Name**:** **Seyed Mohsen**
Surname**:** **Hesamzadeh Hejazi**
Degree of education**:** **Ph.D.**
Field of Study**: Plant Breeding (Molecular Genetics and Genetic Engineering)**
Academic Rank**: Associate professor (32)**

Email: **smhessamzadeh@rifr-ac.ir ; mhessam@yahoo.com**;
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Educational degrees:

B.Sc: Agronomy and Plant Breeding, **University of Tehran**, Iran (1991).

M.Sc: Plants Breeding, **University of Tarbiat Modarres** Tehran Iran, (1996).

Title of thesis: Production of haploid in wheat through wheat X maize method (**accomplished in Japan**)

Ph.D: Plants Breeding (Molecular Genetics and Genetic Engineering), **University of Tehran,** Iran, (2004).

Title of thesis: Production of Bloat Safe Alfalfa Plants through Genetic Transformation (**accomplished in Italy**)

Experiences (position held):

1991-1996, Head of Plant breeding branch in Agricultural group ,Jehad Daneshgahi , university of Tehran.

1996-2001, Member of Scientific Board of Research Institute of Forest and Rangelands, Tehran, Iran

2001-2005 Deputy Of Gene Bank Division and member of Scientific Board of Research Institute of Forest and Rangelands, Tehran, Iran

2005- Continued, Member of Scientific Board of Research Institute of Forest and Rangelands, Tehran, Iran

2012- Continued, Member of Scientific Board of Research Institute of Forest and Rangelands & Member of scientific and educational communications committee.

2013- Continued, Member of Scientific Board of Research Institute of Forest and Rangelands And Member of scientific and educational communications committee and Member of Scientific and technical committee, & Member of Promotion committee of members scientific board .

2012-2021: A member of the Promotion Committee and representative of the faculty members of the Research Institute of Forests and Rangelands (RIFR) of the country.

2013-2016: A member of the Scientific Committee, the Research Institute of Forests and Rangelands of the country

2011-2018: A member of Scientific and Educational Communications Coordination Committee, the Research Institute of Forests and Rangelands of the country

2013-2017: In charge of the Molecular Biology Lab, the Research Institute of Forests and Rangelands of the country

2014-2016: Head of Biotechnology Department, the Research Institute of Forests and Rangelands of the country

2004- 2022: A member of the Specialized Committee of Biotechnology groups of Institute of Forest and Rangeland Research(RIFR).

2018-2020: A member of the Specialist Commission of the Natural Resources Group of the Agricultural Research, Education and Extension Organization

2013-2022: A member of Editorial Board of Scientific and Research Journal of Saffron Agronomy and Technology

2014-2020: A member of Editorial Board of Scientific and Research Journal of Rangeland and Desert Research

1998-1999: Supervisor of the Natural Resources of gene Bank of Iran, Research Institute of Forests and Rangelands.

1999-2003: Deputy of gene Bank of Natural Resources of Iran Research Institute for Forests and Rangelands .

2012-2022: A member of the scientific pole of protection, evaluation and sustainable exploitation of Oak in West of Iran

2014- 2022: A member of the Biotechnology Committee of Agricultural- Jehad Ministry

2014-2022: A member of Transgenic Plants Manufacture Group, Ministry of Agriculture- Jehad

2014: Representative of the Research Institute of Forests and Rangelands for the Mercury Convention.

2017-2022: A member of the Strategic Council of Iran Flora Chromosomal Index.

Book Authorship:

Color chromosome Atlas of Legumes collected in the Natural Resources Gene Bank of Iran. Publishing Research Institute of Forests and Rangelands - Release 415-Year 2009

Patent:

1- Production of a strong and effective material for rooting of different grassy and woody grafts and stems. Registry No. 47370, dated 22.04.2008

2- Production of anti-bloat alfalfa using genetic engineering. Registry No. 47366, 22.04.2008

Hand book :

Transgenic priorities in crop and gardening plants in the country. Serie Journal of the Biotechnology Committee of the Ministry of Agriculture-jehad. 1395. Deputy of Scientific and Technology Department and Ministry of Agriculture-jehad.

Membership in editorial board of scientific-research journals:

2013-2022: A member of Editorial Board of Scientific and Research Journal of Saffron Agronomy and Technology. Publisher: Torbat Heydarieh University

2014-2020: A member of Editorial Board of Scientific and Research Journal of Rangeland and Desert Research

Printed articles in authoritative-Researched journals, ISI and ISC:

Hesamzadeh Hejazi, S.M. High efficiency rapid transformation procedure in diploid and tetraploid alfalfas for the appearance of Sn and Beta-glucuronidase (gus), Agricultural science scientific and research magazine, **University of Tehran**, Vol. 36, No. 4, Year 2005 (Persian Journal)

Hesamzadeh Hejazi, S.M. A high efficiency rapid procedure for transformation of alfalfa for appearance of Banyuls gene (**Research quarterly magazine of genetics and breeding of pasture and forest plants of Iran**, Vol. 13, No. 3, 2005. (Persian Journal)

Hesamzadeh Hejazi, S.M. Surveying different factors of haploid wheat production through confluence with corn (Agricultural science scientific and research magazine, **University of Tehran**, Vol. 29, No. 1, 1998.

Hesamzadeh Hejazi, S.M. Cytogentic survey of species of Atriplex in Iran, Research and Renovation magazine, No. 76, Autumn 2007, (natural resources).

Hesamzadeh Hejazi, S.M. Cytogentic survey of species of Vicia in Iran, Agricultural science scientific and research magazine, University of Tehran, Vol. 1-37, No. 2, 2006

Hesamzadeh Hejazi, S.M. Karyological study of species of clover available in gene bank of Iran natural resources, Iran biology scientific and research magazine, Vol. 19, No. 3, Autumn 2006

Hesamzadeh Hejazi, S.M. Preliminary evaluation of performance of forage and morphological characteristics in 20 species and ecotype of one-year Lolim multiflorum in interval cultivation conditions. Research and reconstruction No. 59, 2004

Hesamzadeh Hejazi, S.M. Evaluation of genetic variation of forage and seed performance in red clover populations (Trifolium parents L.) using multivariable analysis statistical methods. Forest and pasture plants breeding and genetic researches, Vol. 12, No. 1, 2004

Hesamzadeh Hejazi, S.M. Surveying inter-species relation based on karyotypic characteristics in diploid species of Astragalus. Research quarterly magazine of genetic studies and breeding of pasture and forest plants of Iran, Vol. 12, No. 1, 2004

Hesamzadeh Hejazi, S.M. Evaluation of genetic variation of forage and seed performance in red clover populations by using multivariable statistical methods, Research quarterly magazine of genetic studies and breeding of pasture and forest plants of Iran

Hesamzadeh Hejazi, S.M. Electrophoresis of storage proteins of seed for studying the existing variation between different alfalfa cultivars (Medicago sativa), Research quarterly magazine of genetic studies and breeding of pasture and forest plants of Iran, Vol. 5, 2000

Hesamzadeh Hejazi, S.M. Cytogetic study of some of the species of Hedysarum in the gene bank of Iran natural resources, Research quarterly magazine of genetic studies and breeding of pasture and forest plants of Iran, Vol. 15, No. 2, 2007

Hesamzadeh Hejazi, S.M. Karyotypic study of three species of milk vetch (Astragalus). Scientific and research quarterly magazine of research and reconstruction in natural resources, No. 73, 2006

Hesamzadeh Hejazi, S.M. Improvement of physiologic quality of deteriorated seeds of tall wheatgrass (Agropyron elongatum Host) using hormonal priming for stress and non-stress dry conditions. scientific and research magazine of agricultural science, University of Tehran, Vol. 39, No. 1, 2008

Hesamzadeh Hejazi, S.M. Karyological study of some of the different populations of sainfoin tetraploid species in the gene bank of natural resources of Iran. Iran biology scientific and research magazine, Vol. 22, No. 2, 2009

Hesamzadeh Hejazi, S.M. Cytogenetic study of some of the different populations of sain foin diploid species in the gene bank of natural resources of Iran in the scientific and research magazine of genetic researches and breeding of pasture and forest plants of Iran, Summer 2008, 16 (continuous 32): 158- 171

Hesamzadeh Hejazi, S.M. Surveying Karytypical variation in three species of Sophora sp, genetic researches and breeding of pasture and forest plants of Iran, Spring 16(1); 2008 continuous 31: 27-36

Hesamzadeh Hejazi, S.M. Cytogentical survey of clover species in Fars province using video analysis system. Natural resources of Iran, Spring 2008; 61(1): 225-234

Hesamzadeh Hejazi, S.M. Biotechnology and the necessity of its planning for the future of the country. Definition, concepts and applications. Dehati scientific, agricultural and environmental monthly magazine. 4th year, No. 38, November 2006

Hesamzadeh Hejazi, S.M. Karyological survey of four populations of Rosa damascene Mill. Plant and Ecosystem scientific and research magazine, 2010, under publication

Hesamzadeh Hejazi, S.M. Cytogenetical suvey of some of the speicies of alfalfa (Trifolium spp.) in East Azarbaijan province. Scientific and research magazine of genetic researches and breeding of pasture and forest plants of Iran, Vol. 16, No. 1, 2008.

Hesamzadeh Hejazi, S.M. Role of the BAN gene from Arabidopsis thaliana in transgenic Alfalfa expression of anthocyanins and proanthocyanidins.(Molecular breeding for the genetic improvement of forage crops and turf),2005

Hesamzadeh Hejazi, S.M. Ectopic Expression of BANYULS increases leaf tannin levels in Lotus corniculatus.SIGA-XLVII Annual Congress Verona-Italy 24-27/09/2003.

-Jaafari A.A, **Hesamzadeh Hejazi, S.M.**.Genetic variation for yield and morphological traits in 20 enotypes of Italian ryegrass (*Lolium multiflorum*) grown as spaced plants. Czech Journal of Genetics and Plant Breeding **39:** 41-47,2003

Javadi, H. **Hesamzadeh Hejazi, S.M.** 2009. Karyotipic studies of three Thymus (Lamiaceae)species and populations inIran.Caryologia, , vol.62, no.4:316-325.

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H.R. Eisvand, R. Tavakkol Afshari, F. Sharifzadeh, H.M. Maddah Arefi,**S.M. Hesamzadeh Hejazi.** 2010. Effects of hormonal priming and drought tress on activity and isozyme profiles of antioxidant enzymes in deteriorated seed of tall wheat grass. Seed Science and Technology. 38:280-297.

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Gholipour Sh., Tabaei S.R., **Hesamzadeh Hejazi S.M.**, Kalatehjari S.2011. The Karyological Analysis Of Four Populations Of *Rosa damascena* Mill. PLANT AND ECOSYSTEM , Volume 7 , Number 27; Page(s) 87 - 96.

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S.M.Hesamzadeh Hejazi, 2011. Karyological study on three Cicer L. pecies (Fabaceae) in Iran.Asian.J. of cell Biology 6(3):97-104.

Ziaei Nasab, M., **S.M.Hesamzadeh hejazi,** M.R. Bihamta, M.Mirza, M.A.Naderi-Shahab, 2012. Assessment of Karyotypical variation among 16 populations of Thymus daenensis Cleak and

Thymus kotchyanus Boiss. species in Iran.African Journal of Biotechnology Vol.11(5), pp.1028-1036.

Ramazan Kalvandi, Seyed Mohsen Hesamzadeh Hejazi, Morteza Atri , Mehdi Mirza, Ziba Jamzad, Keivan Safikhani,2012. Karyotype analysis among 10 populations of Thymus eriocalyx spesies in Iran. Annals of Biological Research 3(8):3916-3925

Kalvandi R., Mirza M., Atri M., **Hesamzadeh Hejazi S.M.**, Jamzad Z., 2014.Introduction of seven New Chemotypes Of Thymus Eriocalyx (Ronniger) Jalas In Iran Based Upon The Variation Of Essential Oil Composition In Different Populations. Iranian journal of medicinal and aromatic plants .Volume 30 , Number 1 (63); Page(s) 101 -122.

Kalvandi R., **Hesamzadeh Hejazi S.M.,** Mirza M., Atri M., Jamzad Z., Safikhani K., Ahmadian M. 2014. Study On Some Ecological Factors,Morphological Traits, Essential Oil Productivity And Ploidy Levels Of Thymus Eriocalyx (Ronniger) Jalas In Iran. iranian journal of medicinal and aromatic plants Volume 29 , Number 4 (62); Page(s) 854 -878.

Javadi,H., **S. M. Hesamzadeh Hejazi** & M. SH. Babayev,2012. Chromosome reports on two species of thymus (LAMIACEAE). -Iran. J. Bot. 18 (1): 108-111.

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M. Kameli, **S. M. Hesamzadeh Hejazi** and M. Ebadi, 2013. Assessment of genetic diversity on populations of three *satureja* species in Iran using ISSR markers. Annals of Biological Research, 2013, 4 (3):64-72.

Babmorad M., **Hesamzadeh Hejazi S.M.**, Bagheri R., Sadeghi S.E., Zeinali S.2013. Comparing The Oviposition RateOf Monosteira Unicostata (Mulsant & Rey) On Poplar Clones In Karaj Iranian journal of forest and poplar research , Volume 20 , Number 4 (50); Page(s) 669 - 678.

M. Mohammadi Sarab Badieh1, **S. M. Hesamzadeh Hejazi**, S. R. Tabaei Aghdaei, M. R. Naghavi and A. A. Jafari (2013). Prediction of quality parameters in *Onobrychis sativa* L. by near infrared reflectance spectroscopy. Annals of Biological Research, 2013, 4 (5):295-300.

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S.M.Hesamzadeh Hejazi, 2011. Karyological study on three Cicer L. species (Fabaceae) in Iran.Asian.J. of cell Biology 6(3):97-104.

Ziaei Nasab, M., **S.M.Hesamzadeh hejazi,** M.R. Bihamta, M.Mirza, M.A.Naderi-Shahab, 2012. Assessment of Karyotypical variation among 16 populations of Thymus daenensis Cleak and Thymus kotchyanus Boiss. species in Iran.African Journal of Biotechnology Vol.11(5), pp.1028-1036.

Ramazan Kalvandi, **Seyed Mohsen Hesamzadeh Hejazi**, Morteza Atri , Mehdi Mirza, Ziba Jamzad, Keivan Safikhani,2012. Karyotype analysis among 10 populations of Thymus eriocalyx spesies in Iran. Annals of Biological Research 3(8):3916-3925

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Javadi,H**., S. M. Hesamzadeh Hejazi** & M. SH. Babayev,2013. Comparison of Karyotypic Traits of Thymus species in Iran. Annals of Biological Research. 4 (1):199-208

M. Kameli, **S. M. Hesamzadeh Hejazi** and M. Ebadi, 2013. Assessment of genetic diversity on populations of three satureja species in Iran using ISSR markers. Annals of Biological Research, 2013, 4 (3):64-72.

M. Mohammadi Sarab Badieh, **S. M. Hesamzadeh Hejazi**, S. R. Tabaei Aghdaei, M. R. Naghavi and A. A. Jafari (2013). Prediction of quality parameters in Onobrychis sativa L. by near infrared reflectance spectroscopy. Annals of Biological Research, 2013, 4 (5):295-300.

Adel Jalili , Mina Rabie , Hossein Azarnivand, John G. Hodgson, Hossein Arzani,Ziba Jamzad, Younes Asri, Behnam Hamzehee, Farzaneh Ghasemi,**S.M. Hesamzadeh Hejazi**, R. Abbas-Azimi (2013). Distribution and ecological consequences of ploidy variation in Artemisia sieberi in Iran. Acta Oecologica 53: 95-101.

Irani P., **Hesamzadeh Hejazi SM.,** Tabaei aghdaei SR., 2014. Karyological study on four species of satureja (Lamiaceae) in Iran. International Journal of Biosciences (IJB), 4:7,229-240.

Salehi M., **Hesamzadeh Hejazi SM**., Tabaei aghdaei SR., 2014. Cytogenetic studies of two Dracocephalum (Lamiaceae) species and populations in Iran. International Journal of Biosciences (IJB), 4:9,100-108.

Hesamzadeh Hejazi SM, Ziaei Nasab M. 2010.Cytaxonomy of some Onobrychis (Fabaceae) species and populations in Iran. Caryologia 63, 18-31..http://dx.doi.org/10.1080/00087114.2010.589705

Javadi H, **Hesamzadeh Hejazi SM**, Babayev Majnun SH. 2009. Karyotypic Studies of three Thymus (Lamiaceae) species and populations in Iran.Caryologia 62(4), 316-325. http://dx.doi.org/10.1080/00087114.2004.10589697.

Javadi H., **Hesamzadeh Hejazi S.M.** 2014.Karyological studies On Different Populations Of Several Species Of Agropyron In Natural Resources Gene Bank. Iranian journal of rangelands and forests plant breeding and genetic research , Volume 22, Number 1 ; Page(s) 67- 78.

Talebzadeh S.A., **Hesamzade Hejazi S.M.**, Maghsoodi H., Valinassab T.2014. Morpho-Anatomical Studies On Red Alga Gracilaria Corticata In The Persian Gulf And Oman Sea. iranian scientific fisheries journal , Volume 22 , Number 4; Page(s) 60 - 71.

Hesamzadeh Hejazi SM, Ziaei Nasab M. 2010.Cytaxonomy of some Onobrychis (Fabaceae) species and populations in Iran. Caryologia 63, 18-31.http://dx.doi.org/10.1080/00087114.2010.589705

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Sara Sadeghian, **Seyed Mohsen Hesamzadeh Hejazi**, 2014, cytogenetic studies in some species of Medicago L. in Iran. IUFS Journal of Biology, 73 (1):21-30

Mahdiyeh Salehi*, Seyed Mohsen Hesamzadeh Hejazi**2015. Genetic Differentiation of two Dracocephalum (Lamiaceae) species and populations in Iran by Polyacrylamide Gel Electrophoresis. Biological Forum – An International Journal 7(2): 300-306

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Mahdiyeh Salehi1 , **Seyed Mohsen Hesamzadeh Hejazi***. 2016. Karyological study on Dracocephalum (Lamiaceae) genus in Iran. Journal of Biodiversity and Environmental Sciences (JBES) Vol. 9, No. 3, p. 13-22.

Elham Bagheri Abyaneh, **Seyed Mohsen Hesamzadeh Hejazi** , Soheila Gholami, Gholamreza Bakhshi Khaniki. 2017. Study on the Cytotaxonomy of some species of the genus Festuca (Poaceae) Iranian Journal of Science and Technology, Transactions A: Science, DOI 10.1007/s40995-017-0148-6.

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S.M. Hesamzadeh Hejazi , 2022. IAPT chromosome DATA on Satureja spp**.**

S.M. Hesamzadeh Hejazi, 2022. Assessment of genetic diversity on different populations of six Salvia species using R-ISSR markers.(Preparing for printing)

Selected Publications (Presented in Congress by:S.M.Hesamzadeh Hejazi):

1. Surveying the effects of wheat cultivars on the production of haploid plants using maize-crossing method, p. 64, faculty of agriculture, Esfahan University of Technology, August 26-29, 1996.

2. Surveying the effects of different maize genotypes on the production of wheat haploid plant using chromosome omission, p. 65, faculty of agriculture, Esfahan University of Technology, August 26-29, 1996.
3. Surveying the effects of environmental and genetic factors on the growth of pollen in different corn genotypes, p. 622, Karaj, Seed and Plant Improvement Institute, August 31-4 September, 1998.
4. Surveying the transmission process of gene to plant cells, key papers of the 7th congress of Iran plant breeding and agricultural science, August 24-26, 2002, p.5.

5. The effect of pasturing or pruning on the gender ratio of some of Atriplex species planed in Karaj district, abstract of papers of the 7th congress of Iran plant breeding and agricultural science, August 24-26, 2002, p. 109
6. Using video analysis to specify the karyotype of some of the sainfoin species in Iran, abstract of the 7th congress of Iran plant breeding and agricultural science, August 24-26, 2002, p. 375.

7. Surveying the genetic variation of different sainfoin genotypes (onobrychis) existing in the gene bank of natural resources of forests and pastures research institute. Zahedan , First Congress 2003.

8. The importance of halophytes in the zones with saline soils and their agricultural and pasture potentials, Zahedan, p. 173, October 14-15, 2003, Zahedan.

9. The role of BANYULS gene of Arabidopsis on the appearance of anthocyanins and proanthocyanidins in GM alfalfa, 2nd scientific and research conference of students of agricultural science, p. 112, Tarbiat Modares University, September 2004.

10. High efficiency rapid transformation procedure in diploid and tetraploid alfalfas, 2nd scientific and research conference of students of agricultural science, p. 113, Tarbiat Modares University, September 2004

11. Cytogenetic survey of some of the vetch species (Vicia) in Iran using video analysis system, 12th nationwide biological conference in Iran, p. 252, Bu Ali Sina University (Hamedan), August 31-September 02, 2004.

12. 12. Estimating genetic distance between different species of clover in Iran using electrophoresis of storage proteins, 2nd scientific and research conference of students of agricultural science, p. 20, September 2004.

13. 13. Surveying genetic variation of the performance of seed and its constituents in strawberry clover using multivariable statistical methods, 2nd scientific and research conference of students of agricultural science, p. 20, September 2004.

14. 14. Cytogenetic study of some of the species of Trifolium existing in the gene bank of Iran natural resources, agriculture and plant breeding congress, faculty of agricultural science, Guilan University, August 24-26, 2004.

15. 15. Evaluating the performance of forage seed and performance constituents in white clover based on PCA and cluster analysis, p. 28, faculty of agricultural science, Guilan University, August 24-26, 2004.

16. 16. Cytogenetic study of some of the species of Trifolium existing in the gene bank of Iran natural resources, p. 128, faculty of agricultural science, Guilan University, August 24-26, 2004.

17. 17. Surveying interspecies relationship based on caryotype characteristics in diploid species of Astragalus, p. 303, faculty of agricultural science, Guilan University, August 24-26, 2004.

18. 18. Surveying the potential for the production of seed and forage and their relationship with morphological characteristics in strawberry clover genotypes, September 2004, 3rd national conference on pasture and pasture keeping in Iran, Karaj, faculty of natural resources.

19. 19. Cytogenetic study of some of the species of Atriplex in Iran, 1st national conference on forage plants of the country, University of Tehran, faculty of agriculture, July 2005, presented verbally.

20. 20. Study of the electrophoresis of storage proteins in some of the species of Atriplex, 1st national conference on forage plants of the country, University of Tehran, faculty of agriculture, July 2005, presented verbally.

21. 21. The role of leaf colour gene of corn on the appearance of anthocyanins and proanthocyanidins in clover plant, 1st national conference on forage plants of the country, University of Tehran, faculty of agriculture, July 2005, presented verbally.

22. 22. The effect of CTs on the solubility of the proteins of forage legumes, 1st national conference on forage plants of the country, University of Tehran, faculty of agriculture, July 2005, presented verbally.

23. 23. Evaluating genetic variation of clover (M.sativa) using biochemical indicators (SDS-PAGE), 1st national conference on forage plants of the country, University of Tehran, faculty of agriculture, July 2005, presented verbally.

24. 24. Karyological study of three unique species of fenugreek (Trigonella) in Iran, 9th congress on agriculture and plant breeding, August 27-29, 2006, Abu Reihan campus, University of Tehran .

25. 25. Karyologic study of some of the species of sainfoin (Onobrychis) in the gene bank of Iran natural resources using video analysis system, 9th congress on agriculture and plant breeding, August 27-29, 2006, Abu Reihan campus, University of Tehran.

26. 26. Cytogenetic study of three important species of Hedysarum in Iran, 9th congress of agriculture and plant breeding, Abu Reihan campus, University of Tehran.

27. 27. Karyologic study of some of the species of diploid and tetraploid species of milk vetch (Astragalus), 2nd internation conference of Iran biology, August 29-31, 2006.

28. 28. Cytogenetic study of three species of Sophora using video analysis system. 1st national and specialty conference of plant classification in Iran, 06.09.2006.

29. 29. Cytological examination of 4 species of Hedysarum using video analysis system. 1st national and specialty conference of plant classification in Iran, 06.09.2006.

30. 30. Cytological examination of 5 species of Colutea using using video analysis system. 1st national and specialty conference of plant classification in Iran, 06.09.2006.

31. 31. Ploidy variation in a species of thyme (Thymus daenensis), 10th Iranian genetic congress, 2008

32. 32. Karyologic study of Agropyron species using video analysis system. 10th Iranian genetic congress, 2008.

33. 33. Karyologic examination of four species of Salsola in Iran using video analysis system. 10th congress of agricultural science and plant breeding of Iran, 2008.

34. 34. Study of karyotypic changes of the population of two species of Kochia, 10t congress of 10th congress of agricultural science and plant breeding of Iran, 2008.

35. 35. Karyologic study of some of the species of Oryzopsis, 10th congress of agricultural science and plant breeding of Iran, 2008.

36. 36. Comparison of damages of stone pine on the species and colonies of pine in Karaj. 18th phytopathological congress of Iran, 2008.

37. 37. Surveying genetic variation of some of the species of Salsola in Iran using the electrophoresis of storage proteins of seed. 6th national biotechnological conference of Iran, August 13-15, 2009.

38. 38. Cytogentic study and video analysis of some of the populations of Agropyron pectiniforme. 6th national biotechnological conference of the Islamic republic of Iran, August 13-15, 2009.

39. 39. The role of biotechnology in agriculture and natural resources. 2nd nationwide students' conference on biotechnology and its new issues. Alzahra University, 05.11.2008.

40. 40. Karyotypic study in different populations of thyme. 7th national biotechnological conference of the Islamic republic of Iran, September 12-14, 2011, Tehran,Niroo Research Center.

41. 41. Cytogentic survey of species of Bromus in Iran. 17th national conference and 5th international conference of biology in Iran, September 04-06, 2012.

42. 42. Suryeing cytogenetic variation of Oryzopsis populations using Karyotypic studies. 12th genetic conference of Iran, May 21-23, 2012, Tehran, International conference Center of Shahid Beheshti University.

43. 43. Surveying Karyotype variation in 5 populations of two species of Elymus. 12th genetic conference of Iran, May 21-23, 2012, Tehran, International conference Center of Shahid Beheshti University.

44. 44. Karyotype study of 9 populations of 5 species of Avena using video analysis. 12th genetic conference of Iran, May 21-23, 2012, Tehran, International conference Center of Shahid Beheshti University.

45. 45. Specification of ploidy level and karyotypic characteristics in Bothriochloa using chromosome counting. 12th genetic conference of Iran, May 21-23, 2012, Tehran, International conference Center of Shahid Beheshti University.

46. 46. Cytogentic survey of species of clover in Fars province. 12th genetic conference of Iran, May 21-23, 2012, Tehran, International conference Center of Shahid Beheshti University.

47. 47. Cytogenetic survey of species of Aegilops by using video analysis system in Iran. 12th genetic conference of Iran, May 21-23, 2012, Tehran, International conference Center of Shahid Beheshti University.

48. The role of biotechnology in agriculture and natural resources. The second overview of the biotechnology student and its news. Alzahra University of November 2008. (Presentation of lecture).

49. Population structure and the spatial dynamics of genetic polymorphism in Thyme, Shahid Beheshti University, second Interational Congress of Medicine Plants 15-16 May 2013, Tehran

50. Different strategies of biological technology in increasing of production and productivity of medicinal plants, Ferdowsi University, the third National Congress of Medicinal Plants 24-25 May 2014, Mashhad.page 27.

51. The essential oil of the Zhumeria majdae is a rich source of Linalol. The eighteenth of the Iranian Conference on Iranian Biology Conference. August 26-29, 2014 Kharazmi University.

52. The effect of age of poplar colones on the mortality rate of Monosteria Unicostata. National Conference on Pest Control Management (IPMC). Shahid Bahonar University of Kerman.January 21, 2014.

53. Cytogenetic study of four Satureja (lamiaceae) species and populations in Iran, Shahid Beheshti University, second Interational Congress of Medicine Plants 15-16 May 2013, Tehran.

54. Karyological study of populations of the Thymus daenensis. International Conference on Applied Research in Agriculture. Tehran, 2015.

55. Cytogenetic study of populations of mountain (T. kotschyanus) and garden (T. vulgaris) thyme species. International Conference on Applied Research in Agriculture. Tehran, 2015.

56. Study of the elements of the leaf of Zhumeria majdae (in different stages of vegetative in the Geno mountain region. Congress of the National Biology and Natural Sciences of Iran.Tehran 2015.

57. Investigating the compound of the essential oil in different population of Dracocephalum moldavica in greenhouse conditions. The 19th National Congress and the 6th International Congress of Iranian Biology. Tabriz.2016.

58. Study of chemical composition of different populations of salvia verticillata l. in iran, 6thNational Congress on Medicinal Plants 9-10th May, Tehran, Iran.2017.

59. The effect of the age of poplar seedlings on population and Damage Unicostata monosteira in Karaj. The first national conference of Iranian forests, research and development, Urmia, 2018.

60. In vitro Propagation of Dracocephalum kotschyi Species: An Endangered Medicinal Plant.7 th National Congress on Medicinal Plants 12-14th May. Shiraz, Iran. 2018.

61. The in vitro culture of urtica medicinal plant using different culture media. Biotechnology of medicinal plants and Iranian mountain fungi. Zanjan, 2018.

62. Urtica dioica L., herbal medicine and industrial plant in world today. Biotechnology of medicinal plants and Iranian mountain fungi. Zanjan, 2018.

63. Developmental Stages of Ovule and Embryo Sac in Salvia verticillata L. Collected from Different Regions of Iran. 8th National Congress on Medicinal Plants 24-24 April. 2019.Tarbiat Modarres University.

64.

65.

Scientific and research lectures on conferences by S.M.Hesamzadeh Hejazi

1. The role of the Leaf Color gene from corn plant on the manifestation of anthocyanins and Proanthocianidine in alfalfa plant.first national conference of forage plants. 9-11th August 2005, Faculty of Agriculture, University of Tehran.

2. The role of Banyuls gene from Arabidopsis on the manifestation of anthocyanin and proanthocyanides in alfalfa transgenic plant. The second scientific conference of the students of agricultural science. P.112 Tarbiat Modarres University of September 2004.

3. Rapid transformation method with high efficiency in diploid and tetraploid alfalfa. The second scientific conference of the students of agricultural science. P.113 Tarbiat Modarres University of September 2004.

4. Investigating the gene transfer process to plant cells. 7th Congress of agriculture and plant breeding. 2002.

5. Application of Nanotechnology, Biotechnology, Geomatics and ICT in Agricultural Sciences and Natural Resources. 5th Congress of Heads of Natural Resources of faculties in Iran - Isfahan Industrial University, 2005.

6. Application of biotechnology in forest sciences, rangelands and medicinal plants. July 2006, Forest and Rangeland Research Institute.Tehran.2006.

7. Karyological Study on Some species of diploid and tetraploid species of *Astragalus* genous, the second International Conference on Biology of Iran, 7-9th September 2006.

8. Biotechnology and its planning for the future of Iran. Sixth National Conference of Two Annual Associations of Environmental Experts in Iran. 6-7 March 2006.

9. The role of biotechnology in agriculture and natural resources. The second congress of the biotechnology student and its news. Alzahra University, November 2008.

10. Different strategies of biological technology in increasing of production and productivity of medicinal plants, Ferdowsi University, the third National Congress of Medicinal Plants 14-15 May 2014, Mashhad.

11. Population structure and identification of the nature of genetic polymorphism in Thymus plant. Shahid Beheshti University, second National Congress of Medicinal Plants 15-16 th May 2013, Tehran.

12.

Students guided theses as a Supervisor in Master of Science (M.Sc.) and Ph.D. degree

1. Morphologic, Cytogenetic and electrophoresis studies on some species of Clover (Trifolium) genus in Iran, Master of Science (M.Sc.), Islamic Azad University. Ziaya Nasab 2004.

2. Cytogenetic Study of Some species of Vetch genus (*Vicia* sp.)in Iran, Master, Master of Science (M.Sc.), Islamic Azad University. Mohammad Rasooli 2004.

3. Morphologic, Cytogenetic and electrophoresis studies on some species of Artiplex genus in Iran, Master of Science (M.Sc.), Islamic Azad University. Allidaee, 2005.

4. Morphologic, Cytogenetic and electrophoresis studies on some species of Kochia genus in Iran, Master of Science (M.Sc.), Islamic Azad University.Mazloomian, 2007.

5. Walnut (Juglans regia)progeny testing for selection of cold resistant trees. Master of Science (M.Sc.), Islamic Azad University.Sadeghi, 2006.

6. Morphologic, Cytogenetic and electrophoresis studies on some species of Salsola genus in Iran, Master of Science (M.Sc.), Islamic Azad University.Saffarian, 2007.

7. Karyological study on some Oryzopsis genus by imaging analysis system in Iran. Master of Science (M.Sc.), Islamic Azad University.Parvizan, 2006.

8. Effect of some phytohormones on physiological quality improvement of tall wheatgrass (Agropyron elongatum L.) aged seeds under drought stress.Ph.D. student, University of Tehran, Isvand, 2008.

9. Investigation of genetic and cytogenetic variation of *Melica* species in Iran. Master of Science (M.Sc.), Payame Noor University of Tehran, Gholami Soheyla, 2009.

10. . Investigation of genetic and cytogenetic variation of Eurotia ceratoides species in Iran. Master of Science (M.Sc.), Payame Noor University of Tehran,Gholami effat, 2009.

11. Investigation of genetic and cytogenetic variation of *Poa* species in Iran. Master of Science (M.Sc.), Payame Noor University of Tehran, Talkhab, 2009.

12. Morphologic, Cytogenetic and electrophoresis studies on some species of *Festuca* genus in Iran, Master of Science (M.Sc.), Payame Noor University of Tehran, Bagheri Abyaneh, 2009.

13. Biosystematical study of Thymus eriocalyx populations in Iran. Ph.D. student, University of Bu-Ali Sina, Kalvandi, 2012.

14. Study of genetics variation in different species of *Thymus* spp. by cytogenetic and molecular markers.Ph.D student, University state of Baku (Azerbaijan) faculty of biology. Javadi, 2013.

15. Cytotaxony study of some populations of *Rosa damascena* in Iran, M.Sc. student, Islamic Azad University.Gholipoor Shahrbanoo, 2010.

16. Cytogenetic, Molecular and Phytochemistry studies on some populations of *Thymus .kotschyanus ، Th. daenensis و Th.vulgaris* in Iran. Ph.D. student ,Islamic Azad University.Ziaei Nasab, 2012.

17. Effect water stress on quantitative and qualitative on essential oil in *Nepeta crispa* Willd. M.Sc. student, Kharazmi University,Hatami,2012.

18. Study of hormone effects, culture and microscopic medium in regeneration and culture of Teucrium Polium, M.Sc. student, Tehran University. Hamed Sifi- 2006.

19. Study on polymorphism of different populations of two species of *Satureja bachtiarica* and *Satureja sahendica* using ISSR molecular markers in Iran. M.Sc. student, Payame Noor University of Tehran, Mahboubeh Jamali Nasab, 2013.

20. Study on polymorphism of different populations of two species of *Satureja mutica* and *Satureja macrantha* using ISSR molecular markers in Iran. M.Sc. student, Payame Noor University of Tehran, Dalvand, 2013.

21. Ralationships between different populations of species of sainfoin Onobrchis spp. ESI-SSR molecular markers based on forage quality factors. Ph.D. student, Islamic Azad University.Mohammadi Sarab Badieh, 2013.

22. Investigation of cytogenetic variation and morphology of different populations of *SALVIA* species. M.Sc. student, Azad University of Karaj,sara Sadeghian, 2014.

23. Investigation of genetic diversity on some populations of two species of Dracocephalum (D. moldavica and D, kotschyi) by cytogenetic and electrophoresis markers.M.Sc. student, . Islamic Azad University of Karaj. Mahdiyeh Salehi, 2014.

24. Cytogenetic and morphological evaluation of four species of Satureja (S. mutica, S. spicigera, S. sahendica, S. macrosiphonia). M.Sc. student, Islamic Azad University of Karaj. Irani, 2013.

25. Investigation of genetic variation of different populations of three species of Satureja Khuzistanica and Satureja Rechingeri and S. spicigera using ISSR molecular markers in Iran. M.Sc. student, Islamic Azad University of Damghan Branch .2012.

26. Cytotaxonomy of different populations of three species of *Salvia* genus in Iran (*S. verticilata, S. reuteriana, S. lerrifolia*) M.Sc. student, Islamic Azad University of Karaj. al-Mira Mohammadi, 2014.

27. Chromosome morphometry of different populations of three species of *Salvia* genus in Iran (*S. glutinosa, S. spinosa, S. limbata*). M.Sc. student, Islamic Azad University of Karaj. Bakhtiari, 2014.

28. Study of sexual diversity of different populations of red algae *Gracilaria corticata* using ISSR molecular marker in the Persian Gulf and Oman Sea. M.Sc. student, Payam Noor University of Tehran, Talebzadeh, 2014.

29. Investigation of an anatomical and developmental characteristics of different populations of endangered medicinal plant *Zhumeria majdae* and their polymorphism using molecular, cytogenetic and phytochemical markers.Ph.D. student, Kharazmi University, Soltanipoor, 2017.

30. Investigation of anatomical and developmental structure of various populations of three species Salvia spp. and its polymorphism by molecular markers and phytochemical analysis. Ph.D. student , Islamic Azad University.Kameli, 2017.

31. Karyological study of two species of *Dracocephalum* genus using an image analysis method. M.Sc. student, Payame Noor University of Mashhad. Imani, 2015.

32. Investigation on quality and quantity of essential oils and genetic diversity in different populations and in cells and tissue cultures of two species of *Dracocephalum* species.Ph.D. student, University of Tabriz, Allahverdi mamaghani, 2017.

33. Evaluation of karyotypic and ploidy diversity of different populations of *Buxus hyrcana* in the northern hyrcani forests of Iran.M.Sc. student, Islamic Azad University of Research Sciences. Ghasemi, 2015.

34. Investigating the polymorphism intra and Inter different populations of three species of Salvia spp. Using molecular markers and phytochemical analysis in Iran. M.Sc. student Payame Noor University of East Tehran, Saeed Hashemzadeh Hashemi, 2015.

35. genetic diversity assessment between different populations of two species of Moringa peregrina and M. oleifera in Iran. M.Sc. student, Islamic Islamic Research Sciences of Tehran.Nikrad, 2018.

36. Investigation of tissue culture and root cultivation and stable compounds using HPLC method. M.Sc.student, Payame Noor University of East Tehran, Sedaghati, 2018.

37. cytogenetic, molecular and morphological examination of different populations of Iran's native species and their relationship with the quantity and quality of the essential oils compound. Ph.D. student, Islamic Azad University,Salehi, 2022.

38. Investigation of anatomical structure of vegetative and reproductive organs of *salvia hypoleuca* and study polymorphism in populations of three species of *SALVIA* ssp. (*Salvia hypoleuca, salvia leriifolia and salvia limbata*) using molecular and phytochemical markers. Ph.D. student, Kharazmi University, Taali, 2023.

39. Trainee: Ms. Mahin Rousta introduced from the Agricultural and Natural Resources Engineering Organization of IRANfor 750 hours. Year 1398.

40. Trainee: Ms. Zeynab Yoosefi introduced from the Agricultural and Natural Resources Engineering Organization of IRANfor 750 hours. Year 1398.

41.

Research projects implemented by S.M. Hesamzadeh Hejazi as a responsible and coordinator:

1. Evaluation of Quantity, Quality and Cytological Traits of some Rangeland Plants of the Chenopodiaceae Family (Atriplex,Eurotia, Kochia & Salsola). Execution time: 2000-2010. CODE NO: 78-0310890908-07.

2. National project of cytogenetic study of the existing Legumes(Fabaceae) in the Natural Resources Gene Bank of Iran. Execution time: 1996-2007. CODE NO: 74-0310817100-14.

3. Study of Onobrychis species of East Azarbaijan Province in terms of agronomic traits and ploidy levels. Execution time: 2002-2006, CODE NO:79-0310801909-04.

4. Effect of salinity on germination of seedlings (Medicago spp., Onobrychis spp., Trifolium spp.) Execution time: 1995-1996.

5. National project of Cytogenetic Studies Of Grasses (Poaceae) and Legumes (Fabaceae) Collected In Gene Bank by Using Image Analysis system (5-year, Execution time: 2004-2009). CODE NO: 0-100-170000-11-0000-84055.

6. Investigation of genetic and cytogenetic variation of different species of *Thymus* genus in Iran. Execution time: 2007-2012. Code NO: 14-09-09-8601-86022.

7. Study of gender variation in various red Alga populations in isomorphic generations in Persian Gulf waters and Oman. Execution time: 2013- 2015.

8. Cytogenetic studies of different populations of *Buxus hyrcana* Pojark. species in Iran. Execution time: 2014-2017. CODE NO: 14-09-09-9354-93006

9. Investigation of genetic diversity among and within populations of some important medicinal plants and populations in Lamiaceae Family using molecular markers.(Zhumeria majdae, Salvia spp. Dracocephalum spp.) Execution time: 2013-2018. CODE NO: 2-09-09-92106.

10. Investigation of genetic relationship between selected plants of seed orchards Moringa peregrina through molecular markers. Execution time: 2018-2021. CODE NO: 124-09-09-001-09553-970004.

11. Karyological studies in some important medicinal plants of Lamiaceae family: (Zhumeria majdae; Slavia spp.; Dracocephalum spp.). Execution time: 2012-2016, CODE NO: 2-09-09-91152
.

12. Cytogenetic studies in Satureja species of Iran. Execution time: 2018-2021, CODE NO: 12-09-09-071-09554-960433.

13. Chromosomal study of different populations and clones of poplars (Populus spp) found in Arboretum of Alborz station in Karaj. Execution time: 2020-2024, CODE NO: 2-09-09-052-990902.

Research projects implemented by S.M. Hesamzadeh Hejazi as a Colleague:

1. Investigating the methods of sexual proliferation and maintenance – Seed germination of Taxus, Sorbus and Ulmus genera.
2. Investigation of Genetic diversity using *in vitro* methods in *Rosa damascene* plants.
3. Cytogenetic Study of *Rosa damascene* from different regions of the country.
4. Evaluation of resistance to surface white disease on different *Onobrychis* populations
5. Morphological and molecular evaluation of inheritance of *Onobrychis* species to breeding and introduce suitable cultivars for Rainfed areas and low efficiency regions.
6. - Poplar lace bug (*Monosteira unicostata*) damage on different *poplar* species and clones in Karaj
7. Cytogenic study on Sanguisorba ssp. available in the genebank of RIFR.
8. Collection, identification, protection, resuscitation and evaluation of quantitative, qualitative, cytology and genetic properties of rangeland and forest plants in Iran.

9. Breeding and genetic studies of existing masses of three important species of POA and examination of the possibility of crosses between species in order to achieve existing potentials in them.

10. 11- investigation of germination seeds and seed dormancy of three species of forest plants (*Tillia. plathyphylus, Sorbus. aucuparia, Acer. monospessulanum*)
11. Application of metabolomics in response to drought stress in 5 species of *Satureja.*

12. Evaluation of phytochemical diversity of some valuable medicinal plants from Lamiaceae family (*Dracocephalum spp. , Salvia spp. , Zhumeria majdae*) in different habitats.

13. Study of pests and diseases of different species (*Salix* spp.) in Tehran province.
14. Phenotypic and Genotypic Diversity of Boxwood Blight Causal Agent Populations in Iran.

15. Epidemiology and pathogenic mechanism of Boxwood Blight in laboratory and greenhouses .

16. Asexual Regeneration of *Zhumeria majdae* L. By Bud Culture for cultivation and development.

17. Regeneration of *Tecomella undulata* in order to proliferate and development.

18. Investigation of the variation in the genetic structure of *Quercus castaneaefolia* in the northern forests .Phase (Second).

19. Compilation of Flora of Algae Families of the Gulf and Oman Sea by combining classical taxonomy studies and modern taxonomy.

20. Compilation of Flora of Algae Families Seawaters The coast of Hormozgan province by combining classical taxonomy studies and modern taxonomy.95-99

21. Assess and compare the genetic diversity of Fagus orientalis in managed forests (in the form of forestry design) and protected (not interfered) In the Haft khal2 Neka.

22. Evaluation Of Anti-Inflammatory Effects of Methanolic Extract Of Persian Gulf Sea Cucumber (Holothuria Leucospilota and Holothuria parva) On Rats (Rattus Rattus)

Absorb funds and accreditation in particular research project:

1. Investigating the deputation and protection of the genetic reserves of *Buxus hyrcana* in order to rescue and save the *Buxus hyrcana* in the northern forests of Iran ... 6300 million Rials.

Participate in training workshops in 2021-2022:

1. Cold Plasma technology in seed Science and technology, 1th international and 5th national seed science and technology conferences of Iran, Razi University, 3-Feb-2022.
2. Meta- Analysis in agricultureal scinceces with emphasis on seed science, Razi University, 7-Jan-2022.
3. Crop value and consumption test to assess the suitability of the cultivar to enter the national list of plant cultivars. Razi University, 22-Dec-2021.
4. Introduction to VideometerLab device and cases of using multispectral image analysis technique in seed quality assessment. Razi University, 26-Dec-2021.
5. Vegetative seed breeding industry. Razi University, 11-Dec-2021.
6. Analysis of agricultural Design using "R" software. Razi University, 5-7-Dec-2021.
7. Artificial seed production technology, Razi University, 25-Nov-2021.
8. Principals of technical tests of differentiation, uniformity and stability in order to register or introduce a cultivar. Razi University, Razi University, 13-Nov-2021.
9. Ethics and safety in genetic testing, Iranian Genetic Society, 27-Dec-2021.