Personal Biodata:

Name: Mehran

Surname: Enayati Shariatpanahi

Date and place of birth: 20/09/1971 - Tehran – Iran

Father's name: Amir Khosrow

Nationality: Iranian

Civil status: Married to Leila Hessam – Vaziri

Present Status:

Associate Professor (Member of the scientific board) **&** *Head of Department of Tissue and Cell Culture, Agricultural Biotechnology Research Institute of Iran (ABRII) (* ***www.abrii.ac.ir*** *)*

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Educational Background:

B.S.: In Agronomy & Plant Breeding, University of Gulian, Rasht, Iran, 1994.

M.S.: In Plant Breeding, Karaj University, Karaj, Iran. 1997.

Title of thesis: Evaluation of interspecific hybridization (*H. vulgare* L. ×*Hordeum bulbosum* L.) for production of haploids and hybrids

PhD: In Genetics & Plant Biotechnology, Vienna University, Vienna, Austria. 2006.

Title of thesis: Microspore embryogenesis in wheat (*Triticum aestivum* L.), tomato (*Lycopersicon esculentum* Mill) and *Arabidopsis thaliana*

Employment:

Lecturer: In Plant Breeding, Molecular Genetics & Cytogenetics, Karaj branch of Payam – Nour University (2007-present)

Researcher: In Haploid Breeding (Microspore embryogenesis) & Tissue culture, Department of Tissue culture & Gene Transformation, Agricultural Biotechnology Research Institute of Iran, (1997-present)

Post –doc In Microspore embryogenesis, Group of Plant Biotechnology, MFPL, Vienna Biocenter, Vienna University, (2009)

Associated Professor 2012

Head of Department Department of Tissue Culture and Gene Transformation Agricultural Biotechnology Research Institute of Iran (ABRII), (2010-present)

Chief Scientific Investigator
International Atomic Energy Agency (IAEA), Vienna, Austria (2016-present)

Scientific societies Scientific board member of *Biosafety Society of Iran*, (2009-present), Scientific board member of *Iranian Genetics*

society (2010-present), Editorial board member of *Journal of Biosafety* (2008-present)

Field of Study & Research:

- Establishment of protocols for doubled haploid production in wheat via chromosome elimination technique (wheat –maize cross) and microspore embryogenesis
- Establishment of protocol for doubled haploid production in rapeseed, wheat and barley via microspore embryogenesis
- Field evaluations of produced DH lines of wheat and rapeseed in order to release new cultivars
- Establishment of protocol for doubled haploid production in sweet pepper via microspore embryogenesis
- Establishment of protocol for doubled haploid production in cucumber via parthenogenesis
- Optimization of protocols for doubled haploid production in corn and sorghum via microspore embryogenesis
- Establishment of protocol for microspore embryogenesis in ornamentals such as Roses.

Publications:

Articles

1- **Enayati Shariat-Panahei, M.,** 1997. Evaluation of interspecific hybridization (*Hordeum vulgare* L. × *H. bulbosum* L.) for production of haploids and hybrids. M.Sc. Thesis. Islamic-Azad University (Karaj Branch).

2- **Enayati Shariat-Panahei, M.**, & R.Bozorgipour, 1998. Evaluation of haploids & hybrids production in crosses with *Hordeum bulbosum* L. Proceedings of 5th Iranian Congress of Crop Production & Plant Breeding. 31 Aug- 4sep. 1998, Seed & Plant Improvement Institute, Karaj, Iran.

3- **Enayati Shariat-Panahei, M.**, R.Bozorgipour & Y.Sadeghian-Motahar, 2000. Cytological study of Iranian *Hordeum bulbosum* genotypes for production of haploids and their interspecific hybrids in crosses with *H.vulgare*. Proceedings of the First National Congress of Biotechnology, 22-24 feb. 2000, Tarbiat Modaress University, Tehran, Iran.

4- **Enayati Shariat-Panahei, M.**, & R.Bozorgipour, 1999. Evaluation of interspecific hybridization (*Hordeum vulgare* L. × *H.bulbosum* L.) for production of haploids and hybrids. ***Iranian Journal of Agricultural Sciences. Vol. 30, No. 1:111-119(in farsi).***

5- **Enayati Shariat-Panahei, M.**, R.Bozorgipour, M.Aghaeizadeh & Y.Sadeghian-Motahar, 2000. Cytological study of Iranian *Hordeum bulbosum* genotypes and

their interspecific hybrids in crosses with *H.vulgare*. ***Seed and Plant. Vol. 16, No.1: 110- 124(in farsi).***

6- **Enayati Shariat-Panahei, M.,** S.Khoshkam & A.Rostami, 2000. Evaluation of high salt tolerant and high yielding barley (*Hordeum vulgare* L.) production using somaclonal variation. Proceedings of 6th Iranian Congress of Crop Production & Plant Breeding, 3-6 sep. 2000, University of Mazandaran, Babolsar, Iran.

7- **Enayati Shariat-Panahei, M.**, & O. Dabir-Ashrafi, 2003. Production of high salt tolerant barley (*Hordeum vulgare* L.) lines using somaclonal variation. ***Iranian Journal of Agricultural Sciences. Vol. 34, No. 2:367-377(in farsi).***

8- **Shariatpanahi** ME, Bal U, Heberle-Bors E, Touraev A (2006) Stresses applied for the re-programming of plant microspores towards *in vitro* embryogenesis. ***Physiol Plant 127: 519-534.*** ***Cited by 110***

9- **Shariatpanahi** ME, Belogradova K, Hessamvaziri L, Heberle-Bors E, Touraev A (2006) Direct embryogenesis: a novel technique for isolated microspore culture of wheat (*Triticum aestivum* L.). The International Conference "Haploids in Higher Plants III", February 12-15, Vienna, Austria, Abstract, p. 16

10- **Shariatpanahi** ME, Belogradova K, Hessamvaziri L, Heberle-Bors E, Touraev A (2006) Efficient embryogenesis and regeneration in freshly isolated and cultured wheat (*Triticum aestivum* L.) microspores without stress pretreatment. ***Plant Cell Rep. 25:1294-1299.*** ***Cited by 30***

11- **Enayati Shariatpanahi, M.,** 2006. Microspore embryogenesis in wheat (*Triticum aestivum* L.), tomato (*Lycopersicon esculentum* Mill) and *Arabidopsis thaliana.* Ph.D. Thesis. Vienna University, Vienna, Austria.

12- Emamifar M, **Shariatpanahi** ME, Habibzadeh S, Nematzadeh GA, Oroojlo A. 2008. Induction of microspore embryogenesis with 2,4-D instead of heat shock in *Brassica napus* L. cv. Topas. Proceeding of the second international student conference of biotechnology. University of Tehran.

13- Habibzadeh S, **Shariatpanahi** ME, Emamifar M, Amiri R, Oroojloo M (2008) Chemical treatment- Induced microspore embryogenesis in *Brassica napus* L. cv. Topas. Proceeding of the second international student conference of biotechnology. University of Tehran.

14- **ENAYATI SHARIATPANAHI M.,** TOURAEV A., HERBELE BORS E. (2009) INDUCTION OF EMBRYOGENESIS IN MICROSPORES OF TOMATO (LYCOPORSICUM ESCULONTUM MILL) CV. MICROTOM. ***Seed and Plant. Vol. 25-2(3):317-330 (in farsi).***

15- **Shariatpanahi** ME, Emamifar M, Habibzadeh S, Amiri R, Nematzadeh G, Oroojloo M (2010) Effect of 2,4-D as an inducer of embryogenesis in microspores of Brassica napus L. Proceeding of the International Conference "Green Plant Breeding Technologies", February 2-5, Vienna, Austria, oral presentation, p.17

16- **Enayti Shariatpanahi, m., Emami Meybodi, D. 2009.** Microspores:a haploid cell with various applications in genetics and plant breeding. ***Modern Genetics Journal Vol4, Number3:5-19(in farsi).***

17- Tarinejad A.R., Azami N, **Shariatpanahi** M, Rashidi V. (2010) Response to microspore culture in two bread wheat cultivars under different conditions of tissue culture media. ***World Academy of Science, Engineering and Technology 64: 1072-1080.***

18- Tarinejad A.R., Azami N, **Shariatpanahi** M, Rashidi V. (2010) Investigation on response to microspore culture and its evolutionary routine in two bread wheat cultivars (Falat and Chamran) under *In vitro* condition. ***World Academy of Science, Engineering and Technology 64: 1081-1086.***

19- Oroojlo A., **Shariatpanahi** ME, Habibzadeh S, Javidfar F (2012) Study of temperature effect on microspore embryogenesis and regeneration of doubled haploid plants in three canola (*Brassica napus L.)* hybrids. ***Seed and Plant. 28(1): 327-333 (in farsi).***

20- Habibzadeh S, **Shariatpanahi** ME, Amiri R, Emamifar M , Nematzadeh GA, Sadat- Noori S.A., Oroojlo A., Heberle-Bors E (2011) Effect of 2,4-D as a novel inducer of embryogenesis in microspores of *Brassica napus* L. ***CZECH JOURNAL OF GENETICS AND PLANT BREEDING***. *47, 2011 (3): 114–122*

21- Bal U, **Shariatpanahi** ME, Castro A, Emeris D, Clement C, Touraev A (2011) Assessments of pseudo-embryogenic structures observed in anther and microspore cultures *in vitro*: a cautionary guide**.** ***Czech J. Genet. Plant Breed.,*** *48, 2012 (2): 51–60*

22- DEHESTANI ARDAKANI M, M. KAFI, **M. E. SHARIATPANAHI**,M. JAFARKHANI-KERMANI, M. R. FATTAHI MOGHADAM AND M. OROOJLOO (2013) Investigation of the Effects of Temperature and Starvation Stresses on Microspore Embryogenesis in Two Tetraploid Roses (*Rosa hybrid* L.) via Isolated Microspore Culture Technique. **Crop Biotech.** Vol. 2, No. 3, 73-83***(in farsi).***

23- Dehestani-Ardakani, M., **Shariatpanahi, M.E.** and Kafi, M., 2016. Investigation of the Effects of Temperature and Starvation Stresses on Microspore Embryogenesis in Two Tetraploid Roses (Rosa Hybrida L.). Scientia, 14(2), pp.220-227.

24- Oroojloo M, **Shariatpanahi ME** (2012) Induction of multi-cellular structures in isolated microspores of roses (*Rosa hybrida.).* **Acta Hort.,** 961:479-486.

25- Mohammad Mehdi Fakhraei, Mostafa Arab, **Mehran E. Shariatpanahi** (2014) Effect of cultivar, growth regulators and light during incubation on induction of haploid in lisianthus (*Eustoma grandiflorum*) through microspore culture. **Journal of Crop production and processing.** 4(12):171-178.

26- Hamid Jabbari, Gholam A. Akbari, Nayer A. Khosh Kholgh Sima, Amir H. Shirani Rad, Iraj Allahdadi, Ali Hamed, **Mehran E. Shariatpanahi (2013)** Relationships between seedling establishment and soil moisture content for winter and spring rapeseed genotypes. **Ind. Crops Prod**., 49: 177– 187.

27- Ahmadi T., Jafarkhani Kermani M., Mashayekhi K., Hasanloo T., **Shariatpanahi M. E**. (2013) Comparing plant morphology, fertility and secondary metabolites in *Rosa hybrida* cv Iceberg and its chromosome-doubled progenies. **International Research Journal of Applied and Basic Sciences** 4 (11): 3840-3849.

28- Ahmadi B., **Shariatpanahi ME**, Teixeira da Silva JA (2013) Efficient induction of microspore embryogenesis using abscisic acid, jasmonic acid and salicylic acid in Brassica napus L. **Plant Cell, Tissue and Organ Culture (PCTOC).** 116: 343–351.

29- Ahmadi B., **Shariatpanahi ME**, Mehdi Aghapour Ojaghkandi, Ali Akbar Heydari (2014) Improved microspore embryogenesis induction and plantlet regeneration using putrescine, cefotaxime and vancomycin in Brassica napus L. **Plant Cell, Tissue and Organ Culture (PCTOC).** 118: 497-505

30- Neda Pishbin, Amir Mousavi, Sepideh Kalatejari, **Mehran Shariatpanahi**, Behnam Behrooznam Jahromi (2014) The effect of plant growth regulators and different types of explants on in vitro regeneration of sweet pepper (Capsicum annuum L.). Int. J. Biosci 5: 139-146

31- Ahmadi B., **Shariatpanahi ME (2015)** Proline and chitosan enhanced efficiency of microspore embryogenesis induction and plantlet regeneration in Brassica napus L. **Plant Cell, Tissue and Organ Culture (PCTOC).** DOI: 10.1007/s11240-015-0814-3. Volume 123, Issue 1 (2015), Page 57-65

32- Fatemeh Pourabdollah Najafabadi, **Mehran E. Shariatpanahi**, Behza d Ahmadi, Nayerazam Khosh-Kholgh Sima, Bahram Alizadeh and Mahnaz Oroojlo(2015) Effects of Heat Shock and 2, 4-D Treatment on Morphological and Physiological Characteristics of Microspores and Microspore-Derived Doubled Haploid Plants in Brassica napus L. **Iran J Biotech.** DOI:10.15171/ijb.1148

33- Behzad Ahmadi, **Mehran E. Shariatpanahi,** Rasoul Asghari-Zakaria1, Nasser Zare1 and Pejman Azadi (2015) Efficient Microspore Embryogenesis Induction in Tomato (Lycopersicon esculentum Mill.) using Shed Microspore Culture. **Journal of Pure and Applied Microbiology.** Vol. 9(Spl. Edn. 2), p. 21-29

34- Behzad Ahmadi, Farhad Masoomi Aladizgeh, **Mehran E. Shariatpanahi**, Pejman Azadi and Mehdi Keshavarz Alizadeh (2016) Molecular characterization and expression analysis of SERK1 and SERK2 in Brassica napus L.: implication for microspore embryogenesis and plant regeneration. **Plant Cell Rep**. 35:185–193

35- Ali Akbar Heidari, **Mehran E. Shariatpanahi**, Amir Mousavi3 and Sepideh Kalatejari1 (2017) Efficient Androgenic Embryo Induction and Plant Regeneration in Different Genotypes of Sweet Pepper via Anther Culture. **Journal of Pure and Applied Microbiology**. 11(1): 23-29

36- Asghar Valizadeh, Mehran Enayati Shariatpanahi, Behzad Ahmadi, Hamed ebrahimzadeh, Masoud Parvizi Almani, Mohammad Ali Ebrahimi (2017) Induction of symmetrical nucleus division and multi-nuclear structures in isolated microspores of sugarcane (Saccharum officinarum L.). **Iranian Journal of Genetics and Plant Breeding**. 6(1): 27-37

37- Ebrahimzadeh, H., **Shariatpanahi, M.E.**, Ahmadi, Hassan Soltanloo H, ,Lotfi M, Zarifi E. (2018) Efficient Parthenogenesis Induction and In Vitro Haploid Plant Regeneration in Cucumber (Cucumis sativus L.) Using Putrescine, Spermidine, and Cycocel. **J Plant Growth Regul.** 37: 1127–1134

38- Ali Akbar Heidari, **Mehran E. Shariatpanahi**, Amir Mousavi and Sepideh Kalatejari (2018) Enhancement of microspore embryogenesis induction and plantlet regeneration of sweet pepper (Capsicum annuum L.) using putrescine and ascorbic acid. **Protoplasma**. https://doi.org/10.1007/s00709-018-1268-3.

39- Ebrahimzadeh, H., Soltanloo H., **Shariatpanahi, M.E**., Eskandari A., and Ramezanpour S.S. (2018) Improved chromosome doubling of parthenogenetic haploid plants of cucumber (Cucumis sativus L.) using colchicine, trifluralin, and oryzalin. **Plant Cell, Tissue and Organ Culture (PCTOC)**. 135: 407–417

40- **Shariatpanahi** M.E., Hamed Ebrahimzadeh, Ali Eskandari, Behzad Ahmadi,Mohsen Niazian (2018) AMINO ACIDS AND CYCOCEL APPLICATION TO ENHANCE CUCUMBER HAPLOID EMBRYOGENESIS WITH GAMMA IRRADIATED POLLEN.

FAO/IAEA International Symposium on Plant Mutation Breeding and Biotechnology. IAEA-CN-263-93

41- **Shariatpanahi** M.E., Samira Tajedini, Abdelbagi Mukhtar Ali Ghanim, Baratali Fakheri, Mahnaz Oroojloo, Nafiseh Mahdinejad (2018) HAPLOIDY IN RICE (ORYZA SATIVA L.) MUTATION BREEDING FOR STRIGA RESISTANCE. **FAO/IAEA International Symposium on Plant Mutation Breeding and Biotechnology.** IAEA-CN-263-79

42- **Shariatpanahi** M.E., Samira Tajedini, Abdelbagi Mukhtar Ali Ghanim, Baratali Fakheri, Mahnaz Oroojloo, Nafiseh Mahdinejad (2018) ENHANCING EFFICIENCY OF MUTATION BREEDING FOR STRIGA RESISTANCE IN SORGHUM BY HAPLOID TECHNOLOGY. **FAO/IAEA International Symposium on Plant Mutation Breeding and Biotechnology.** IAEA-CN-263- 82.

43- **Shariatpanahi M.E.**, Samira Tajedini, Abdelbagi Mukhtar Ali Ghanim (2018) Improvement of embryogenesis in anther versus shed microspore culture of rice (Oryza sativa L.). **International Conference on Plant Cells & Tissues in Vitro III.** Vienna, Austria.

44- Niazian M., **Shariatpanahi M. E.**, M. Abdipour M., M. Oroojloo M.(2019) Modeling callus induction and regeneration in anther culture of tomato (*Lycopersicon esculentum* L.) using image processing and artificial neural network method. **Protoplasma**. ***256:1317–1332***

45- Pegah M. Dezfouli; Mohammad Sedghi; **Mehran E. Shariatpanahi**; Mohsen Niazian; Bahram Alizadeh (2019) Assessment of general and specific combining abilities in doubled haploid lines of rapeseed (Brassica napus L.). **Industrial Crops and Products.** https://doi.org/10.1016/j.indcrop.2019.111754**.**

46- Niazian, M. & **Shariatpanahi, M. E.** (2020). In vitro-based doubled haploid production: recent improvements. **Euphytic**a, 216, 69. https://doi.org/10.1007/s10681-020-02609-7.

Books/ Book chapters

47- **Shariatpanahi** ME, Touraev A (2010) Microspores and their applications in basic and applied plant sciences. In: Columbus F, (editor). Pollen: Structure, Types and Effects. ***Nova Science Publishers. ISBN: 978-1-61668-669-7. Chapter 9. P: 217-234.***

48- **Shariatpanahi** ME, Shakib A and Emami D (2012) Haploidy and its applications in Genetics and Plant breeding. ISBN: 978-600-5879-19-3, ABRII Publications, 276 pages (in Farsi).

49- **Shariatpanahi ME,** Ahmadi B (2016) Isolated microspore culture and its applications in plant breeding and genetics. In: Anis M, (editor) Plant Tissue Culture: Propagation, Conservation and Crop Improvement. Springer, India. Chapter 22. DOI 10.1007/978-981-10-1917-3_22

50- **Shariatpanahi ME,** Zarebayati A (2020) Haploidy in Rapeseed (*Brassica napus* L.): A Critical Review. In: Moeller K, (editor) *Brassica napus*: Cultivation and Uses. ***Nova Science Publishers. ISBN: 978-1-53618-191-3. Chapter2. P: 45-73.***

51- Shariatpanahi ME, Zarebayati A (2020) Haploidy in Pepper (Capsicum annum L.): A Critical Review. In: Norris P, (editor) Capsicum: Production, Varieties and Nutrition. Nova Science Publishers. ISBN: 978-1-53618-851-6. Chapter4. P: 131-156.