

## Curriculum Vita

### Sara Daneshjou

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### EDUCATION

- 2011-2016 **PhD:** Nanobiotechnology, Tarbiat Modares University(Tehran)

Thesis title: activity-stability study of chondroitinase ABC I immobilized on porous silicon nanoparticle

- 2008-2010 **MSc:** Microbiology, Islamic Azad University Science and Research Branch (Tehran)

Thesis title: Screening, isolation and selection of indigenous bacteria producing alpha-amylase and investigating the functional and secretory role of the end fragment of alpha-amylase obtained from the indigenous bacterium *Bacillus* sp.HR03 , (Distinguished student)

- 2004-2008 **BSc:** Microbiology, Islamic Azad University, North Tehran Branch (Tehran),(Distinguished student)

### HONORS AND AWARDS:

-Receiving invention silver medal: Ursolic acid production from apple peels and validation of anti-aging activities, Khayyam international invention and innovation festival on May 15th 2021.

- Student supported by Iran's National Elites Foundation (introduced by Tarbiat Modares University)

### RESEARCH INTERESTS

- The use of nanomaterials in the direction of transfer - stabilization of drugs/pharmaceutical and industrial enzymes
- Nanoparticles with biological pattern: construction and application
- The use of nanomaterials in repairing and increasing the strength of damaged tissues: with an emphasis on bone tissues
- Design and manufacture of nanobiosensors to detect diseases and pathogenic bacteria

## **PUBLICATIONS**

- 1- Seyed Amirhamzeh Aminisough, Sara Daneshjou\*, and Khosro Khajeh  
Effects of ZnO nanoparticles on mortality and growth performance in broiler chickens,  
Scientific Reports, 2025**
- 2- Zahra Latifi Azizi & Sara Daneshjou\*  
*Bacillus Megaterium* as TiO2 Nano-Factory: Biosynthesis, Characterization, and  
Antibacterial Activity, Waste and Biomass Valorization, 2025**
- 3- Fatemeh Sheikh Ansari & Sara Daneshjou\*  
Optimizing the green synthesis of antibacterial TiO2 - anatase phase nanoparticles  
derived from spinach leaf extract, Scientific Reports, 2024**
- 4- Sajedeh Hajiali, Sara Daneshjou\*, Khosro Khajeh , Somayeh Daneshjoo  
Investigation of pH and Temperature Changes on the Biomimetic Synthesis of Iron  
Oxide Magnetic Nanoparticles from the Bacterial Source of *Bacillus Megatrium*, Journal  
of Inorganic and Organometallic Polymers and Materials, 2024**
- 5- Seyed Amirhamzeh Aminisough, Sara Daneshjou\*, and Khosro Khajeh  
Biosynthesis, characterization, and investigation of cytotoxic activities of selenium  
nanoparticles utilizing *Limosilactobacillus fermentum*, Green Processing and Synthesis,  
2024**
- 6- Fatemeh Afraei, Sara Daneshjou\* and Bahareh Dabirmanesh  
Synthesis and evaluation of nanosystem containing chondroitinase ABCI based On  
hydroxyapatite, AMB Express, 2024**
- 7- Mehrbod Mehrafza, Sara Daneshjou\*, Khosro Khajeh & Abbas Akhavan Sepahi  
Green Fabrication of Cobalt Oxide Nanoparticles by *Bacillus megaterium* and Their  
Antibacterial Activities, BioNanoScience, 2024**
- 8- Safoura Jabbari, Bahareh Dabirmanesh, Sara Daneshjou & Khosro Khajeh  
The potential of a novel enzyme-based surface plasmon resonance biosensor for direct  
detection of dopamine, Scientific Reports journal, 2024**
- 9- Sajedeh Hajiali, Sara Daneshjou\*, Somayeh Daneshjoo , Khosro Khajeh  
Biosynthesis Optimization of Antibacterial-Magnetic Iron Oxide Nanoparticles  
from *Bacillus megaterium*, Biological Trace Element Research, 2024**
- 10- Zahra Latifi Azizi ,Sara Daneshjou\*  
Bacterial nano-factories as a tool for the biosynthesis of TiO2 nanoparticles:  
characterization and potential application, applied biochemistry and biotechnology, 2024**

**11- Hamed Mirshekari, Bahareh Dabirmanesh, Sara Daneshjou, Khosro Khajeh**  
**Fabrication and evaluation of a plasmonic biosensor based on silica-coated gold nanorods for highly-sensitive detection of anti-Müllerian hormone, Colloid and Interface Science Communications, 2024**

**12- Fereshteh Alizadeh , Sara Daneshjou\***  
**A comprehensive review of the application of nanotechnology in agricultural, Modares Journal of Biotechnology, 2024**

**13- Fereshteh Alizadeh , Sara Daneshjou\***  
**Protein Nanoparticles and their applications, Studies of Biological Sciences and Biotechnology, 2024**

**14- Atefeh Hassanli, Sara Dahnesjou\*, Bahareh Dabirmanesh , Khosro Khajeh**  
**Improvement of thermal-stability of chondroitinase ABCI immobilized on graphene oxide for the repair of spinal cord injury, Scientific Reports journal, 2023**

**15- Sajedeh Hajiali, Sara Daneshjou\*, Somayeh Daneshjoo**  
**Biomimetic synthesis of iron oxide nanoparticles from Bacillus megaterium to be used in hyperthermia therapy, AMB Express journal, 2022**

**16- Fatemeh Afraei, Sara Daneshjou\*, Bahareh Dabirmanesh**  
**Examination of the effect of pH and temperature on the activity of nanosystem containing chondroitinase ABCI based on hydroxyapatite, Modares Journal of Biotechnology, 2023**

**17- Mehrbod Mehrafza, Sara Daneshjou \*, Safoura Jabbari, Khosro Khajeh**  
**Immobilization of Chondroitinase Enzyme on Porous Silicon Nanoparticle: Characterization and Stability Determination, journal of Nanomaterials, 2021**

**18- Hoda Dashtipour, Ali Noras ,Sara Daneshjou\*, Sohameh Mohebi ,Neda Mousavi Niri**  
**Recent progress in (nano) biosensors: AI application, Modares Journal of Biotechnology, 2022**

**19- Sara Daneshjou\*, Bahareh Dabirmanesh, Fereshteh Rahimi, safoura jabbari and Khosro Khajeh**  
**Catalytic parameters and thermal stability of chondroitinase ABCI on red porous silicon nanoparticles, Journal of Biotechnology, 2020**

**20- Sara Daneshjou, Bahareh Dabirmanesh, Fereshteh Rahimi and Khosro Khajeh**  
**Porous silicon nanoparticle as a stabilizing support for chondroitinase, International Journal of Biological Macromolecules, 2017**

**21-** *Sara Daneshjou, Shima Khodaverdian, Bahareh Dabirmanesh, Fereshteh Rahimi, Somayeh Daneshjoo, Farideh Ghazi and Khosro Khajeh*

**Improvement of chondroitinases ABCI stability in natural deep eutectic solvents, Journal of Molecular Liquids, 2017**

**22-** *Safoura Jabbari, Bahareh Dabirmanesh, Seyed Shahriar Arab, Massoud Amanlou, Sara Daneshjou, Somayeh Gholami, Khosro Khajeh*

**A novel enzyme based SPR-biosensor to detect bromocriptine as an ergoline derivative drug, Sensors and Actuators B: Chemical, 2017**

**23-** *Bahareh Dabirmanesh\*, Sara Daneshjou\*, Abbas Akhavan Sepahi, Bijan Ranjbar, Ramazan Ali Khavari-Nejad, Pooria Gill, Akbar Heydari, Khosro Khajeh*

**Effect of ionic liquids on the structure, stability and activity of two related**

**$\alpha$ -amylases, International Journal of Biological Macromolecules, 2011**

**24-** *Ali Salimi, Khosro Khajeh, Fatemeh Yousefi, Marzieh Ghollasi, Sara Daneshjou, Hesam Tavoli, Sirous Ghabadi. Investigation on possible roles of C-terminal propeptide of a ca-independent  $\alpha$ -amylases from Bacillus, J. Microbiol. Biotechnol, 2012*

## **CONFERENCE PRESENTATIONS**

**1- Fereshteh Alizadeh, Sara Daneshjou\***

**Quantum dots in cancer cell imaging, 1st International Congress on Cancer Prevention, 2024, Iran**

**2- Fereshteh Alizadeh, Sara Daneshjou\***

**A review on biosynthesis of metal nanoparticles and their medical applications, The second international conference of biology and laboratory sciences, 2024, Iran**

**3- Fereshteh Alizadeh, Sara Daneshjou\***

**Nanoflowers and their applications, seventh International Conference on Interdisciplinary Studies in Nanotechnology, 2024, Iran**

**4- Hoda Hoseini, Sara Daneshjou\*, Mohammad Aminjafari, Aboulfazl Mirzapoor, Mahdi Fakoor**

**The development of a biocompatible nanocomposite patch to relieve stress on cracked bone tissue, 3rd Intl. Conference on Researches in Nanotechnology & Nanoscience, 26 April, 2023, Iran**

**5- Fatemeh Sheikh Ansari, Sara Daneshjou\***

**Green Synthesis of TiO<sub>2</sub>NPs by Spinach Extract, 6th International Conference on interdisciplinary studies in Nanotechnology, 20 May, 2023, Iran**

6- *Fatemeh Afraei, Sara Daneshjou\**, *Bahareh Dabirmanesh*

**Examination the effect of pH on the activity of nanosystem containing chondroitinase ABCI based on hydroxyapatite, 3rd Intl. Conference on Researches in Nanotechnology & Nanoscience, 26 April, 2023, Iran**

7- *Fereshteh Alizadeh, Sara Daneshjou\**

**An overview of the role of nanotechnology in agriculture to improve food safety, National conference of applied research on food security, food safety and health, 16 October, 2023, Iran**

8-*Shima Shahrivar, Sara Daneshjou\*, Aboufazl Mirzapoor, Mahdi Fakoor*

**Design and synthesis of nanocomposite patch based on Hydroxyapatite/PVA in order to repair and strengthen cracks on bone tissue, 6 th International Conference on interdisciplinary studies in Nanotechnology, 20 May, 2023, Iran**

9- *Seyed Amirhamze Aminisough, Sara Daneshjou\*, Khosro Khajeh, Abbas Akhavan Sepahy*

**Biosynthesis of selenium nanoparticles by *Limosilactobacillus fermentum*, 3rd Intl. Conference on Researches in Nanotechnology & Nanoscience, 26 April, 2023, Iran**

10- *Sara Daneshjou\*, Sajedeh Hajiali and Somayeh Daneshjoo*

**Investigation of antibacterial effect of biomimetic iron oxide nanoparticles by disk method International Conference on recent advances in engineering,innovation and technology, 20 may, 2022, Square conference center, Brusseles, Belgium**

11- *Sara Daneshjou\*,Fatemeh Afraee, Bahareh Dabirmanesh*

**Investigating the stability of nanosystem containing chondroitinase ABCI enzyme based on hydroxyapatite, the 3rd national conference on Micro/Nanotechnology,20 July,2022,Iran**

12- *Safoura Jabbari, Bahareh Dabirmanesh, Sara Daneshjou, Khosro Khajeh*

**Monitoring of dopamine as a biomarker candidate in neurodegenerative diseases using surface plasmon resonance based on laccase enzyme, International Conference of biomarkers,22-24 February,2023,Iran**

13-*Sara Daneshjou\*,Mehrbod Mehrafza, Khosrow Khajeh,Abbas Akhavan sepathi*

**Investigation of antibacterial effect of cobalt oxide bionanoparticles, International Conference on new research and achievements in science, engineering and technologies, 12 December, 2021, Seoul, South Korea**

14- *Sara Daneshjou\*, Sajedeh Hajiali and Somayeh Daneshjoo*

**Biomimetic synthesis of iron nanoparticles from *Bacillus Megatrium* bacterial and investigation of its antimicrobial effect, 5<sup>th</sup> International Congress on global studies in technology and engineering sciences,25 January, 2022, Iran**

15- **Sara Daneshjou\***, *Mehrbod Mehrafza and Khosro Khajeh*

**Synthesis of cobalt oxide particles using *Bacillus megatrium* and optimization of the produced concentration.** *2nd International Conference on Nanotechnology and Nanoscience, 7th August, 2021, University of Tehran, Iran*

16-**Sara Daneshjou\***, *Mehrbod Mehrafza, Bahareh Dabirmanesh and Khosro Khajeh*  
**Porous silicon nanoparticles as a drug carrier in the body.** *International Conference on Nanotechnology & Nanoscience 30th December, 2020 ,Iran University of Tehran*

17- **Sara Daneshjou**, *Khosro Khajeh, Bahareh Dabirmanesh, Fereshteh Rahimi*

**Activity and stability analysis of immobilized chondroitinase on porous silicon nanoparticles . The National Conference on Protein and Peptide Sciences**

*"from Basic to Medical and Industrial Application "Shiraz University 10 & 11 Dec 2014.*

18- **Sara Daneshjou**, *Bahareh Dabirmanesh , Fereshteh Rahimi,Safoura Jabbari, Somayeh Daneshjoo ,Khosro Khajeh*

**Chondroitinaseimmobilization on red porous silicon nanoparticles:Quantitative Analysis of the Kinetic Parameters.** *Conference of biophysical chemistry.*

19- **Sara Daneshjou**, *Bahareh Dabirmanesh , Fereshteh Rahimi, Safoura Jabbari, Khosro Khajeh*  
**Stability enhancement of labile Chondroitinase by immobilization on red porous silicon nanoparticles.** *International Conference on Nanostructures (ICNS6).*

20- **Sara Daneshjou**, *Bahareh Dabirmanesh ,Fereshteh Rahimi,Khosro Khajeh*  
**Chondroitinase ABCI immobilization on green porous silicon nanoparticles (Kinetic Parameters and cytotoxicity).** *6<sup>th</sup> International Congress on Nanoscience and Nanotechnology(ICNN2016).*

21- *Safoura Jabbari, Bahareh Dabirmanesh, Sara Daneshjou, Khosro Khajeh*

**Investigation of enzyme activity towards ABTS by immobilization of laccase on carboxymethyl dextran (CMD) chip surface.** *Conference of biophysical chemistry.*

22- *jabbari, safour; Dabirmanesh, Bahareh; daneshjou, sara; Khajeh, Khosro*

**Development of a specified laccase, for detection of phenolic compounds using surface plasmon resonance technique.** *International Conference on Nanostructures (ICNS6).*

23- **Sara Daneshjoo** , *Bahareh Dabirmanesh , Abbas Akhavan Sepahi , Bijan ranjbar , Ramezan Ali Khavari-nejad , Khosro Khajeh*

**Effects of [HMIm][Cl] and [BMIm][Cl] on the activity, stability and structure of  $\alpha$ -amylases,**  
The 16th National Conference and the 4th International Conference of Iranian Biology,2010

24- Fatemeh Yousefi, **Sara Daneshjoo**, Ali Salimi , Abolfazl Golestani

**Analysis of the role of the C-terminal propeptide in BKA (Bacillus sp. KR8104  $\alpha$ -Amylase) secretion**, The 16th National Conference and the 4th International Conference of Iranian Biology,2010

25- Bahareh Dabirmanesh\*, **Sara Daneshjoo**\*, Abbas Akhavan Sepahi, Bijan Ranjbar, Ramazan

Ali Khavari-Nejad, Pooria Gill, Akbar Heydari, Khosro Khajeh

**Stability-structure relation and aggregation protection of two related  $\alpha$ -amylases in ionic liquids.** 4th symposium on the alpha \_ amylase family Slovakia September-26-30, 2010

26- Ali Salami, Khosro Khajeh, Marzieh Gholasi, Fatemeh Yousefi, **Sara Daneshjou**, Sirous Ghobdi.

**Characterization of the C-terminal propeptid bye cloning ,sequencing and expression of a**

**Ca –independent  $\alpha$ -amylases from Bacillus sp. KR-8104.** 4th symposium on the alpha \_ amylase family Slovakia September-26-30, 2010

## **BOOKS**

- Nanotechnology in agricultural and food industries (Author)
- Application of nanotechnology in animal biotechnology (translated)
- Biomimetic Nano engineered Materials For Advanced Drug Delivery(translated)
- Microbial Nanotechnology(translated)
- Metal nanoparticles, production and application in pharmaceutical sciences(translated)

## **Executive records:**

- Nanobiotechnology Group Director of Tarbiat Modares University
- Adviser of Nanobiotechnology Scientific Association of Tarbiat Modares University

