

## **Bahareh Dabirmanesh** (PhD)

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### **RESEARCH INTERESTS**

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- Recombinant protein technology
- Protein engineering as a strategy to investigate mechanism and function
- Signaling pathways in cancer cells: Diagnosis, Drug design and Delivery
- Amyloidogenic proteins and fibril formation
- Macromolecular Interaction

### **EDUCATION**

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- 2009-2013**    **PhD:** Biochemistry at Tarbiat Modares University (Tehran)
- 2004-2007**    **MSc:** Biochemistry at Alzahra University (Tehran)
- 2000-2004**    **BSc:** Cellular & Molecular Biology at University of Tehran (Tehran)

### **HONORS AND AWARDS**

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- Young researcher **Award** in the field of Biotechnology **2018** (from Vice presidency for Science & Technology)
- Shahid Tehrani Moghaddam **Award 2012**
- Became a member of **National Elite Foundation**

### **PUBLICATIONS**

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- 1. The effect of Nrf2 deletion on the proteomic signature in a human colorectal cancer cell line.**  
*BMC Cancer, Volume 22, 2022*  
Omid Cheraghi, **Bahareh Dabirmanesh**, Farideh Ghazi, Massoud Amanlou, Mona Atabakhshi, Yaghoub Fathollahi, Khosro Khajeh
- 2. CD38 and MGLUR1 as possible signaling molecules involved in epileptogenesis: A potential role for NAD<sup>+</sup> homeostasis**  
*Brain Research, Volume 1765, 2021*  
Shima Khodaverdiana, Elahe Dashtban-Moghadama, **Bahareh Dabirmanesh**, JavadMirnajafi-Zadeh, MohammadTaleb, KhosroKhajeh, YaghoubFathollahi
- 3. Characterization of Interaction of the MBP-Tagged MuRif1-C-Terminal Domain with G-Quadruplex DNA by SPR**  
*Biochemistry (Moscow) volume 86, 2021, pages 898–905*  
Hamed Ghadiri, Sana Alavi, **Bahareh Dabirmanesh** & Khosro Khajeh

4. **Proteomic profiling of the rat hippocampus from the kindling and pilocarpine models of epilepsy: potential targets in calcium regulatory network**  
*Scientific Reports, volume 1, 2021, pages 1-12*  
 Leila Sadeghi, Albert Anatolyevich Rizvanov, **Bahareh Dabirmanesh**, Inur Ildusovich Salafutdinov, Mohammad Sayyah, Amir Shojaei, Javad Zahiri, Javad Mirnajafi-Zadeh, Babak Khorsand, Khosro Khajeh & Yaghoub Fathollahi
  
5. **Screening and Identification of Herbal Urease Inhibitors Using Surface Plasmon Resonance Biosensor**  
*Research Journal of Pharmacognosy, Volume 8, 2021, Pages 51-62*  
 Mahmood Biglar; Hafezeh Salehabadi; Safoura Jabbari; **Bahareh Dabirmanesh**; Khosro Khajeh; Faraz Mojab; Massoud Amanlou
  
6. **Cancer-associated-platelet-inspired nanomedicines for cancer therapy**  
*Wiley Interdiscip Rev Nanomed Nanobiotechnol, 2021, 3;e1702*  
 Marzieh Geranpayehvaghei, **Bahareh Dabirmanesh**, Mohammad Khaledi, Mona Atabakhshi-Kashi, Chao Gao, Mohammad Taleb, Yinlong Zhang, Khosro Khajeh, Guangjun Nie
  
7. **Enhanced Solubility and One-Step Purification of Functional Dimeric Carboxypeptidase G2**  
*Biochemistry (Mosc), Volume 86, 2021, Pages 190-196*  
 Atefeh Khodakarami, Bahareh Dabirmanesh, Sedigheh Asad , Mohammad Khaledi
  
8. **G-quadruplex binding protein Rif1, a key regulator of replication timing**  
*The Journal of Biochemistry, Volume 169, 2021, Pages 1–14*  
 Sana Alavi, Hamed Ghadiri, Bahareh Dabirmanesh, Kenji Moriyama, Khosro Khajeh, Hisao Masai
  
9. **Catalytic parameters and thermal stability of chondroitinase ABCI on red porous silicon nanoparticles**  
*Journal of Biotechnology, Volume 20, 2020, Pages 83-90*  
 Sara Daneshjou, Bahareh Dabirmanesh, Fereshteh Rahimi, Safoura Jabbari, Khosro Khajeh
  
10. **Anti-amyloidogenic effect of artemin on  $\alpha$ -synuclein**  
*Journal of Biological Chemistry, Volume 401, 2020, Pages 1143-1151*  
 Narges Marvastizadeh, **Bahareh Dabirmanesh**, Reza H Sajedi, Khosro Khajeh
  
11. **Molecular Dynamics Study of the Human Beta-defensins 2 and 3 Chimeric Peptides with the Cell Membrane Model of Pseudomonas aeruginosa**  
*International Journal of Peptide Research and Therapeutics, Volume 26, 2020, Pages 2039-2056*  
 Mohammad Davoud Ghafari, Iraj Rasooli, Khosro Khajeh, **Bahareh Dabirmanesh**, Parviz Owlia
  
12. **Enhancing myelin repair in experimental model of multiple sclerosis using immobilized chondroitinase ABC I on porous silicon nanoparticles**  
*International Journal of Biological Macromolecules, Volume 146, 2020, Pages 162-170*  
 Safoura Rezaei, **Bahareh Dabirmanesh**, Leila Zare, Abolfazl Golestani, Mohammad Javan, Khosro Khajeh,
  
12. **A multifunctional fusion peptide for tethering to hydroxyapatite and selective capture of bone morphogenetic protein from extracellular milieu**  
*Journal of biomedical materials research, Volume 108, 2020, Pages 1459-1466*  
 Mina Bahri, Sadegh Hasannia, **Bahareh Dabirmanesh**, Alireza Moshaverinia, Homayoun H. Zadeh

- 13. Improvement of *Selenomonas ruminantium*  $\beta$ -xylosidase thermal stability by replacing buried free cysteines via site directed mutagenesis.**  
*International Journal of Biological Macromolecules*, Volume 136, 2019, Pages 352-358  
 Ehsan Dehnavi, Soheila Moeini, Ali Akbarzadeh, **Bahareh Dabirmanesh**, Seyed Omid Ranaei Siadat, Khosro Khajeh
- 14. The interaction of several herbal extracts with  $\alpha$ -synuclein: fibril formation and surface plasmon resonance analysis**  
*PLOS ONE*, Volume 14, 2019, e0217801  
 Shokouh Honarmand, **Bahareh Dabirmanesh**, Massoud Amanlou, Khosro Khajeh
- 15. Evaluation of angiotensin converting enzyme inhibitors by SPR biosensor and theoretical studies**  
*Enzyme and Microbial Technology*, Volume 120, 2019, Pages 117-123  
 Hafezeh Salehabadi, Khosro Khajeh, **Bahareh Dabirmanesh**, Mahmood Biglar, Massoud Amanlou
- 16. Insight into the aggregation of lipase from *Pseudomonas* sp. using mutagenesis: protection of aggregation prone region by adoption of  $\alpha$ -helix structure**  
*Protein engineering, design & selection*, Volume 31, 2018, Pages 419-426  
 Fatemeh Rashno, Khosro Khajeh, **Bahareh Dabirmanesh**, Reza Hassan Sajedi, Fabrizio Chiti
- 17. Surface plasmon resonance based biosensor for discovery of new matrix metalloproteinase-9 inhibitors**  
*Sensors and Actuators, B: Chemical*, Volume 263, 2018, Pages 143-150  
 Hafezeh Salehabadi, Khosro Khajeh, **Bahareh Dabirmanesh**, Mahmood Biglar, Sara Mohseni, Masoud Amanlou
- 18. Cell Timer/Cell Clock**  
*Iranian Biomedical Journal*, Volume 22, 2018, 360-361  
 Hamed Ghadiri, Sana Alavi, Bahareh Dabirmanesh, Kenji Moriyama, Khosro Khajeh, Hisao Masai
- 19. Improve *Salinivibrio* zinc-metalloprotease function in less polar organic solvents by increasing surface hydrophobicity.**  
*International Journal of Biological Macromolecules*, 120 (Pt A), 2018, Pages 440-448  
 Arastoo Badoei-Dalfard, Negar Goodarzi, **Bahareh Dabirmanesh**, Khosro Khajeh
- 20. Rational design toward developing a more efficient laccase: Catalytic efficiency and selectivity**  
*International Journal of Biological Macromolecules*, Volume 112, 2018, Pages 775-779  
 Atefeh Khodakarami, Negar Goodarzi, Mahshid Hoseinzadeh, Fezzeh Amani, Shima Khodaverdian, Khosro Khajeh, Farideh Ghazi, Bijan Ranjbar, Masoud Amanlou, **Bahareh Dabirmanesh**
- 21. Decolorization of dyes by a novel sodium azide-resistant spore laccase from a halotolerant bacterium, *Bacillus safensis* sp. strain S31.**  
*Water Science and Technology*, Volume 77, Pages 2867-2875  
 Maryam Siroosi, Mohammad-Ali Amoozgar, Khosro Khajeh, **Bahareh Dabirmanesh**
- 22. Activity, stability and structure of laccase in betaine based natural deep eutectic solvents**  
*International Journal of Biological Macromolecules*, Volume 107, 2018, Pages 2574-2579  
 Shima Khodaverdian, **Bahareh Dabirmanesh\***, Akbar Heydari, Elahe Dashtban Mogham, Khosro Khajeh, Farideh Ghazi
- 23. Cloning and characterization of *Halomonas elongata* L-asparaginase, a promising chemotherapeutic agent**  
*Applied Microbiology and Biotechnology*, Volume 101, 2017, Pages 7227-7238  
 Ali Ghasemi, Sedigheh Asad, Mahboubeh Kabiri, **Bahareh Dabirmanesh**

- 24. Hippocampal asymmetry: differences in the left and right hippocampus proteome in the rat model of temporal lobe epilepsy**  
*Journal of Proteomics*, volume 154, 2017, Pages 22-29  
 Leila Sadeghi, Albert Anatolyevich Rizvanov, Ilnur Ildusovich Salafutdinov, **Bahareh Dabirmanesh**, Mohammad Sayyah, Yaghoub Fathollahi, Khosro Khajeh
- 25. Improvement of chondroitinases ABCI stability in natural deep eutectic solvents**  
*Journal of Molecular Liquids*, Volume 227, 2017, Pages 21-25  
 Sara Daneshjou, Shima Khodaverdian, **Bahareh Dabirmanesh**, Fereshteh Rahimi, Somayeh Daneshjoo, Farideh Ghazi, Khosro Khajeh
- 26. A novel enzyme based SPR biosensor to detect bromocriptine as an ergoline derivative drug**  
*Sensors & Actuators: B. Chemical*, Volume 240, 2017, Pages 519-527  
 Safoura Jabbari, **Bahareh Dabirmanesh**, Seyed Shahriar Arab, Massoud Amanlou, Sara Daneshjou, Somayeh Gholami, Khosro Khajeh
- 27. Development of a label-free SPR sensor for detection of matrix metalloproteinase-9 by antibody immobilization on carboxymethyl dextran chip**  
*Biosensors and Bioelectronics*, volume 81, 2016, Pages 510-516  
 Sara Mohseni; Tahereh Tohidi Moghadam; **Bahareh Dabirmanesh**; Safoura Jabbari; Khosro Khajeh
- 28. Porous silicon nanoparticle as a stabilizing support for chondroitinase**  
*International journal of biological macromolecules*, volume 94, 2017, Pages 852-858  
 Sara Daneshjou, **Bahareh Dabirmanesh**, Fereshteh Rahimi, Khosro Khajeh
- 29. Expression, purification, refolding and in vitro recovery of active full length recombinant human MMP-9 in *Escherichia coli***  
*Protein Expression and Purification*, volume 126, 2016, Pages 42-48  
 Sara Mohseni; Tahereh Tohidi Moghadam; **Bahareh Dabirmanesh**; Khosro Khajeh
- 30. An alternative allosteric pathway in thermophilic methylglyoxal synthase.**  
*International Journal of Biological Macromolecules*, Volume 93, Pages 526-533  
 Mona Atabakhshi-Kashi, Malihe Mohammadi, Reihaneh Mirhassani, **Bahareh Dabirmanesh**, Reza Hasa Sajedi, Khosro Khajeh
- 31. Specificity enhancement towards phenolic substrate by immobilization of laccase on surface plasmon resonance sensor chip.**  
*Molecular catalysis B*, Volume 121, 2015, Pages 32-36  
 Safoura Jabbari, **Bahareh Dabirmanesh**, Khosro Khajeh
- 32. A semi-rational approach to obtain an ionic liquid tolerant bacterial laccase through  $\pi$ -type interactions.**  
*International Journal of Biological Macromolecules*, Volume 79, 2015, Pages 822–829  
**Bahareh Dabirmanesh**, Khosro Khajeh, Farideh Ghazi, Bijan Ranjbar, Seyed-Masoud Etehad.
- 33. Phenol removal from refinery wastewater by mutant recombinant horseradish peroxidase.**  
*Biotechnology and Applied Biochemistry*, Volume 61, 2014, Pages 226-229  
 Sedigheh Asad, **Bahareh Dabirmanesh**, Khosro Khajeh.
- 34. Studies on the refolding process of recombinant horseradish peroxidase.**  
*Journal of Molecular Biotechnology*, Volume 54, 2013, Pages 484-492  
 Sedigheh Asad, **Bahareh Dabirmanesh**, Nasser Ghaemi, Seyed Masoud Etehad, Khosro Khajeh

35. **Extra EF Hand Unit (DX) Mediated Stabilization and Calcium Independency of a Amylase.**  
*Journal of Molecular Biotechnology, Volume 53, 2013, Pages 270-277*  
Leila Sadeghi, Khosro Khajeh, Nasrin Mollania, **Bahareh Dabirmanesh**, Bijan Ranjbar.
36. **Inhibition mediated stabilization effect of imidazolium based ionic liquids on alcohol dehydrogenase.**  
*Journal of Molecular Liquids, Volume 170, 2012, Pages 66–71*  
**Bahareh Dabirmanesh**, Khosro Khajeh, Bijan Ranjbar, Farideh Ghazi, Akbar Heydari.
37. **Molecular detection of human Parechovirus type-1 in stool samples in children with diarrhea.**  
*International Journal of infectious disease, Volume 16, 2012, Pages 673–676*  
Farideh Ghazi; Zohreh Ataei ; **Bahareh Dabirmanesh**.
38. **Mesophilic alcohol dehydrogenase behavior in imidazolium based ionic liquids.**  
*Journal of Molecular Liquids, Volume 161, 2011, Pages 139-143*  
**Bahareh Dabirmanesh**, Khosro Khajeh, Jafar Akbari, Hanieh Falahati, Somayeh Daneshjoo , Akbar Heydari.
39. **Effect of ionic liquids on the structure, stability and activity of two related amylases.**  
*International Journal of Biological Macromolecules, Volume 48, 2011, Pages 93-97*  
**Bahareh Dabirmanesh**, Sara Daneshjou, Abbas Akhavan Sepahi, Bijan Ranjbar, Ramazan Ali Khavari-Nejad, Pouria Gill, Khosro Khajeh.
40. **Purification and characterization of a thermostable phytate resistant  $\alpha$ -amylase from *Geobacillus* sp. LH8.**  
*International Journal of Biological Macromolecules, Volume 46, 2010, Pages 27-36*  
Nasrin Mollania, Khosro Khajeh, Saman Hosseinkhani, **Bahareh Dabirmanesh**.
41. **Purification and characterization of a novel amylopullulanase that converts pullulan to glucose, maltose, and maltotriose and starch to glucose and maltose.**  
*Enzyme and Microbial Technology, Volume 46, 2010, Pages 57-63*  
Shekufeh Zareian, Khosro Khajeh, Bijan Ranjbar, **Bahareh Dabirmanesh**, Marzieh Ghollasi, Nasrin Mollania.
42. **Evidence on the presence of two distinct enzymes responsible for the reduction of selenate and tellurite in *Bacillus* sp. STG-83.**  
*Enzyme and Microbial Technology, Volume 45, 2009, Pages 1-6*  
Seyed Masoud Etehad, Khosro Khajeh, Mohammadreza Soudi, Parisa Tajer Mohammad Ghazvini, **Bahareh Dabirmanesh**.
43. **Analysis of Polyprotein processing in human parechovirus type1 by gene cloning and expression (in Persian).**  
*Medical journal of Tabriz University of Medical Sciences, Volumn 29, Issue 2, 2007, Pages 109-114.*  
Farideh Ghazi, Aliakbar Gorzin, Shams shahrabadi M., **Bahareh Dabirmanesh**

## CONFERENCE PRESENTATIONS

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40 international and national congresses in Biochemistry, Biotechnology and pharmacology

## BOOKS

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- Participated in writing a chapter entitled “**Machine learning in surface plasmon resonance for environmental monitoring**” for Artificial Intelligence and Data Science in Environmental sensing-

Cognitive Data Science in Sustainable Computing, edited by Mohsen Asadnia, Amir Razmjou, Amin Beheshti. **Paperback ISBN: 9780323905084**

<https://www.elsevier.com/books/artificial-intelligence-and-data-science-in-environmental-sensing/asadnia/978-0-323-90508-4>

- **Principle of Chromatography (in Persian):** Compiled by: Dabirmanesh B, Khalkhal E and edited by Ghazi F
- **Translation of 4th edition of Molecular Genetics of Bacteria:** written by Jeremy W Dale and Simon F Park