

## 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- Fatemeh Sheikh Ansari & Sara Daneshjou\*  
**Brookite-phase TiO<sub>2</sub> synthesized by *Spinacia oleracea*: structure, photocatalytic activity and light-enhanced antimicrobial efficacy**, *Discover Nano*, 2026
- 2- Seyed Amirhamzeh Aminisough, Sara Daneshjou\*, and Khosro Khajeh  
**Effects of ZnO nanoparticles on mortality and growth performance in broiler chickens**, *Scientific Reports*, 2025
- 3- Zahra Latifi AzizI & Sara Daneshjou\*  
***Bacillus Megaterium* as TiO<sub>2</sub> Nano-Factory: Biosynthesis, Characterization, and Antibacterial Activity**, *Waste and Biomass Valorization*, 2025
- 4- Mahboubeh Mohseni , Abolfazl Mirzapoor armaki\*, Sara Daneshjou  
**Study of antimicrobial properties of polyvinyl alcohol/chitosan nanocomposite films containing original & color removal pomegranate peel extract and zinc oxide nanoparticles**, *food processing and preservation journal*, 2025
- 5- Fatemeh Sheikh Ansari & Sara Daneshjou\*  
**Optimizing the green synthesis of antibacterial TiO<sub>2</sub> - anatase phase nanoparticles derived from spinach leaf extract**, *Scientific Reports*, 2024
- 6- 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
- 7- 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
- 8- Fatemeh Afraei, Sara Daneshjou\* and Bahareh Dabirmanesh  
**Synthesis and evaluation of nanosystem containing chondroitinase ABCI based On hydroxyapatite**, *AMB Express*, 2024
- 9- Mehrbod Mehrafza, Sara Daneshjou\*, Khosro Khajeh & Abbas Akhavan Sepahi  
**Green Fabrication of Cobalt Oxide Nanoparticles by *Bacillus megaterium* and Their Antibacterial Activities**, *BioNanoScience*, 2024
- 10- 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

- 11- SajedeH Hajiali, **Sara Daneshjou\***, Somayeh Daneshjoo , Khosro Khajeh  
**Biosynthesis Optimization of Antibacterial-Magnetic Iron Oxide Nanoparticles from *Bacillus megaterium***, *Biological Trace Element Research*, 2024
- 12- Zahra Latifi Azizi ,**Sara Daneshjou\***  
**Bacterial nano-factories as a tool for the biosynthesis of TiO<sub>2</sub> nanoparticles: characterization and potential application**, *applied biochemistry and biotechnology*, 2024
- 13- 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
- 14- Fereshteh Alizadeh , **Sara Daneshjou\***  
**A comprehensive review of the application of nanotechnology in agricultural**, *Modares Journal of Biotechnology*, 2024
- 15- Fereshteh Alizadeh , **Sara Daneshjou\***  
**Protein Nanoparticles and their applications**, *Studies of Biological Sciences and Biotechnology*, 2024
- 16- 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
- 17- 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
- 18- 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
- 19- Mehrbod Mehrafza, **Sara Daneshjou\*** , Safoura Jabbari, Khosro Khajeh  
**Immobilization of Chondroitinase Enzyme on Porous Silicon Nanoparticle: Characterization and Stability Determination**, *journal of Nanomaterials*, 2021
- 20- Hoda Dashtipour, Ali Noras ,**Sara Daneshjou\*** ,Sohameh Mohebi ,Neda Mousavi Niri  
**Recent progress in (nano) biosensors: AI application**, *Modares Journal of Biotechnology*, 2022
- 21- **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

- 22- **Sara Daneshjou**, Bahareh Dabirmanesh, Fereshteh Rahimi and Khosro Khajeh  
**Porous silicon nanoparticle as a stabilizing support for chondroitinase,**  
*International Journal of Biological Macromolecules*, 2017
- 23- **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
- 24- 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
- 25- 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
- 26- Ali Salimi, Khosro Khajeh, Fatemeh Yousefi, Marzieh Ghollasi, **Sara Daneshjou**, Hesam Tavoli, Sirous Ghabadi. **Investigation on possible roles of C-terminal propeptide of a calcium-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 Tio2NPs by Spinach Extract**, 6<sup>th</sup> 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**, 3<sup>rd</sup> 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\***, Aboulfazl Mirzapoor, Mahdi Fakoor

**Design and synthesis of nanocomposite patch based on Hydroxyapatite/PVA in order to repair and strengthen cracks on bone tissue**, 6<sup>th</sup> 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***, 3<sup>rd</sup> 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 engineeering,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 3<sup>rd</sup> 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 sepahi

**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

**Chondroitinase immobilization 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 Daneshjou**\*, 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 propeptide by 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