

## Curriculum vitae



**Mokhtar Jalali Javaran**

Associated Professor of Genetic Engineering and Agricultural Biotechnology

*Department of Plant breeding and Biotechnology, Tarbiat Modares  
University, Tehran, Iran. Postal code: 14115-115*

Phone: +982182882014, Fax: +982182882014, E-mail: m\_jalali@modares.ac.ir

### **Education**

- B.S. Agronomy and Plant breeding, University of Tehran, Iran, 1988
- M.S. Plant breeding, Tarbiat Modares University, Iran, 1991
- Ph.D. Genetic engineering and Biotechnology, University of London, United Kingdom, 1999

### **Research Interests**

- Molecular farming and production of recombinant proteins in plants
- Cloning and gene transfer to plants
- Analysis and conservation of country's genetic resources

### **Research Accomplishments**

- Direct responsibility in implementation of more than 7 research projects
- Implementation of several projects in molecular farming

- Collecting and evaluating of genetic diversity of a part of genetic resources
- Production of human recombinant proteins (such as tPA, proinsulin, human gamma interferon and etc.) in plants, 2002-current
- Publishing more than 105 scientific-research papers in national and international valid journals
- One of the managers of the international master plan of plant, livestock and aquatics genetic resources

### **Scientific Services at the National level**

- Contribution to the promotion of the country's scientific capabilities by training more than 60 graduated Ph.D. and M.S. students as supervisor or advisor
- Active participation in the audit implementation of genetic science, January 2012
- Main member of the Iranian Genetics Society founding board
- Establishing genetic engineering and molecular genetics laboratories, department of plant breeding, Tarbiat Modares University
- Participation in professional education
- Supervising and advising more than 30 Ph.D. dissertation, and 45 M.S. thesis, 2000-current
- Teaching specialized courses of B.S., M.S. and Ph.D. in plant breeding and biotechnology, 1997-current
- Active participation in implementation of different national and international scientific and research conferences
- Implementation of scientific workshops and professional training courses

### **Membership of Scientific and Professional Societies**

- Representative of scientific societies at National Council of Biosafety, 2012-current
- President of the Iranian Genetics Society for two terms, 2010-2015
- Board member of the Iranian Biotechnology Society (for three terms)
- Board member of the Iranian Plant breeding society (for one term)
- Secretary of the Eighth National Congress of Biotechnology in Iran, 2009
- President of the Twelfth National Congress of Genetics in Iran, 2012
- President of the Thirteenth National, and the First International Congress of Genetics in Iran, 2014

- Member of scientific committee of several national and international conferences for several terms in Iran (biotechnology, genetics, agronomy and plant breeding, biosafety and biology)
- Member of several national and international societies
- Member of the central council of Faculty Union Assembly in Iran for two terms, 2008-2013 (deputy director for one term)
- Chairman of the Iran's Genetics Strategy Development Committee
- Member of the central council of the Agricultural Engineering System Organization of Alborz province, and member of the Specialized Committee of Research, Technology and Education in Tehran
- Member of the founding board of the Tehran's Genetics Foundation, 2014
- Member of the founding board, trustee board and director board of the Tehran's Genetics Foundation, 2014-current

### **National Patents**

- Proinsulin production processes in the strawberry's adventitious roots obtained from *Agrobacterium rhizogenes* inoculation for medical and industrial aims, (approved by country's research organization), 2011
- Elimination of strawberry's seed dormancy in order to germinate using sulfuric acid and oxygen peroxide for pharmaceutical and food industry applications, 2011
- Production and purification of human proinsulin in strawberry fruit in the laboratory in order to study the feasibility of edible insulin, 2012
- tPA recombinant protein production process by means of gene transfer in tobacco, 2008
- Human gamma interferon production in canola seed, 2007
- Production and characterization of snake's krusin tumor specific nanobody detector in plant, 2006
- Production of single domain antibody against MUC1 using gene transfer in tobacco plant, 2006

### **Work Experience and Responsibilities**

- Educational assistant of Tarbiat Modares University, 2014-current
- Educational assistant of faculty of agriculture, Shahed University, 1991-1994

- Member of the educational council and research council of Shahed University, 1991-1994
- Head of the plant breeding department, Tarbiat Modares University, 2000-2002 and 2006-2010
- Educational assistant of faculty of agriculture, Tarbiat Modares University, 2002-2006
- Board member of the Agricultural Engineering System Organization in Alborz province
- Member of the Iranian National Biosafety Council, 2012-current

### **Teaching Experience**

- **B.S.**
  - ❖ General and private plant breeding, faculty of agriculture, Shahed University, 1991-1994
  - ❖ Genetics, faculty of agriculture, Shahed University, 1991-1994
- **M.Sc.**
  - ❖ Complementary genetics, faculty of agriculture, Tarbiat Modares University, 1999-current
  - ❖ Genetic engineering, faculty of agriculture, Tarbiat Modares University, 1999-current
- **Ph.D.**
  - ❖ Molecular Genetics, faculty of agriculture, Tarbiat Modares University, 2000-current
  - ❖ Genetic engineering, faculty of agriculture, Tarbiat Modares University, 2000-current

### **Scientific-Research Journals' Editorial Board Membership**

- Editor of the Journal of Agricultural Biotechnology, 2009-current
- Editorial board member of Journal of Modern Genetics
- Editorial board member of Iranian Journal of Rangelands Forests Plant Breeding and Genetic Research
- Editorial board member of **Crop Journal**
- Editorial board member of Iranian Journal of Field Crop Science

## Publications

- Tavizi, Ashkan, **Mokhtar Jalali Javaran**, Ahmad Moieni, Manijeh Mohammadi-Dehcheshmeh, Mehdi Mohebodini, and Esmaeil Ebrahimie. **"Root and shoot parts of strawberry: factories for production of functional human pro-insulin."** *Molecular biology reports* (2014): 1-11.
- Rahpeyma, Sara-Alsadat, Ahmad Moieni, and **Mokhtar Jalali Javaran**. **"Paclitaxel production is enhanced in suspension-cultured hazel (*Corylus avellana L.*) cells by using a combination of sugar, precursor, and elicitor."** *Engineering in Life Sciences* (2015).
- Nikooei, Mehrnoosh, Yaghoob Fathipour, **Mokhtar Jalali Javaran**, and Mahmoud Soufbaf. **"How Different Genetically Manipulated Brassica Genotypes Affect Life Table Parameters of *Plutella xylostella* (*Lepidoptera: Plutellidae*)."** *Journal of Economic Entomology* 108, no. 2 (2015): 515-524.
- Khatibzadeh, Raheleh, Majid Azizi, and **Mokhtar Jalali Javaran**. **"Health Positive Uses of Genetically Modified Food Crops as a Source of Biopharmaceuticals."** *Int. J. Adv. Biol. Biom. Res* 2, no. 11 (2014): 2810-2818.
- Asgari, Mishaneh, **Mokhtar Jalali Javaran**, Ahmad Moieni, Asad Masoumiasl, and Maryam Abdolinasab. **"PRODUCTION OF HUMAN TISSUE PLASMINOGEN ACTIVATOR (*tPA*) IN *Cucumis sativus*."** *Preparative Biochemistry and Biotechnology* 44, no. 2 (2014): 182-192.
- Latif, Babak, **Mokhtar Jalali Javaran**, Houshang Alizadeh, Hamid Rajabi Memari, and Rasoul Mohammadi. **"Interactions of genotype and plant growth regulators affecting direct shoot regeneration of lettuce (*Lactuca sativa L.*)."** *International Journal of Biosciences (IJB)* 5, no. 1 (2014): 315-322.
- Rezaei, Arsalan, **Mokhtar Jalali-Javaran**, and Maryam AbdoliNasab. **"Homoplasmy stability of transplastomic tobacco plants (*Nicotiana tabacum CV. Xhanti*) containing human tissue-type plasminogen activator (*K2S* form) gene in T1 generation."** *International Journal of Biosciences (IJB)* 4, no. 9 (2014): 116-125.
- Yarbakht, Melina, **Mokhtar Jalali-Javaran**, Maryam Nikkhah, and Mehdi Mohebodini. **"Dicistronic expression of human proinsulin–protein A fusion in tobacco chloroplast."** *Biotechnology and applied biochemistry* (2014).
- Soltanmohammadi, Behnoush, **Mokhtar Jalali-Javaran**, Hamid Rajabi-Memari, and Mehdi Mohebodini. **"Cloning, Transformation and Expression of Proinsulin Gene in Tomato (*Lycopersicum esculentum Mill.*)."** *Jundishapur Journal of Natural Pharmaceutical Products* 9, no. 1 (2014): 9.
- Goojani, Hojjat Ghasemi, **Mokhtar Jalali Javaran**, Jaber Nasiri, Esmaeel Ghasemi Goojani, and Houshang Alizadeh. **"Expression and large-scale production of human tissue plasminogen activator (*t-PA*) in transgenic tobacco plants using different signal peptides."** *Applied biochemistry and biotechnology* 169, no. 6 (2013): 1940-1951.
- Abdoli-Nasab, Maryam, **Mokhtar Jalali-Javaran**, Rosa M. Cusidó, Javier Palazón, Amin Baghizadeh, and Houshang Alizadeh. **"Expression of the truncated tissue**

**plasminogen activator (K2S) gene in tobacco chloroplast.**" *Molecular biology reports* 40, no. 10 (2013): 5749-5758.

- Asgari, M., **M. Jalali javaran**, A. Moieni, and A. Masoumiasl. "**The human tissue-plasminogen activator gene was transformed to cucumber cells.**" *MINERVA BIOTECNOLOGICA* 25, no. 2 (2013): 75-80.
- Ekhveh, Mohammad Javad, Ahmad Moieni, and **Mokhtar Jalali Javaran**. "**The evaluation of response to isolated microspores culture in some Iranian hexaploid wheat (*Triticum aestivum L.*) cultivars.**" *Journal of Agricultural Science* 5, no. 7 (2013): p206.
- Afkar, Soheila, Ghasem Karimzadeh, **Mokhtar Jalali Javaran**, Mozafar Sharifi, and Mehrdad Behmanesh. "**Methyl Jasmonate-Induced Changes in Non-and Antioxidant-Enzymatic Defense in Peppermint (*Mentha piperita*).**" *Journal of Plant Physiology & Breeding* 3, no. 1 (2013): 13-21.
- Afkar, Soheila, Ghasem Karimzadeh, **Mokhtar Jalali-Javaran**, Mozafar Sharifi, and Mehrdad Behmanesh. "**Influence of Methyl Jasmonate on Menthol Production and Gene Expression in Peppermint (*Mentha x piperita L.*).**" *Journal of Medicinal Plants and By-Products* 2, no. 1 (2013): 75-82.
- Dehghani, Hamid, Ehsan Feyzian, **Mokhtar Jalali**, Abdolmajid Rezai, and Fenny Dane. "**Use of GGE biplot methodology for genetic analysis of yield and related traits in melon (*Cucumis melo L.*).**" *Canadian Journal of Plant Science* 92, no. 1 (2012): 77-85.
- Kashani, Kimia, **Mokhtar Jalali Javaran**, Mehdi Mohebodini, Ahmad Moieni, and Maryam Sheikhi Deh Abadi. "**Regeneration and 'Agrobacterium'-mediated transformation of three potato cultivars (*Solanum tuberosum*'cv. *Desiree*, *agria* and *marfona*) by human proinsulin gene.**" *Australian Journal of Crop Science* (2012): 1212.
- Bakooie, Mansoureh, Ebrahim Pourjam, and **Mokhtar Jalali Javaran**. "**Investigation on Iranian *Pratylenchus vulnus* populations by morphological and molecular marker (RAPD-PCR).**" *International Journal of Agricultural Technology* 8, no. 1 (2012): 219-231.
- Khodayari, Samira, Saeid Moharramipour, Karim Kamali, **Mokhtar Jalali Javaran**, and David Renault. "**Effects of acclimation and diapause on the thermal tolerance of the two-spotted spider mite *Tetranychus urticae*.**" *Journal of Thermal Biology* 37, no. 6 (2012): 419-423.
- Tabatabaei, Iman, Leila Pazouki, Mohammad Reza Bihamta, Sadolla Mansoori, **Mokhtar Jalali Javaran**, and Ulo Niinemets. "**Genetic variation among iranian sesame (*Sesamum indicum*'L.) Accessions vis-a-vis exotic genotypes on the basis of morpho-physiological traits and rapd markers.**" *Australian Journal of Crop Science* 5, no. 11 (2011): 1396.
- Mohebodini, Mehdi, **Jalali Javaran Mokhtar**, Freidoon Mahboudi, and Hooshang Alizadeh. "**Effects of genotype, explant age and growth regulators on callus induction and direct shoot regeneration of Lettuce (*Lactuca sativa L.*).**" *Australian Journal of Crop Science* (2011): 92.

- Baghizadeh, Amin, Shahram Noroozi, and **Mokhtar Jalali Javaran**. "Study on genetic diversity of some Iranian Pistachio (*Pistacia vera L.*) cultivars using random amplified polymorphic DNA (RAPD), inter sequence repeat (ISSR) and simple sequence repeat (SSR) markers: A comparative study." *African Journal of Biotechnology* 9, no. 45 (2010): 7632-7640.
- Karimzadeh, Ghasem, Seyed Hossein Mousavi, Maryam Jafarkhani-Kermani, and **Mokhtar Jalali-Javaran**. "Karyological and nuclear DNA variation in Iranian endemic muskmelon (*Cucumis melo var. inodorus*)." *Cytologia* 75, no. 4 (2010): 451-461.
- Bagheri, Khadijeh, **Mokhtar Jalali Javaran**, Fereidoun Mahboudi, Ahmad Moeini, and Alireza Zebarjadi. "Expression of human interferon gamma in *Brassica napus* seeds." *African Journal of Biotechnology* 9, no. 32 (2013): 5066-5072.
- Mirzaghaderi, G., G. Karimzadeh, H. S. Hassani, **M. Jalali-Javaran**, and A. Baghizadeh. "Cytogenetic analysis of hybrids derived from wheat and *Tritipyrum* using conventional staining and genomic in situ hybridization." *Biologia Plantarum* 54, no. 2 (2010): 252-258.
- Masoumiasl, A., **M. Jalali-Javaran**, F. Mahboudi, and H. Alizadeh. "Cloning and expression of tissue plasminogen activator (*t-PA*) gene in tobacco plants." *Scientific research and essays* 5 (2010): 917-922.
- NOROOZI, Shahram, Amin BAGHIZADEH, and **Mokhtar Jalali JAVARAN**. "The genetic diversity of Iranian pistachio (*Pistacia vera L.*) cultivars revealed by ISSR markers." *Biological Diversity and Conservation (BioDiCon)* 2, no. 2 (2009): 50-56.
- Feyzian, E., H. Dehghani, A. M. Rezai, and **M. Jalali Javaran**. "Diallel cross analysis for maturity and yield-related traits in melon (*Cucumis melo L.*)." *Euphytica* 168, no. 2 (2009): 215-223.
- Feyzian, E., H. Dehghani, A. M. Rezai, and **M. Jalali**. "Correlation and sequential path model for some yield-related traits in melon (*Cucumis melo L.*)." *J. Agric. Sci* 11 (2009): 341-353.
- Shobbar, Zahra-Sadat, Rowena Oane, Rico Gamuyao, Justina De Palma, Mohammad Ali Malboobi, Ghasem Karimzadeh, **Mokhtar Jalali Javaran**, and John Bennett. "Abscisic acid regulates gene expression in cortical fiber cells and silica cells of rice shoots." *New Phytologist* 178, no. 1 (2008): 68-79.
- Ismaili, Ahmad, **Mokhtar Jalali-Javaran**, Mohammad J. Rasaei, Fatemeh Rahbarizadeh, Mehdi Forouzandeh-Moghadam, and Hamid Rajabi Memari. "Production and characterization of anti-(mucin *MUC1*) single-domain antibody in tobacco (*Nicotiana tabacum cultivar Xanthi*)." *Biotechnology and applied biochemistry* 47, no. 1 (2007): 11-19.
- Rajabi-Memari, H., **M. Jalali-Javaran**, M. J. Rasaei, F. Rahbarizadeh, M. Forouzandeh-Moghadam, and A. Esmaili. "Expression and characterization of a

**recombinant single-domain monoclonal antibody against *MUC1* mucin in tobacco plants."** *Hybridoma* 25, no. 4 (2006): 209-215.

- Jonoubi, P., A. Mousavi, A. Majd, A. H. Salmanian, **M. Jalali Javaran**, and J. Daneshian. "**Efficient regeneration of *Brassica napus L.* hypocotyls and genetic transformation by *Agrobacterium tumefaciens.*"** *Biologia plantarum* 49, no. 2 (2005): 175-180.
- Karimzadeh, G., R. Darvishzadeh, **M. Jalali-Javaran**, and H. Dehghani. "**Cold-induced accumulation of protein in the leaves of spring and winter barley cultivars."** *Acta Biologica Hungarica* 56, no. 1 (2005): 83-96.
- Abdollahi, Mohammad Reza, Ahmad Moieni, and **Mokhtar Jalali Javaran**. "**Interactive effects of heat shock and culture density on embryo induction in isolated microspores culture of *Brassica napus L.* cv. Global."** *Iranian Journal of Biotechnology* 2, no. 2 (2004): 97-100.
- Karimzadeh, G., K. Bagheri, and **M. Jalali-Javaran**. "**Changes in the Callus Soluble Proteins of Winter and Spring Wheat Cultivars following Cold Treatment."** *Plant tissue culture* 2, no. 13 (2003): 135-144.