

Jafar Hemmat's CV

PERSONAL INFORMATION

First name: Jafar Last name: Hemmat D.O.B: 14 May 1971 Sex: Male
Status: Married Nationality: Iranian Academic title: Faculty
Language: Persian, English

Education

B .Sc. BIOLOGY- Microbiology, 1994, Microbiology Department, Faculty of Sciences, Tehran University, Iran.

M Sc, BIOLOGY- Microbiology, 1998, Microbiology Department, Faculty of Science, Isfahan University. Iran.

PhD of Molecular Genetics, 2011, Industrial & Environmental Biotechnology Department, National Institute of Gene Engineering and Biotechnology (NIGEB/NRCGEB) & Medical University of Tehran, Iran.(With Scholarship of The Ministry of Science, Research and Technology).

Appointments

1. Manager of Productivity Committee of Iranian Research Organization for Science and Technology (IROST)–Yazd center. 16 Oct 1999.
2. Responsible to Establish the Biotechnology Department of Iranian Research Organization for Science and Technology (IROST) –Yazd center. 1999-2003
3. Researcher and member of scientific board in Biotechnology Department of Iranian Research Organization for Science and Technology (IROST) –Yazd center. 11 Jun 1999.
4. Selected as Top Employee in Iranian Research Organization for Science and Technology (IROST) – Yazd center (1999& 2000).
5. Member of Scientific Committee of Iranian Research Organization for Science and Technology (IROST) –Yazd center. 22 Nov 2000.
6. Logistic Vice President of Iranian Research Organization for Science and Technology (IROST).) – Yazd center. 22 Nov 2001.
7. Member of Professional Committee of Biotechnology of Iranian Research Organization for Science and Technology (IROST). 7 Jun 2002.
8. Responsible to Establish the Technological Incubators of Yazd Science and Technology Park (YSTP-Member of IASP).10 Apr 2003.
9. Technical Manager of Yazd Science and Technology Park (YSTP-Member of IASP).2 Jun. 2004-2005.
10. Member of Primary/Technical and Final Committees of compiling of National Standards 8035-1 & 8035-2. Institute of Standards and Industrial Research of Iran (ISIRI). 2004-2005.
11. Faculty member. Biotechnology Department of Iranian Research Organization for Science and Technology (IROST). March 2005-
12. Referee of Khwarizmi International and Young Award.2005- Now.
13. Member of Commercialization Committee of Iranian Society of Biotechnology (ISB).Sept. 2006.
14. Vice President of Biotechnology Department of IROST. 2012-14.
15. Head of Industrial and Environmental Biotechnology Group, of IROST, 2015-2016.
16. Director-in-Charge of Journal of Advanced Research in Microbial Metabolites & Technology(ARMMT) (<http://armmt.irost.ir/>), IROST. 2016- Now.

17. Welfare Consultant of the President of IROST, 2016-2017.

Research projects

-Isolation of Cellulolytic Bacteria from Silkworm's Digestive Tract and Evaluation of Their Application in Industry, 1998. (M.Sc. thesis).

- Evaluation of Production of a Multifunctional Biofertilizer. 2001-2002. Biotechnology Department of Iranian Research Organization for Science and Technology (IROST)-Yazd Center. Research Director.

-Production of a Multienzyme as Feed Additive. 2002-2004. Biotechnology Department of Iranian Research Organization for Science and Technology (IROST)-Yazd Center. Research Director.

-Expression of HCV Core Antigen and Evaluation of Its Ligand Designing. , 2007-10. PhD Thesis. NIGEB.

-Study and selection of strains producing thermostable cellulose. IROST, 2014, Research Director.

-Production of thermostable Cellulase for Industrial Applications- phase 2: Isolation and molecular detection of the isolates. IROST –INSF-2015. Research Director.

-Monitoring and identification of the GMOs of imported fruits, 2015, Co-Investigator.

- Codification of address instructions of risk assessment(national) guidelines for genetically modified organisms based on act 4 of biosafety law of I.R. of Iran (in progress). Co-Investigator.

-Identification of Intronic regulatory elements of the human coagulation factor VIII gene as immune privilege motifs for hemophilia gene therapy, Eastern Mediterranean Health Genomics and biotechnology Network (EMGEN), Principle Investigator.

-Production of thermostable Cellulase for Industrial Applications- phase 3: Production of recombinant Cellulase. IROST –INSF-2018-21. Research Director.

-Production of efficient microbial recombinant endoglucanases and their applications in food and bioenergy. IROST_India (Joint Project)-2018- Now.

Interests

- Microbial Biocatalysts and Thermostable Enzymes

- Extremophiles (Developmental biology, genetics, metabolites)

- Recombinant proteins –Protein Engineering- GMO Survey

- Application of Microbial Metabolites in in food Biotechnology

Publications

-Hemmat. J., Emtiazi. G. And Nahvi. I. Isolation of Cellulomonas sp. From Silkworm's Gut and Evaluation of its Exoglucanase Activity. Research Bulletin of Isfahan University,.1999. 11.No 1.66-72.

-Hemmat. J., And Emtiazi. G. Isolation of Cellulomonas sp. From Silkworm's Gut and Evaluation of its Endoglucanase Activity. Iranian J. Agric. Sci.2001.. 31 No.2. 55-60.

-Lame'a B., et al. & Hemmat. J. Nationl Standard 8035-1: Microbiology of Food and Animal Feeding Stuffs-Horizontal Method for Detection and Enumeration of Listeria Monosytogenes Part I: Detection Method. Institute of Standards and Industrial Research of Iran (ISIRI). Aug 2005.

-Lame'a B, et al. & Hemmat. J. Microbiology of Food and Animal Feeding Stuffs-Horizontal Method for Detection and Enumeration of *Listeria Monosytogenes* Part II:Enumeration Method. National Standard 8035-2. Institute of Standards and Industrial Research of Iran (ISIRI). Aug 2005.

-Hemmat J, Haddad Mashadrizeh & A. Zomorodipour. A. Study of Distribution and Characterization of Non-LTR Retrotransposons in The Human Coagulation VIII Factor Gene. Archives of Iranian Medicine, Vol 10, Number 4(Suppl 1),S144, October 2007 .

-Hemmat J, Haddad Mashadrizeh A. Zomorodipour. A. Relationship among CpG Islands, Repeat Elements and Possible Promoter-like Sequences in the Human Coagulation VIII Factor Gene. Archives of Iranian Medicine, Vol 10, Number 4(Suppl 1),S145, October 2007 .

-Haddad Mashadrizeh., A.Zomorodipour .Sabouni. F. Hemmat. J. Analysis of the Non-Coding Region of the Human Factor VIII Gene in Comparison with Selected Regions of the Intron 1 of Human Factor IX
Biology Bultin of Iranian Society of Biology .Vol .9 no:4, 2008.

-Hemmat, J. Y. B., Khajeh, K. H., Moosavi-Movahedi, A. A., & Karkhane, A. A. (2011). Over-expression of full-length core protein of hepatitis C virus by *Escherichia coli* cultivated in stirred tank fermentor. *Iran J Biotechnol*, 9, 245-252.

-Karkhane, A. A., Yakhchali, B., Rastgar Jazii, F., Hemmat, J., Shariati, P., Khodabandeh, M., & Zomorodipoor, A. (2012). Periplasmic expression of *Bacillus thermocatenulatus* lipase in *Escherichia coli* in presence of different signal sequences. *Iranian Journal of Biotechnology*, 10, 255-262.

-Hashemi, T., Hemmat, J., & Sadeghifard, N. (2014). STUDY OF THE ABILITY OF BIOFILM FORMATION OF ISOLATED *KLEBSIELLA* FROM TWO GEOGRAPHIC REGIONS OF Iran. *Iranian Journal of Public Health*, 43(2), 178.

-Hesari, M. H., Hemmat, J., & Sadegifard, N. (2014). THE ANTIBIOTIC RESISTANCE OF *KLEBSIELLA PNEUMONIAE* STRAINS ISOLATED FROM URINARY TRACT INFECTIONS OF SHIRVAN CITY-NORTH KHORASAN IN 1392. *Iranian Journal of Public Health*, 43(2), 96.

-Hemmat, J., & MazaheriAssadi, M. (2013). Optimization of Reactive Blue 19 Biodegradation by *Phanerochaete chrysosporium*. *International Journal of Environmental Research*, 7(4), 957-962.

-Hesari, M. H., Hemmat, J., & Sadegifard, N. (2014). THE ANTIBIOTIC RESISTANCE OF *KLEBSIELLA PNEUMONIAE* STRAINS ISOLATED FROM URINARY TRACT INFECTIONS OF SHIRVAN CITY-NORTH KHORASAN IN 1392. *Iranian Journal of Public Health*, 43(2), 96.

-Azizi, M., Hemmat, J., Seifati, S. M., Torktaz, I., & Karimi, S. (2015). Characterization of a thermostable endoglucanase produced by *Isoptricola variabilis* sp. IDAH9. *Brazilian Journal of Microbiology*, 46(4), 1225-1234.

-Hashemi, T., & Hemmat, J. (2016). Isolation of *Klebsiella* Species form Urinary Tract Infections and Study of Frequency of those LuxS Gene. *www. sjimu. medilam. ac. ir*, 23(6), 20-28.

- Shafiee, M., & Hemmat, J. & Sam M. (2016). Evaluation antibacterial activity of acetone extract of *Glypholecia scabra* and *Rhizoplaca melanophthalm* on some standard bacteria, *Biological Journal of Microorganims* 5, (19,), 127-136.
- Azizi, M., Hemmat, J., (2016). Isolation of thermotolerant *Isoptericola variabilis* IDAH9 and optimization of its exoglucanase activity, *Biotechnology Tarbiat Modares Journal*, 7(2) 70-80.
- Bambaei, B., Hemmat, J., Karkhane, A ,A., & Torktaz, I. (2017). In Silico Optimization of Formate Formation by *Acetobacterium woodii*'s formate Dehydrogenase. *Int J cell Sci & mol biol* 1(3): IJCSMB.MS.ID.555564 (2017).
- Farmanbar, N., Haddad-Mashadrizeh, A., & Hemmat, J. (2017). An in-silico investigation on the structure, function and homologous sequences of the enzymes and proteins involved in the production and accumulation of the lipids in oleaginous fungi. *JMBS* 2017, 8(2): 25-41.
- N Farmanbar, A Haddad-Mashadrizeh, J Hemmat (2017).An in-silico investigation on the structure, function and homologous sequences of the enzymes and proteins involved in the production and accumulation of the lipids in biodiesel resources. *Biological Journal of Microorganism* 6 (220029), 59-76.
- Hajmohammadi, F., Soleimani, Z., Hemmat, J., Kazemimejad, N., Sedrpoushan, A. R., Ranjbar, M., ... & Parach, A. (2017). Studies of antibacterial effects of synthesized silver nanoparticles using a novel thermotolerant *Isoptericola variabilis* sp. IRSH1 against *Staphylococcus aureus* and *Pseudomonas aeruginosa*. *The Journal of Qazvin University of Medical Sciences*, 21(3), 23-30.
- Torktaz, I., Karkhane, A. A., & Hemmat, J. (2018). Rational engineering of Cel5E from *Clostridium thermocellum* to improve its thermal stability and catalytic activity. *Applied microbiology and biotechnology*, 102(19), 8389-8402.
- Torktaz, I., Hemmat, J., Karkhane, A. A., Rigi, G., Rostami, A., Khezri, J., & Behroozi, R. (2018). Molecular Engineering of the *Geobacillus stearothermophilus* α -Amylase and Cel5E from *Chlostridium thermocellim*; In Silico Approach. *Iranian Journal of Biotechnology*, 16(3), 185-192.
- Diba H, Hemmat J, Vaez M, Amoozegar M AAmoozegar M A.(2018) Screening of Bacteria Producing Acid-stable and Thermostable Endo-1, 4- β -Glucanase from Hot Springs in the North and Northwest of Iran. *Advanced Researches in Microbial Metabolites & Technology*, 1(1), 23-30. doi: 10.22104/armmt.2018.701
- Pouryosef M, Hemmat J, Vaez M.(2018) A comparison between molecular and morphological methods in evaluation of vesicular-arbuscularmycorrhizal fungi colonization with *Crocus sativus* L. *Biological Journal of Microorganism*, 26, 1-10.
- Gholampour-Faraji, N., Farazmand, R., Hemmat, J., & Haddad-Mashadrizeh, A. (2019). Modeling, stability and the activity assessment of glutathione reductase from *Streptococcus Thermophilus*; Insights from the in-silico simulation study. *Computational biology and chemistry*, 83, 107121.

-Hajmohammadi, F. (2019). Biosynthesis of silver nanoparticles and the comparison of their antibacterial activity against *Bacillus cereus* and *Serratia marcescens*. *Journal of Cellular and Molecular Research (Iranian Journal of Biology)*, 32(1), 16-32.

-Kowsari, E., Haddadi-Asl, V., Ajdari, F. B., & Hemmat, J. (2019). Aramid fibers composites to innovative sustainable materials for biomedical applications. In *Materials for Biomedical Engineering* (pp. 173-204). Elsevier.

-Ayorloo, F., Vaez, M., & Hemmat, J. (2019). Isolation and molecular identification of the carotenoid producing yeasts in the exudation sap from birch trees (*Betula pendula* Roth.) at Marmisho region of Northwest Iran. *Journal of Microbial World*, 12(2), 139-149.

-Gholampour-Faraji, N., Shakeri, M. S., Hemmat, J., Rastegar-Moghadam, M., & Haddad-Mashadrizheh, A. (2020). Modeling, Mutagenesis and In-silico Structural Stability Assay of the Model of Superoxide Dismutase of *Lactococcus Lactis* Subsp. *Cremoris* MG1363. *Iranian Journal of Biotechnology*, 18(1), e2256.

-Haddad-Mashadrizheh, A., Hemmat, J., & Aslamkhan, M. (2020). Intronic regions of the human coagulation factor VIII gene harboring transcription factor binding sites with a strong bias towards the short-interspersed elements. *Heliyon*, 6(9), e04727.

Publications (Proceeding)

More than 60 Proceedings in National and International Congresses.

Teachings

1. Environmental Microbiology. Biology BSc. Payam-e-Nour University. Jan 2000-2004.
2. General Microbiology. Biology BSc. Payam-e-Nour University. Jan 2000-2004.
3. Laboratory of General Microbiology. Biology BSc. Payam-e-Nour University. Jan 2001-2004.
4. Virology. Biology BSc. Payam-e-Nour University. Jan. 2000-2004.
5. Biochemistry .Gynecology. Azad University -Maybod Unit. Jan 2002.
6. Eukaryotic Genetic. Tehran University. 2011.
7. Microbial Biotechnology. MSc. IROST. 2012-
8. Industrial Microbiology. MSc. IROST.2012.
9. Gene Engineering. PhD. IROST.2012
10. Metabolic Engineering. PhD. IROST. 2013-Now.
11. Genetic of Microorganisms. IROST.2013-Now.

Workshops & Trainings

1. Working with laboratorial Animals and Virology. Institute Pasture of Iran. Jul-Aug 1993(Two weeks).
2. Protein Sequencing. Research Institute of Biochemistry and Biophysics (I.B.B.) of Tehran University. Nov 1993.
3. Transmission and Scanning Electron Microscopes (TEM & SEM).TEM & SEM Department of Medical University of Isfahan. Jun _Jul. 1998(Six weeks).
4. Application of Biotechnology in Waste Management. (International Workshop) IROST & APCTT. Isfahan. Iran. Nov 4-6. 2000.
5. Protein Purification in Downstream Process. Medical Biotechnology Network. Institute Pasture of Iran. Dec 2002.
6. Impedance Microbiology. Sylab Company. Tehran, Dec 2003.
7. Cloning and Expression of HGH in E.Coli. NRCGEB. 2005 .

8. Genome Workbench and SeqVista. NRCGEB/NCBI. 24 May 2006 .
9. Management Citation. NRCGEB. 11-12 Sep 2006 .
10. Detection of Avian Influenza Virus by RT-PCR. NIGEB/ Institute for Research and Planning in Higher Education (IRPHE). 11-13. Nov 2006.
- 11 Introduction to Advanced Molecular, Cytogenetic & Molecular Cytogenetic Techniques. NIGEB/ Institute for Research and Planning in Higher Education (IRPHE). 19-22 Nov 2006.
12. Application of Bioinformatics in Molecular Biology. NIGEB/ Institute for Research and Planning in Higher Education (IRPHE). 16-19 Dec 2006.
13. Expression, Production of Assay of Enzyme for Biotechnological Purposes. NIGEB/ Institute for Research and Planning in Higher Education (IRPHE). 23-26 Dec 2006.
14. Commercialization of Research Results in Biotechnology. NIGEB. 25 Dec 2006.
16. Rules, Rights of Inventors and Biotechnology Improvement. NIGEB. 9 May 2007.
17. Quality Control in Biotechnology Products. NIGEB. 18 Jul 2007.
18. Phylogenetic Tree (softwares). NIGEB. 1-3 Nov 2010.
19. Roadmap of Biotechnology in Iran. Part A. Iroost. 2010
20. Roadmap of Biotechnology in Iran. Part B. Iroost. 2011.

Awards

1. Selected as Top Employee in Iranian Research Organization for Science and Technology (IROST) –Yazd center (1999& 2000).
2. Scholarship of the Ministry of Science, Research and Technology for PhD. Education. 2005.
3. Selected as Top Resercher in Yazd Providence. 2011.

Workshops & seminars directors

1. Quality Control in Microbiology Laboratory. Yazd_ IROST& Iranian Blood Transferring Organization. 22 May-22 Jun 2001.
2. Basic Techniques of Microbial Biotechnology. Biotechnology Department of IROST. 24 Apr 2001.
3. 3th Congress of Managers & Presidents of Technology Parks & Technology Incubators. 2004.
3. Applications of Environmental Friendly Technologies (Coordinator). YSTP and the International Representative and Coordinator of Ecocentrum (Sweden). 11 Mar 2005.
4. Director of 2th Workshop of Commercialization of Research Projects-Results: Making Fortune. Iranian research Organization for Science and Technology. IROST & Iranian Society of Biotechnology (ISB). May 2007.
5. Scientific Coworker of Workshop on Quality Control of Biotechnology Products. National Institute of Genetic Engineering and Biotechnology. June. 2007.
6. Codirector of Biotechnology Bazaar. *5th National Congress of Biotechnology of Iran. Tehran, 2007.*

Establishment of Centers & others

1. Student's Research group of Immunology. Biology Department .Tehran University. 1993 (the primary national pattern).
2. Research Building of IROST. Yazd Branch. 2001 (vice present)
3. Biotechnology Department of IROST- Yazd Branch. 2001
4. Biotechnology Incubator- Yazd Science and Technology Park (Coworker). 2003 (The first national)
5. Technology Incubator of Abarkooh. 2004 ((The first national of satellite incubator).
6. Advanced Researches in Microbial Metabolites & Technology (ARMMT) Journal (<http://armmt.iroost.ir/>)

Affiliation:

Biotechnology Department. Iranian Research Organization for Science and Technology (IROST).

Address: Ehsani Rad St., Enqelab St., Parsa Sq., Ahmadabad Mostoufi Rd., Azadegan Highway, Tehran, Iran. P. O. Box 33535-111, Tehran 3313193685, I. R. Iran.

Contact: Office Telfax: #98-56276636, Tel: 02156276020-5(2118, 2264).

Email: j.hemmat@gmail.com Website: <http://en.iroost.org/>