

## *Curriculum Vitae*

**Name:** Mahdi Rahaie

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### **Position**

### **Education**

**Ph.D. in Biotechnology**

### **Research Areas**

- Biosensing and biodetection by bio & nanobio tools and biosensors, specially for human disease prognosis such as Cancer, Alzheimer, MS
- Molecular Biotechnology and Genetic engineering in plant and Microorganisms
- Gene expression analysis in transcript level, such as investigation of cell & organism response to drug & stimulants
- New Nutraceutical production for therapy objectives with emphasis on Natural material

### **Publications**

#### *Papers*

#### **Nano works**

1. Mansourian N., **M. Rahaie\*** and M. Hosseini. 2017. A Nanobiosensor based on fluorescent DNA-hosted silver nanocluster and HCR amplification for detection of MicroRNA involved in progression of Multiple Sclerosis. **Journal of Fluorescence**, DOI 10.1007/s10895-017-2105-3.
2. Azimzadeh M., **M. Rahaie\***, N. Nasirizadeh, M. Daneshpour and H. Naderi-Manesh. 2017. Electrochemical miRNA Biosensors: The Benefits of Nanotechnology. **Nanomedicine Research Journal**, 3:158-171.
3. Delkhahi, S., **M. Rahaie\*** and F. Rahimi. 2016. Design and Fabrication a Gold nanoparticle-DNA based Nanobiosensor for detection of microRNA involved in Alzheimer's disease. **Journal of Fluorescence**, 27 (2): 603–610.

4. Shokri, E., M. Hosseini, F. Faridbod and **M. Rahaie**. 2016. Rapid pre-symptomatic recognition of Tristeza viral RNA by novel fluorescent self-dimerized DNA-silver nanocluster Probe. **RSC Advances**, **6**: 99437-99443.
5. Jafari, Y., H. Sabahi, and **M. Rahaie**. 2016. Stability and loading properties of curcumin encapsulated in *chlorella vulgaris*. **Food Chemistry**, 211(1): 700-706.
6. Shokri, E., M. Hosseini, F. Faridbod, and **M. Rahaie**. 2016. Synthesis and Assessment of DNA/Silver Nanoclusters Probes for Optimal and Selective Detection of Tristeza Virus Mild Strains. **Journal of Fluorescence**, 26(5): 1795-1803.
7. Mokhtari, M., **Rahaie\* M.**, Arjmand M., Nikfarjam, A., 2016. Detection of biomarkers by gold nanoparticles. *New Cellular and Molecular Biotechnology Journal*, 6(22):29-34.
8. Azimzadeh M., **M. Rahaie\***, N. Nasirizadeh\*, K. Ashtari, H. Naderi-Manesh\*. 2015. An electrochemical nanobiosensor for plasma miRNA-155, based on graphene oxide and gold nanorod, for early detection of breast cancer. **Biosensors and Bioelectronics**, 77: 99-106.
9. Azimzadeh M., **M. Rahaie\***, N. Nasirizadeh\*, Naderi-Manesh\*. 2015. Application of Oracet Blue in a novel and sensitive electrochemical biosensor for detection of microRNA. **Analytical Methods**, 7: 9495-9503.
10. Mehrazar E., **M. Rahaie\***, S. Rahaie. 2015. Application of Nanoparticles for Pesticides, Herbicides, Fertilizers and Animals Feed Management. **International Journal of Nanoparticles**, 8(1):1-19.
11. Zarafshar M., M. Akbarinia\*, H. Askari, S. M. Hosseini, **M. Rahaie** and D. Struve. 2015. Toxicity Assessment of SiO<sub>2</sub> Nanoparticles to Pear Seedlings. **Int. J. Nanosci. Nanotechnol.**, 11(1):13-22.
12. Behdokht Janfada, Fatemeh Yazdian\*, Ghassem Amoabediny, **Mahdi Rahaie**. 2014. Use of sulfur-oxidizing bacteria as recognition elements in hydrogen sulfide biosensing System. **Appl. Biotechnol. Biochem.**, 62(3):349-356.
13. Sherkat H., A. Nikfarjam\*, **M. Rahaie** and M. H. Naghavi. 2014. Integrated LC resonator as a detector of colloidal nanoparticles or bio-sensing applications. *Proceeding of the Second Iranian Conference on Engineering Electromagnetisc (ICEEM 2014)*, Jan. 8-9, 2014.
14. Mandeh M., M. Omid and **M. Rahaie\***. 2012. *In vitro* Influences of TiO<sub>2</sub> Nanoparticles on Barley (*Hordeum Vulgare* L.) Tissue Culture. **Biol. Trace Elem. Res. Journal**, 150(1-3):376-380.
15. **Rahaie, M.\***, M. R. Naghavi, H. Alizadeh and M. A. Malboobi. 2011. A Novel DNA-based Nanostructure for Single Molecule Detection Purposes. **International Journal of Nanotechnology**, 8 (6/7): 458-470.

16. **Rahaie, M.\***, and S. S. Kazemi. 2010. Lectin-Based Biosensors: As Powerful Tools in Bioanalytical Applications. **Biotechnology**, 9(4):428-443.
17. **Rahaie, M.**, R. Ghai, B. Babić and K. Dimitrov\*. 2009. Synthesis and characterization of DNA-based micro- and nanodumbbell structures. **Journal of Bionanoscience**, 3: 73-79.

### **Molecular Genetics Works**

18. Kahila, M. M. H., A. M. Najy, **M. Rahaie\***, M. Mir-Derikvand. 2017. Effect of Nanoparticle Treatment on Expression of a key gene involved in Thymoquinone biosynthetic pathway in *Nigella sativa* L. **Natural Product Research**, Accepted for publishing.
19. Farsinejad, S., **M. Rahaie**, A. M. Alizadeh, M. Mir-Derikvand, Z. Gheisari, H. Nosrati, and S. Khalighfard. 2016. Expression of the circulating and the tissue microRNAs after surgery, chemotherapy, and radiotherapy in mice mammary tumor. **Tumor Biology**, 37(9): 1-10.
20. Pourrajab, F., F. Torkian Velashani, M. Khanaghaei, S.H. Hekmatimoghaddam, **M. Rahaie**, M.R. Zare-Khormizi. 2016. Comparison of miRNA signature versus conventional biomarkers before and after off-pump coronary artery bypasses graft. **Journal of Pharmaceutical and Biomedical Analysis**, 134 (2017): 11-17.
21. Pourrajab F., M. Sharifi, S. H. Hekmati moghaddam, M. Khanaghaei, **M. Rahaie**. 2016. Elevated levels of miR-499 protect ischemic myocardium against uric acid in patients undergoing off-pump CABG. **Cor et Vasa**, 1(1): 1-9.
22. Khanaghaei, M., F. Tourkianvalashani, S.H. Hekmatimoghaddam, N. Ghasemi, **M. Rahaie**, V. Khorramshahi, A. Sheikhpour, Z. Heydari. 2016. Circulating miR-126 and miR-499 reflect progression of cardiovascular disease; correlations with uric acid and ejection fraction. **Heart International**, 11(1): 1-9.

### **Bioproducts Works**

23. Jafari S, V Babaeipour, HA Eslampanah Seyedi, **M Rahaie**, MR Mofid, L Haddad, MM Namvaran, J Fallah. 2014. Recombinant production of mecasermin in *E. coli* expression system. **Research in Pharmaceutical Sciences**, 9(6): 453-461.

### **Plant Works**

24. Bochani, A. Z. Tahmasebipoor and **M. Rahaie**. 2016. The expression analysis of genes involved in direct and indirect defense against two-spotted spider mite, *Tetranychus urticae* in black beans. **Journal of Crop Breeding**, Accepted for publishing in 2016.
25. Zarafshar M, M Akbarinia\*, H Askari, SM H, **M Rahaie**, D Struve, GG Striker. 2014. Morphological, physiological and biochemical responses to soil water deficit in seedlings of three populations of wild pear (*Pyrus boissieriana*). **Biotechnologie, Agronomie, Société Environnement**, 18(3):353-366.

26. **Rahaie M.**, G-P. Xue and P. M. Schenk\*. 2013. The Role of Transcription Factors in Wheat under Different Abiotic Stresses, Abiotic Stress- Plant Responses and Applications in Agriculture, Dr. Kouros Vahdati (Ed.), ISBN: 978-953-51-1024-8, **InTech**, DOI: 10.5772/54795.
27. **Rahaie, M.\***, M. Gomarian, H. Alizadeh, M. A. Malboobi, M. R. Naghavi. 2011. The expression analysis of transcription factors under long term salt stress in tolerant and susceptible wheat (*Triticum aestivum* L.) Genotypes using Reverse Northern Blot. **Iranian Journal of crop Sciences**, 13(3):580-595.
28. **Rahaie, M.**, G-P. Xue, M. R. Naghavi, H. Alizadeh and P. M. Schenk\*. 2010. A MYB gene from wheat (*Triticum aestivum* L.) is up-regulated during salt and drought stresses and differentially regulated between salt-tolerant and sensitive genotypes. **Plant Cell Reports**, 29(8):835-44.
29. **Rahaie, M.\***, M. R. Naghavi, H. Alizadeh, M. A. Malboobi, C. Abd Mishani, P. Schenk, G-P. Xue. 2010. The Gene Expression Analysis of MYB Transcription Factors in Wheat (*Triticum aestivum* L.) During Short Term Salinity and Cold Stresses by Quantitative RT-PCR. **Iranian Journal of Agricultural Sciences**, 41(3):433-446.
30. Gomarian, M., M. A. Malboobi\*, F. Darvish, S.A. Mohammadi, K. Razavi, **M. Rahaie**, H. Alizadeh. 2010. Evaluation of inducible genes expression under long term salinity stress in two susceptible and tolerant cultivars of wheat. **Novel Genetic Journal**, 4(1):27-40.
31. **Rahaie, M.\***, B. E. Ssyed-Tabatabaei, A. A. Shahnejat-Bushehri, C. Abd-mishani, M. A. Malboobi. 2004. Study of genetic diversity in canola (*Brassica napus* L.) using AFLP marker. **Journal of seed & plant improvement**, 19(4):69-81.

### Management Field

32. Abdi\*, H. R., R. Hamidi Motlagh, M. Enayatzadeh, **M. Rahaie** and M. Rezaie. 2005. To investigate the Biotechnology private section problems and development approaches in Iran. **Journal of Management**, 14(97&98): 41-49.

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### **Presentations**

1. Jalilian, A., **M. Rahaie\***, M. Madani, M. Tabrizian. 2016. Preparation of Pheromone Releasing Nanofibers for Pest Biological Control Process. The 6<sup>Th</sup> congress on Nanoscience and Nanotechnology, Octobr, 26-28, 2016, Karaj, Iran.

2. Azimzadeh, M., **M. Rahaie\***, N. Nasirzadeh, H. Naderi-Manesh. 2016. Design and fabrication of a novel nanobiosensor for early detection of breast cancer using signal amplification of the gold nanorods decorated on graphene oxide sheets. 11th international Breast Cancer Congress, February 24-26, 2016, Tehran, Iran.
3. Kahila, M.M.H., A.M. Najy, **M. Rahaie\***. 2016. Effect of nanoparticles treatment on Expression of genes involved in Thymoquinon biosynthesis pathway in *Nigella sativa* L. 2th international and 14th national biotechnology congress of Iran, May 21-23, 2016, Tehran, Iran.
4. khajavi M., **M. Rahaie\***, A. Ebrahimi. 2016. The effect of Tio<sub>2</sub> and Sio<sub>2</sub> nanoparticles and Salinity stress on expression of GAS, Cost and Cars genes involved in parthenolid production in feverfew (*Tanacetum parthenium* L.). 2th international and 14th national biotechnology congress of Iran, May 21-23, 2016, Tehran, Iran.
5. Moafi S., **M Rahaie\***, H Poustchi and A mohammadkhani, 2015. Designing and synthesis of DNA based nanostructure to detect Hepatits B virus using FRET. Asian nanoforum conference, 8-11 March, 2015, Kish Island, Iran.
6. Heydari Z., **M Rahaie\***, A M Alizadeh. 2015. Effect of Bifidobacterium bifidum on microRNA-155-5p and PU.1 expression in colorectal cancer. 1th international and 9th national biotechnology congress of Iran, May 24-26, 2015, Tehran, Iran.
7. Niksefat T., H Askari, **M Rahaie** and M Tohidfar. 2015. Gene transferring in algae using GUS reporter gene by electroporation. 1th international and 9th national biotechnology congress of Iran, May 24-26, 2015, Tehran, Iran.
8. Sherkat H, A NikfarJam\*, **M Rahaie**. 2014. Design and Fabrication of Interdigitated Microelectrode-based Biosensor for Label-free detection of DNA. The first international conference on MEMS and Microfabrication-ICMEMS2014. 18-19 Feb 2014, New Technologies Research Center, Amirkabir University of Technology, Tehran, Iran.
9. BabaeipourV\*., S Jafari, **M Rahaie**, M R Mofid. 2014. Strategies for efficient expression of disulfide bond containing proteins in E. coli. 12th Iranian genetics congress, May, 2014, Tehran, Iran.
10. Farsinejad, S., **M. Rahaie\***. 2013. MicroRNA Profiling as a New Approach for Early Detection of Breast Cancer. 3th international student biotechnology congress, May 5-8, 2013, Tehran, Iran.
11. Gheisari, Z., **M. Rahaie\***. 2013. Approaches to detect matrix metalloproteinases (MMPs) as disease biomarkers. 3th international student biotechnology congress, May 6-8, 2013, Tehran, Iran.

12. Farsinejad, S., **M. Rahaie\***. 2013. Application of nanostructures for MicroRNA analysis. The 5th international congress of biochemistry and molecular biology & 13th Iranian congress of biochemistry, April 16-19, 2013, Yazd, Iran.
13. Azimzadeh, M., **M. Rahaie\***, N. Nasirzadeh, H. Naderi-Manesh. 2012. Gold nanoparticles: an effective deliver system to transfer siRNAs to breast cancer cell line. 9th international Breast Cancer Congress, February 25-27, 2012, Tehran, Iran
14. **Rahaie, M.\***, M. Gomarian, H. Alizadeh, M. A. Malboobi, M. R. Naghavi. 2010. The expression analysis of transcription factors under long term salt stress in tolerant and susceptible wheat (*Triticum aestivum* L.) Genotypes. International Conference on Biotechnology and Nanotechnology (ICBN 2010), July 28-30, Paris, France.
15. **Rahaie, M.\***, M. R. Naghavi, B. Babić and K. Dimitrov. 2010. A Novel Nanobiostructure for Single Molecule Detection purposes. The 8th international nanotechnology symposium (Nanofair 2010), July 6-7, Dresden, Germany
16. Khodayari, M., and **M Rahaie\***. 2007. Biosensors and their application in biology. Nanotech Northern Europe congress, 27-29 March 2007, Helsinki, Finland.
17. **Rahaie, M\***, M. Ahangarzadeh Rezaee, H. R. Abdi. 2005. The methods for detecting of genetically modified organisms. The first Iranian Biosafety congress, Karaj, Iran.
18. **Rahaie, M.\***, M. Ahangarzadeh Rezaee and H. R. Abdi. 2005. Use of biotechnological methods in medicinal plants for more productivity. The second Iranian medicinal plants congress. Tehran, Iran.
19. **Rahaie, M.\***, B. E. Ssyed-Tabatabaei, A. A. Shahnejat-Bushehri, C. Abd-mishani, M. A. Malboobi. 2003. Study of genetic diversity of canola using AFLP and RAPD markers. The TREE Biotechnology 2003, Umea, Sweden.
20. **Rahaie, M.\***, B. E. Ssyed-Tabatabaei, A. A. Shahnejat-Bushehri, C. Abd-mishani, M. A. Malboobi. 2003. Using AFLP technique in assessment of genetic diversity of canola. The 8th Iranian genetic congress (2003), Tehran, Iran.
21. **Rahaie, M.\***, A. A. Shahnejat-Bushehri, C. Abd-mishani. 2002. Proteomics. The 7th Iranian crop and plant breeding sciences congress (2002), Karaj, Iran.
22. **Rahaie, M.\***, A. A. Shahnejat-Bushehri, S. Pourmohammad kiani. 2002. Candidate genes and resistance gene analogs: new approaches for resistance to disease in wheat. The first international wheat congress, Tehran, Iran.

**\* As Corresponding Author**

## **Books**

1. Faramarzpour M., Mirderikvand M., Enayatzadeh M., **Rahaie M.**, Entrepreneurship in Biotechnology (vol.1&2). First edition, Tehran, NIGEB Press, 2014.

## **Teaching Experiences**

- Biosensors
  - Bioinformatics
  - Bioengineering
  - Molecular Biotechnology
  - Genetics of Bacteria
  - Genetics of Eukaryotes
  - Biotechnology in Food Science
  - Principle of Plant Biotechnology
  - Computer Skills in Biotechnology
  - Cell and Tissue Culture
  - Biochemistry
  - Applications of Nanotechnology in Biology
  - Bioinformatics in Nanobiotechnology
- 
- Supervisor, PhD Thesis, Hanieh Kavand, ongoing project (microfabrication for nanobiosensor designing), 2015
  - Supervisor, PhD Thesis, Shilan Nasri, PhD freshman student, drug delivery system, ongoing project, 2015
  - Supervisor, M.Sc Thesis, Morteza Hashemian, Design and fabrication of nanostructure based on graphene oxide and gold nanoparticle to detect microRNA involved in Alzheimer's disease, University of Tehran, Tehran, Iran, 2015-2016.
  - Supervisor, M.Sc Thesis, Yaser Jafari, Encapsulation curcumin within plant cell as drug delivery system and study of its effects for the treatment of colon cancer, University of Tehran, Tehran, Iran, 2014-2016.
  - Supervisor, M.Sc Thesis, Nilofar Mansourian, Design and fabrication of silver nanocluster\_DNA based nanobiosensor for detection of involved microRNA in MS disease, University of Tehran, Tehran, Iran, 2014-2016.
  - Supervisor, M.Sc Thesis, shekofeh Delkhahi, Design and fabrication of gold nanoparticle\_DNA based nanobiosensor for detection of involved microRNA in Alzheimer's disease, University of Tehran, Tehran, Iran, 2014-2016.
  - Supervisor, PhD Thesis, Mostafa Azimzadeh, Design and Fabrication of Electrochemical Nanobiosensor to Quantify Specific miRNA for Early Detection of Breast Cancer, University of Tehran, Tehran, Iran, 2013-2015.

- Supervisor, M.Sc Thesis, Mahbobeh Zandian, Detection of Cholera Disease Agent, *Vibrio cholera*, Using Optical Gold Nanoparticle Biosensor, University of Tehran, Tehran, Iran, 2014-2015.
- Supervisor, M.Sc Thesis, Zahra Heidari, Analysis of Gene expression involved in colorectal cancer in response to probiotic diet, University of Tehran, Tehran, Iran, 2013-2014.
- Advisor, PhD Thesis, Mehrdad Zarafshar. The Response of Wild Pear Seedlings to Drought Stress and Efficiency of Tio<sub>2</sub> and Sio<sub>2</sub> Nano-particles in Alleviating the Deleterious Effects of Drought Stress. University of Tarbiyat Modares, Tehran, Iran, 2012-2014.
- Supervisor, M.Sc Thesis, Sadaf Farsinejad, Diagnosis of breast cancer by tracing MicroRNA as biomarker, University of Tehran, Tehran, Iran, 2013-2014.
- Supervisor, M.Sc Thesis, Zohreh Gheisari, Diagnosis of breast cancer by tracing MicroRNA related to MMPs, University of Tehran, Tehran, Iran, 2013-2014.
- Supervisor, M.Sc Thesis, Samaneh Moafi, Detection of human infectious virus using FRET (Fluorescence Resonance Energy Transfer) technique, University of Tehran, Tehran, Iran, 2013-2014.
- Supervisor, M.Sc Thesis, Tayyobeh Niksefat, Gene transferring optimization in algae using GUS reporter gene to Produce recombinant protein, University of Shahid Beheshti, Tehran, Iran, 2013-2014.
- Supervisor, M.Sc Thesis, Habib Sherkat, Designing and constructing a microchip based on microfluidic technology and nanosensors to detect biomarkers, University of Tehran, Tehran, Iran, 2012-2013.
- Supervisor, M.Sc Thesis, Sevda Jafari, cloning and production of recombinant human insulin-like growth factor I in bacterial system, University of Tehran, Tehran, Iran, 2011-2012.
- Supervisor, M.Sc Thesis, Fatemeh Tazari, study of biosurfactant effect on cell surface of bacterial strain used in bioremediation, University of Tehran, Tehran, Iran, 2011-2012.
- Advisor, M.Sc Thesis, Behdokht Janfada, Study and comparison of performance of the microorganisms used in sulfur compound Biosensor, University of Tehran, Tehran, Iran, 2011-2012.
- Advisor, M.Sc Thesis, Hediye Rahmjoo, The Study of genetic and phylogenetic diversity of Isolated Thermophilus bacteria from Iran Hot springs based on 16s rRNA gene sequence, University of Abu Ali Cina, Hamadan, Iran, 2008-2009,

## Patents



1. Effect of biosurfactant on *pseudomonas aeruginosa* strains mm1011 and TMU56 for bioremediation application, Invention registration office of Iran, patent No. 78933,

## Technical Abilities

### *lab*

Fluorescent microscopy, Nanoparticles-Biomolecules manipulation and conjugation, Real Time PCR, molecular markers (including AFLP, RAPD, RGA, SSR, Seed Storage Protein), Cloning, Electrophoresis, Sequencing Gel, Silver Staining, Tissue Culture, DNA manipulation

### *Computer*

Bioinformatics and Application of biological DATA Bases and Tools, Molecular Softwares including, Mev, QTL Mapmaker, QTL cartographer, DNAsis, Winstar, and a list of others), Microsoft Office (including Word, Power Point, Excel), statistical software including SPSS, NTSYS, MSTATC

## Skills

English language (Moderated), Communication and Negotiation Techniques, Webpage Designing (primary), Swimming, Mountain Climbing.

## Honors and Awards

- Research work in Australian Institute for Bioengineering and Nanotechnology (AIBN), Brisbane, Australia, in Nanoscience field.
- Research work in CSIRO and University of Queensland, Brisbane, Australia, (AIBN) in Nanoscience field in plant science.
- Scientific chair in the first Iranian New Technology congress (Electronic) held at 12 Feb, 2015, Tehran, Iran.
- Scientific chair in the 3th international biotechnology student congress held at 6-8 May, 2013, university of Tehran, Tehran, Iran.
- Refers of 12<sup>th</sup> congress of Iranian genetics, Tehran, Iran
- A member of scientific and executive committee of 3th Iranian national biosafety congress, Tehran, Iran (2011).
- One of four central management members of biotechnology development council think tank (2009)
- To obtain a financial prize from Iran Nanotechnology initiative for my research project (2009, Oct)
- To obtain the prize for the best student articles in Iran student scientific magazines festival, 2007 with title: "The potential of biotechnology for medicinal plants improvement and more their productivity"
- A member of editing board of Biotechnology Development Council Bulletin
- Editor of "Biotechnologist Letter" bulletin, 2004-2005
- The Member of Central Nucleus of Plant Section of Iranian Genetic Society (at the First period), 2001-2002
- The First Rank Student in B.Sc Entrance Exam
- The Fourth Rank Student in M.Sc. Entrance Exam

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**گزیده ای از فعالیتهای علمی-اجرایی (خانمه یافته)**

- ۱- سرپرست دفتر آموزشهای آزاد دانشکده علوم و فنون نوین، دانشگاه تهران از بدو تاسیس تا سال ۹۳
- ۲- مسوول زیرگروه نانوبیوتکنولوژی دانشکده علوم و فنون نوین، دانشگاه تهران (۸۹)
- ۳- مسوول گروه بیوتکنولوژی شبکه تحلیلگران تکنولوژی ایران- دفتر همکاریهای فناوری ریاست جمهوری (۸۴)
- ۴- عضو کمیته ۹ نفره کمیته پژوهش ستاد توسعه زیست فناوری کشور- معاونت علمی ریاست جمهوری (۸۷-۸۹)
- ۵- دبیر علمی سومین کنگره بین المللی دانشجویان بیوتکنولوژی (اردیبهشت ۹۲)
- ۶- دبیر اجرایی اولین کنگره کاربرد نانوتکنولوژی در کشاورزی (۱۳۸۵)
- ۷- دبیر علمی اولین کنگره فناوریهای نوین ایران (الکترونیک) (۱۳۹۴)
- ۸- عضو کمیتههای علمی و اجرایی کنگرههای بیوتکنولوژی و ژنتیک ایران از سال ۱۳۸۱ به بعد

**پروژههای مطالعاتی (کلان) انجام شده**

- ۱- تعیین اولویتهای تحقیقاتی و سرمایه گذاری در بیوتکنولوژی از طریق مطالعات بنچ مارکینگ به سفارش ستاد توسعه زیست فناوری (۱۳۸۷-۱۳۸۹).
- ۲- بررسی پتانسیل و کاربردهای نانوتکنولوژی در زمینه بسته بندی مواد غذایی به سفارش ستاد ویژه توسعه فناوری نانو (۱۳۸۵).
- ۳- مطالعه وضعیت بیوتکنولوژی در ایران (پنج بخش شامل؛ تحقیقات، منابع انسانی، بخش خصوصی، سند ملی بیوتکنولوژی، ایمنی زیستی) به سفارش ستاد ویژه توسعه فناوری نانو و شبکه تحلیلگران تکنولوژی ایران.
- ۴- بررسی وضعیت بیوتکنولوژی در کشورهای مختلف جهان (کشورهای توسعه نیافته، در حال توسعه و توسعه یافته) به سفارش ستاد توسعه زیست فناوری (۱۳۸۵).