

## Curriculum Vitae

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Shahnam Azizi-Dargahlou

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### Education

**Visiting scholar:** 2021-2022, **Subject of research:** Production of recombinant chymosin in *E. coli* cells, **Place of study:** Drug Applied Research Center, University of Medical Sciences, Tabriz, Iran

**Ph.D** in Agricultural Biotechnology, 2017-2022

Dissertation title: "Cloning and Transformation of Bovine Chymosin Gene into Tobacco Genome"

University of Azarbaijan Shahid Madani, Tabriz, Iran

**Master degree** in Agricultural Biotechnology, 2012-2014

Dissertation title: "Assessment of wheat cultivars for callus induction and plant regeneration"

University of Tabriz, Tabriz, Iran

**Bachelor degree** in Plant Protection, 2007-2011

University of Mohaghegh Ardabili, Aradabil, Iran

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### PUBLICATIONS

#### Journals

1. Factors involved in heterologous expression of proteins in *E. coli* host (ISI, JCR, Scopus, IF: 2.8)
2. Agrobacterium tumefaciens-Mediated Plant Transformation: A Review (ISI, JCR, Scopus, IF: 2.6)
3. Biolistic transformation and expression of functional chymosin from a codon-optimized synthetic bovine gene in Tobacco plants (ISI, ISC, IF: 0.089).
4. Identifying properties and functions of unknown protein with AT2G15110.1 accession number in Tair site (ISC, IF: 0.146).
5. Callus induction and plant regeneration from mature embryos of some Iranian wheat (*Triticum aestivum* L.) genotypes (ISI, IF: 0.564).
6. Codon optimization and cloning of Bovine Prochymosin gene for ideal expression in nucleus and chloroplast of *Nicotiana Tabacum* (ISC).
7. Antimicrobial peptides and their heterologous production in plant systems (ISC).
8. miRNAs and their therapeutic and biomarker properties (ISC Master list)

#### Conferences

1. The effect of different combinations of hormones on shooting potential of Kaskogen cultivar (*Triticum aestivum*), 2016, 2<sup>nd</sup> International and 14<sup>th</sup> National Iranian Crop Science Congress.

2. Explants sterilizing in plant tissue culture by new method of Acid-Base, 2016, 2<sup>nd</sup> International and 14<sup>th</sup> National Iranian Crop Science Congress.
  3. Effect of genotype on callus induction and plant regeneration from mature embryos of wheat (*Triticum aestivum*), 2014, 1<sup>st</sup> International and 13<sup>th</sup> Iranian Crop Science Congress.
  4. Decontamination of plant tissue culture media by chemical treatment, 2019, 3<sup>rd</sup> International and 11<sup>th</sup> National Biotechnology Congress of Islamic Republic of Iran.
  5. The effect of 2,4-D pretreatment and silver nitrate on the direct regeneration of rapeseed, 2014, National Conference on Agricultural Science and Technologies.
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## **Presentations**

### **My presentations in [www.slideshare.net](http://www.slideshare.net) platform**

1. Common cloning technique (2321 views).
  2. Chloroplast transformation (12567 views)
  3. Current approaches toward production of secondary plant metabolites (2203 views)
  4. Genome editing tools (1543 views).
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## **RESEARCH INTERESTS**

Production of recombinant proteins in different hosts- Plant tissue culture- Analysis of seed dormancy and its application in the production of drought-resistant plants - Gene knock-out, knock-down, and knock-in to assess gene functions- Introduction of inducible promoter into the chloroplast genome to circumvent metabolic burden issue which is observed in the strong constitutive promoters - Application of viroids in gene transfer and disease treatment - Plastome engineering - Production of transgenic plants resistance and tolerance to biotic and abiotic stress- Production of genetically edited organisms. In-vitro plant secondary metabolite production by means of *A. rhizogenes* as well as elicitors- mRNA, multi-epitope, and recombinant-based vaccine designing and production- Recombinant antimicrobial peptides production- Aging control pathway analysis in plants especially assessment of the relationship between flowering stage and aging with OMICs analysis in *Arabidopsis thaliana*- miRNAs affect in plant defense system

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## **Skills**

Agrobacterium-mediated transformation, Biolistic transformation, Plant tissue culture, Identification of transgenic plants, PCR, RT-PCR, SDS-PAGE, Southern blot, DNA and RNA electrophoresis, DNA extraction, RNA extraction, Plasmid extraction, Primer designing, Cloning, Genetic engineering, Codon optimization, Heat-shock and electroporation competent cell preparation, Recombinant protein production in *E. coli*, and so on.

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## **LANGUAGES**

Persian and Azerbaijani: Fluent  
English: Proficient  
Turkish: Good

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## **HONORS AND AWARDS**

- Receiving visiting student grant

- Receiving financial support from Biotechnology Development Council for production of recombinant chymosin in plants
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