

Curriculum vitae

First name: **Saeid**
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Address

Saeid Mirzaei

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Qualifications

Ph.D.: Plant Molecular Genetics, University of Queensland November 2013.

PhD thesis title:

“**Functional characterization of the LRR receptor kinase *GmCLVIA* of soybean**”

M.Sc.: Agricultural biotechnology, Isfahan University of Technology , Isfahan, Iran, Feb 2003.

B.Sc.: Agricultural Engineering – Horticulture, Valiasr University, Rafsanjan, Iran, Sep 1999.

Research Interests

Legume nodulation and nitrogen fixation; Soybean, *Trigonella foenum-graecum*

Plant physiology, signaling and development

Plant functional genomics, Transcriptomics, RNAseq; Genetics

Symbiosis

Genetic diversity, Molecular markers

Current Projects

- Biological control of *Macrophomina phaseolina* and *Phytophthora sojae* the causal agents of root and crown rot of soybean using rhizosphere microorganisms
- Study of elicitors effect on diosgenin production by fenugreek in vitro culture (*Trigonella foenum-graecum l.*)

- Biochemical and genetic diversity of Fenugreek populations using biochemical, morphological and SRAP markers
- Transcriptome evaluation of bread wheat plastome under salinity stress using RNAseq (Ended)
- Investigation of nitrate and phosphate treatment effects on root growth and CLE gene in Soybean (*Glycine max*) (Ended)

Workshops attended

- 1- **The International Bioinformatics** workshop. Biochemistry and Biophysics Institute, Tehran, Iran, 2004.
- 2- **FISH (Fluorescent in situ hybridization) Practical** workshop. Islamic Azad University, Mashhad, Iran, 2004.
- 3- 3rd International Workshop on “**Application of Advanced Molecular Methods for Diagnosis of Human Genetic Diseases**”. National Research Center for Genetic Engineering and Biotechnology, Tehran, Iran, 2005.
- 4- “**Research Methods in Basic Science and engineering**”. Shahid Bahonar University. Kerman, Iran, 2003.
- 5- **The use of Molecular Markers in Agriculture. (As the teaching assistant)**. Isfahan University of Technology. Isfahan Iran, 2002.
- 6- **An Introduction to Biotechnology** (DNA Extraction, PCR and Electrophoresis Application). (As the teaching assistant). International Center for Science, High Technology & Environmental Sciences, Kerman, Iran, 2005.
- 7- Workshop on “**Research Method in Biological Sciences**”. International Center for Science, High Technology & Environmental Sciences, Kerman, Iran, 2005.
- 8- Workshop on “**Application of Biochemical markers (Isoenzymes) in Plant Biotechnology**”, International Centre for Science, High Technology & Environmental Sciences, Kerman, Iran, 2006.
- 9- **PCR Primer Design** Workshop, International Centre for Science, High Technology & Environmental Sciences, Kerman, Iran, 2007.
- 10- Workshop on “**Real Time PCR**”. Kerman University of Medical Sciences, Kerman, 2008.
- 11- Workshop on “**Bone Marrow Mesenchymal stem cell isolation & culture**”. Kerman University of Medical Sciences, Kerman, 2008.
- 12- **Research commercialization workshop**, UniQuest, The University of Queensland, 2010.
- 13- **Basics of Transcriptome Assembly Non-model de novo transcriptomics**, University of Queensland, July 5-6, 2012.

Referees

Prof. Peter Gresshoff, Centre for Integrative Legume Research, School of Agriculture and Food Sciences, The University of Queensland, St Lucia, Brisbane QLD 4072; email: p.gresshoff@uq.edu.au

Prof. Jacqueline Batley, Department of Plant Biology, University of Western Australia, Crawley WA 6009, Australia; email: jacqueline.batley@uwa.edu.au

Prof. Bahram sharifnabi, Department of Agricultural Biotechnology, College of Agriculture, Isfahan University of Technology, Isfahan, Iran; email: sharifna@cc.iut.ac.ir

Publications

- 1- Shamsi Gushki, R., Lashkari, M., **Mirzaei S.** (2018) Identification, sexual dimorphism, and allometric effects of three psyllid species of the genus *Psyllopsis* by geometric morphometric analysis (Hemiptera, Liviidae). *ZooKeys* 737: 57–73. doi: 10.3897/zookeys.737.11560
- 2- Sadeghi, B., **Mirzaei, S.**, (2018) First report of *Alternaria* leaf spot caused by *Alternaria chlamydosporigena* on tomato in Iran. *Plant disease* 102(6): 1175. DOI: 10.1094/PDIS-09-17-1420-PDN
- 3- **Mirzaei, S.**, Mansouri, M., Mohammadi-Nejad, G., and Sablok, G. (2017) Comparative assessment of chloroplast transcriptional responses highlights conserved and unique patterns across Triticeae members under salt stress. *Photosynthesis Research* 136(3):357-369. doi: 10.1007/s11120-017-0469-5.
- 4- **Mirzaei S.**, Batley, J., Meksem, K., Ferguson, B.J. and Gresshoff, P.M. (2017) Neodiversification of homeologous *CLAVATA1*-like receptor kinase genes in soybean leads to distinct developmental outcomes. *Scientific reports* 7: 8878; DOI: 10.1038/s41598-017-08252-y.
- 5- **Mirzaei, S.**, Rahimi, M., Tajabadipour, A., Bahar, M. and Sharifnabi, B. (2017) Regression association analysis of yield related traits with molecular markers in pistachio. *Journal of horticulture science*, 31(1):80-98. DOI: [10.22067/jhorts4.v0i0.43835](https://doi.org/10.22067/jhorts4.v0i0.43835). (In Persian)
- 6- **Mirzaei, S.** (2018) Transcriptome profiling of shoot and root tip of soybean. *Journal of Cellular and Molecular Researches*, 30(4): 499-511. (In Persian)
- 7- Bagherzadeh, E., Kavosi, H.R., Khezri, M. and **Mirzaei, S.** (2016) Study of protein expression pattern and some morphological and biochemical characteristics of Badami-Sefid and Badami-Zarand pistachio rootstocks under

- salt stress. *Journal of Agricultural Biotechnology*, Period 8, No. 3, Autumn 95. (In Persian)
- 8- Tadayon, R., **Mirzaei, S.**, Rahimi, M. and Salari, H. (2016). Evaluation the effect of silver nanoparticles on shelf life of *Citrus Sinensis*. *Journal of Plant Researches*, 29(2):1-10.
 - 9- Gresshoff, P.M., Hayashi, S. Biswas, B., **Mirzaei, S.**, Indrasumunar, A., Reid, D., Samuel, S. Tollenaere, A., Hameren, V., Hastwell, A., Scott, P., and Ferguson, B., (2015) The value of biodiversity in legume symbiotic nitrogen fixation and nodulation for biofuel and food production. *Journal of Plant Physiology*, 172: 128-136.
 - 10- **Mirzaei, S.**, Shahsavand Hasani, H, Rameshi, N., Ghasemkhani, M., Ahmadi-Afzadi, M., (2014) Cytogenetic study and optimization of GISH method in *Pistacia* spp. *Journal of Agricultural Biotechnology*. Period 6, No. 3, Autumn 93. (In Persian)
 - 11- **Mirzaei, S.**, Batley, J., Ferguson, B.J., Gresshoff, P.M. (2014) Transcriptome Profiling of the Shoot and Root Tips of *S562L*, a Soybean *GmCLAVATA1A* Mutant. *Atlas Journal of Biology 3 (1): 183–205*.
 - 12- Dehghan Noudeh, G., Khazaeli, P., **Mirzaei, S.**, Shariffifar, F. and Nasrollahosaiani, S. (2009) Determination of the Toxicity Effect of Sorbitan Esters Surfactants Group on Biological Membrane. *Journal of Biological Sciences* 9 (5): 423-430.
 - 13- Mozafari, H., Kalantari, K. M., OLIA'IE, M. S., Torkzadeh, M., Salari, H. and **Mirzaei, S.** (2008) Role of Calcium in Increasing Tolerance of *Descurainia sophia* to Salt Stress. *Journal of Agriculture & Social Sciences* 4(2): 53-58.
 - 14- Javanshah, A., Tajabadipour, A. and **Mirzaei, S.** (2007) Identification and introducing a new phenotype (Siah Barg) *pistacia vera* L. with shiny blackish green leaves. *International Journal of Agriculture and Biology*, 9 (2): 307-310.
 - 15- **Mirzaei, S.**, Bahar, M. and Sharifnabi, B. (2006) A phylogenetic study of Iranian pistachio (*Pistacia vera*) based on RAPD markers. *Acta Horticulturae*, 726: 39-43.

Conference Proceedings

- 1- Saeid Mohammadi, **Saeid Mirzaei** and Mohammad Javad Arvin (2018) Culture medium optimization in Fenugreek (*Trigonella Foenum-graecum* L.) under *in vitro* condition. The 2nd National Conference of Novel Finding in Food Industries & Healthy Nutrition, Tehran, Iran.
- 2- Saeid Mohammadi, **Saeid Mirzaei** and Mohammad Javad Arvin (2018) Comparison of 2, 4-D Hormone effect in combination with BAP on Diosgenin content in Callus culture of Fenugreek. The 2nd National Conference of Novel Finding in Food Industries & Healthy Nutrition, Tehran, Iran.
- 3- Ebrahim Tajaddinizadeh, **Saeid Mirzaei**, Mahmoud Maleki and Mehdi Rahimi (2017) Study of genetic diversity of Iranian Fenugreek populations using agronomic traits. 2th National Conference of New Achievements in Agronomy and Plant Breeding, Damavand, Iran
- 4- Ebrahim Tajaddinizadeh, **Saeid Mirzaei**, Mahmoud Maleki and Mehdi Rahimi (2017) Cluster analysis of Iranian Fenugreek populations using SRAP markers. 2th National Conference of New Achievements in Agronomy and Plant Breeding, Damavand, Iran
- 5- Fateme Sharif, **Saeid Mirzaei**, Maryam Abdoli Nasab and Hossein Mozafari (2017) Gene expression analysis of a putative ortholog CLE1 in soybean under nitrogen treatments. 2nd International & 10th National Biotechnology congress, Karaj, Iran.
- 6- Mehdi Montazeri Shatoori, **Saeid Mirzaei**, Maryam Abdoli Nasab, Ebrahim Tajaddini and Fateme Sharif (2017) Evaluation of Nitrate effects on root nodulation in Fenugreek. 2th National Conference of New Achievements in Agronomy and Plant Breeding, Damavand, Iran
- 7- Nahid Amiri, Amin Baghizadeh and **Saeid Mirzaei** (2017) Evaluating the genetic diversity among 17 Chicory ecotypes using RAPD marker in Iran. 2nd International & 10th National Biotechnology congress, Karaj, Iran.
- 8- Fateme Sharif, **Saeid Mirzaei**, Maryam Abdoli Nasab and Hossein Mozafari (2017) Biochemical effects of nitrogen and phosphate treatments in soybean cultivars, Bragg and super nodulating mutant. 1st International Conference on Modern technologies in Sciences, Amol, Iran.
- 9- Nadia Bahremand and **Saeid Mirzaei** (2017) Effect of nano iron chelate and nutrient Treatments on chlorophyll and carotenoids of Fenugreek plant (*Trigonella foenum-graecum* L.). 1nd International & 10th National Horticultural Science Congress, Tehran, Iran.
- 10- Sara Jabalbarez, Mahmoud maleki, **Saeid Mirzaei** and Hakimeh Olomi (2017) Investigation of salt stress on some biochemical traits in wheat population of *Triticum boeoticum*. 4th Congress of Development and Extension of Agricultural, Natural resources and environmental Sciences. Tehran, Iran.
- 11- Nahid Amiri, Amin Baghizadeh and **Saeid Mirzaei** (2017) Investigation and

comparison of some biochemical traits among 17 Chicory ecotypes. 2nd International & 10th National Biotechnology congress, Karaj, Iran.

- 12- Fateme Sharif, **Saeid Mirzaei**, Maryam Abdoli Nasab and Hossein Mozafari (2017) Effects of nitrogen and phosphorus treatments on nitrogen fixation and photosynthetic pigment content in soybean. 1st International Conference on Modern technologies in Sciences, Amol, Iran
- 13- Zainab Pachnameh, Maryam Abdoli Nasab, **Saeid Mirzaei** and Hossein Mozafari (2017) Investigated the Activity of Phenylalanine Ammonylase (PAL) Enzyme in Basil's Medicinal Product under the Effects of Salicylic Acid and Brassinosteroids. 2nd International & 10th National Biotechnology congress, Karaj, Iran.
- 14- Sara Jabalbarez, Mahmoud maleki, **Saeid Mirzaei** and Hakimeh Olomi (2017) Investigation of salt stress effect on some growth characteristics of wheat (*Triticum boeoticum*). 4th Congress of Development and Extension of Agricultural, Natural resources and environmental Sciences. Tehran, Iran.
- 15- Sima Khalilpour, Mahmoud Maleki, **Saeid Mirzaei** and Mehdi Soltani (2016) Evaluation of morphologic changes durum wheat genotypes under salt stress. 3rd National Conference on Life Sciences. Tehran, Iran.
- 16- Negin Azizkhani, **Saeid Mirzaei** and Masoud Torkzadeh (2016) Bioinformatic analysis on the Ribonuclease T2 genes of four legumes species. 2nd International & 14th Iranian Genetics congress, Tehran, Iran.
- 17- Nasrin Nategheyani, **Saeid Mirzaei**, Elham Rezvannejad and Mohammadreza Lashkari (2016) Anti-fungal evaluation of some plant extracts on *Paecilomyces* spp. the causal agent of Pistachio dieback. 2nd International & 14th National Iranian Crop Science Congress, Gilan, Iran.
- 18- Mehrnaz Mashayekhi, **Saeid Mirzaei**, Mahmood Maleki and Hossein Mozafari (2016) Biochemical and physiological effects of nitrogen treatment in soybean cultivar, Bragg, and mutant super nodule (NTS). 2nd International & 14th National Iranian Crop Science Congress, Gilan, Iran.
- 19- Iraj Tavassolian and **Saeid Mirzaei** (2016) Application of CRISPR-Cas9 genome editing tool in plant breeding. 1st Congress on Chemical Biotechnology, Tehran, Iran.
- 20- Nasrin Nategheyani, **Saeid Mirzaei**, Elham Rezvannejad and Mohammadreza Lashkari (2016) The antifungal effect of thyme and chamomile extracts on fungus *Phytophthora* (*Phytophthora* spp). 19th National and 7th International Congress of Biology, Tabriz, Iran.
- 21- Mehrnaz Mashayekhi, **Saeid Mirzaei**, Mahmood Maleki and Hossein Mozafari (2016) Effects of nitrogen treatments on growth and nitrogen fixation in both wild and mutant soybean varieties. 19th National and 7th International Congress of Biology, Tabriz, Iran.

- 22- Shima Alahtavakoly, **Saeid Mirzaei** and Reza Tedayon (2015) The effect of herbal compounds and silver nanoparticles on postharvest life of *Citrus limon* cv. Lisbon. 2nd conference on New Findings in Environment and Agricultural Ecosystems. Tehran, Iran.
- 23- Amene Estakhri, **Saeid Mirzaei** (2015) Physiological and molecular mechanisms of tolerance to salinity and drought stresses. 2nd National symposium on Iranian Date, Bam, Iran.
- 24- Iraj Tavassolian and **Saeid Mirzaei** (2015) Production improvement of agricultural products under irrigation with saline water. 13th National Congress Irrigation & Evaporation Reduction, Kerman, Iran.
- 25- Reza Tedayon, **Saeid Mirzaei** and Shima Alahtavakoly (2015) Increased survival of several varieties of oranges (Local, Valencia and Blood) with the use of silver nanoparticles. 2nd conference on New Findings in Environment and Agricultural Ecosystems. Tehran, Iran.
- 26- Reza Tedayon, **Saeid Mirzaei** and Shima Alahtavakoly (2014) Qualitative characteristics evaluation of orange cultivars under the influence of different levels of silver nanoparticles. 1st conference on New Findings in Environment and Agricultural Ecosystems. Tehran, Iran.
- 27- **Saeid Mirzaei** and Peter M Gresshoff (2014) Transcriptome study of the root tip of soybean *GmCLAVATA1A* mutant. First international & 13th Iranian crop science congress, 3rd seed science and technology conference, Tehran, Iran.
- 28- **Saeid Mirzaei**, Mehdi Rahimi and Ali Tajabadipur (2014) Identification of molecular markers associated with phenological traits of *pistachio*. 1st Iran's Pistachio Conference, Keram, Iran .
- 29- Mehdi Rahimi, **Saeid Mirzaei** and Ali Tajabadipur (2014) Relationship between the split pistachio weight and other agronomic traits in pistachio genotypes. 1st Iran's Pistachio Conference, Keram, Iran.
- 30- Mehdi Rahimi, **Saeid Mirzaei** and Ali Tajabadipur (2014) Grouping and identification of better genotypes of pistachio using factor analysis . 1st Iran's Pistachio Conference, Keram, Iran.
- 31- Shima Alahtavakoly, **Saeid Mirzaei** and Reza Tedayon (2014) The effect of plant essential oils and silver nanoparticles on qualitative characteristics of *Citrus limon* cv. Lisbon. The 2nd national conference on sustainable agriculture and natural resources. Tehran, Iran.
- 32- **Saeid Mirzaei**, Brett J. Ferguson, Jacqueline Batley and Peter M. Gresshoff (2012) Functional Characterisation of the LRR Receptor Kinase *GmCLVIA* Gene of Soybean. ComBio, Adelaide, South Australia.
- 33- **Saeid Mirzaei**, Brett J. Ferguson, Khalid Meksem, Jacqueline Batley and Peter M. Gresshoff (2012) Neodiversification in the paleotetraploid soybean genome: GmCLAVATA 1A, a GmNARK paralogue involved in the control of stem nodal

identity but not root nodulation. Plant & Animal Genomes XX San Diego, CA, USA.

- 34- Peter M. Gresshoff, Dugald Reid, Yu-Hsiang Lin, Satomi Hayashi, Dongxue Li, Rob Capon, Julia Kehr, **Saeid Mirzaei**, Jacqui Batley, and Brett Ferguson (2012) Molecular physiology of the genetic regulation of nodulation and symbiotic nitrogen fixation in legumes. The third International Symposium on Genomics and Crop Genetic Improvement, Wuhan, China.
- 35- Peter M. Gresshoff, Dugald E. Reid, Yu-Hsiang Lin, Satomi Hayashi, **Saeid Mirzaei**, Dongxu Li, Alina Tollenaere, Meng-Han Lin, Jacqueline Batley, Khalid Meksem and Brett J. Ferguson (2012) Genetic Components of Developmental Signalling for Nodulation and Nodal Identity Control in Soybean. Plant & Animal Genomes XX San Diego, CA, USA.
- 36- Peter M. Gresshoff, Dugald E. Reid, Satomi Hayashi, **Saeid Mirzaei** and Brett J. Ferguson (2012) Duplication Allows Divergent Evolutionary Fates of Gene Function in Legumes. Plant & Animal Genomes XX San Diego, CA, USA.
- 37- **Saeid Mirzaei**, Jacqueline Batley, Brett J. Ferguson and Peter M. Gresshoff (2012) Characterisation of a *GmCLVIA* mutant in soybean under short photoperiod and cold conditions. 3rd Iranian PhD Students' Conference in Australia and New Zealand, Brisbane, Australia.
- 38- **Saeid Mirzaei**, Jacqueline Batley, Brett J. Ferguson, and Peter M. Gresshoff (2011) Paralogous functions of two *CLAVATAI*-like nodulation genes in soybean. Plant Biology 2011, Minneapolis, Minnesota, USA.
- 39- Brett J. Ferguson, Satomi Hayashi, Dugald E. Reid, Yu-Hsiang Lin, Meng-Han Lin, **Saeid Mirzaei**, Alina Tollenaere, Dong-Xue Li. and Peter M. Gresshoff (2011) Novel factors required for legume nodule development and autoregulation. ComBio, Cairns, Queensland, Australia.
- 40- **Saeid Mirzaei**, Jacqueline Batley, Brett J. Ferguson and Peter M. Gresshoff (2011) New insights on *GmCLAVATA1a*, a paralogue of *GmNARK*, in soybean (*Glycine max* L.). 2nd Iranian PhD Students' Conference in Australia and New Zealand, Melbourne, Australia.
- 41- **Saeid Mirzaei**, Jacqueline Batley and Peter M. Gresshoff (2010) The Apparent Function of an Apparent Stem-Cell-Control Gene *GmCLVIA* in Soybean. 1st Iranian PhD Students' Conference in Australia and New Zealand, Sydney, Australia.
- 42- Peter M. Gresshoff, Brett J. Ferguson, Dugald E. Reid, Yu-Hsiang Lin, Meng-Han Lin, Satomi Hayashi, Khalid Meksem, **Saeid Mirzaei**, Dong-Xue Li, Shiming, Liu, Ning Chen, Jacqueline Batley, and Arief Indrasumunar (2010) Gene discovery, functional genomics and gene transfer for increased nodulation and nitrogen fixation. Plant & Animal Genomes XVIII San Diego, CA, USA.

- 43- **Saeid Mirzaei**, Najme Rameshi and Hossein Shahsevand-Hasani (2008) Study of chromosome numbers of Pistachio species located in Iran. The 2th National Congress of Cellular and Molecular Biology. Kerman, Iran.
- 44- Masoud Ahmadi-afzadi, **Saeid Mirzaei**, Badraldin Ebrahim Sayed Tabatabaei, Masoud Bahar, Seyed Abolghasem Mohammadi and Ali Tajabadi (2007) Analysis of genetic diversity among some species of pistachio (*Pistacia* sp L.) based on AFLP and RAPD markers. The 5th national biotechnology congress of Iran, Tehran, Iran.
- 45- **Saeid Mirzaei**, Masoud Bahar, Bahram Sharifnabi and Ali Tajabadi (2005) Analysis of genetic diversity of Iranian pistachio (*P. vera*) based on RAPD and morphological markers. XVII International botanical congress, Vienna, Austria.
- 46- **Saeid Mirzaei**, Masoud Bahar and Bahram sharifnabi (2005) A phylogenetic study of Iranian wild pistachio species and some cultivars using RAPD markers. IV International Symposium on Pistachio& Almonds, Tehran- Iran.
- 47- **Saeid Mirzaei**, Masoud Bahar and Bahram sharifnabi (2004) Genetic diversity of Iranian Pistachio cultivars based on RAPD markers. The 3rd National Biotechnology Congress, Mashhad, Iran.