

# Atena Farahpour

📍 Advanced Science Research Center, 85 St Nicholas Terrace, New York, NY 10031  
📍 Memorial Sloan Kettering Cancer Center, 1275 York Avenue, ZRC-13S, New York, NY 10065  
🏠 Atena Farahpour | ✉️ afarahpour@gradcenter.cuny.edu | 📞 +1 (646) 318-8013

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## EDUCATION

Ph.D. in Chemistry (Nanotechnology and Materials) Aug 2022–Present  
**City University of New York, Advanced Science Research Center & Memorial Sloan Kettering Cancer Center**, New York, US  
Thesis title: *Design of Peptides for Enhanced mRNA Therapeutics Delivery*  
Supervisor: [Dr. Rein Ulijn](#) and [Dr. Daniel Heller](#)

M.Sc. in Polymer Chemistry Sep 2017–Sep 2020  
**Ferdowsi University of Mashhad**, Mashhad, Iran  
GPA: **17.58/20** (with honors)  
Thesis title: *Synthesis and characterization of carriers for gene delivery based on poly( $\beta$ -amino ester) and evaluation of their properties*  
Supervisor: [Dr. Navid Ramezani](#) and [Dr. Reza Kazemi Oskuee](#)

B.Sc. in Applied Chemistry Sep 2013–Jul 2017  
**Ferdowsi University of Mashhad**, Mashhad, Iran  
GPA: **17.14/20** (with honors)

## RESEARCH INTERESTS

Drug delivery  
Biomaterials  
Gene delivery

## EXPERIENCE and PROJECT DESCRIPTION

**Research Assistant in Prof. Rein Ulijn's lab.**  
• Project Title: Discovery of potential nanocarriers using supramolecular co-assembly of peptides and drugs. Jan 2023-Present

**Research Assistant in Prof. Daniel A. Heller's lab.**  
• Project Title: Design of Peptides for Enhanced mRNA Therapeutics Delivery. 2023-Present

**Research Assistant in Kazemi Oskuee's lab.**  
• Synthesis of breakable cholesterol-lactose for targeted gene delivery. 2021-2022

**Research Assistant in Prof. Navid Ramezani's lab.**  
• Synthesis of different kinds of biopolymers for gene delivery. 2018-2020

## PUBLICATIONS

**A. Farahpour**, N. Ramezani, L. Gholami, S. Askarian, A. Banisadr, and R. Kazemi Oskuee, "[Synthesis and characterization of polyethyleneimine-terminated poly\( \$\beta\$ -amino esters\) conjugated with pullulan for gene delivery](#)," *Pharmaceutical Development and Technology*, 27.5 (2022): 606-614.

M. Khalifeh, A. Badiie, N. Ramezani, A. Sahebkar, **A. Farahpour**, and R. Kazemi Oskuee, "[Lactosylated lipid calcium phosphate-based nanoparticles: A promising approach for efficient DNA delivery to hepatocytes](#)," *Iranian Journal of Basic Medical Sciences*, 27, no. 8 (2024): 952.

N. Berisha, **A. Farahpour**, M. Ramakrishnan, C. Chen, S. A. McPhee, T. Wang, T. Li, K. Hema, M. Panagiotakopoulou, V. Athiyarath, Y. Marciano, M. Coste, E. Sherman, R. V. Ulijn, D. A. Heller, "Directed discovery of high-loading nanoaggregates enabled by drug-matched oligo-peptide excipients," *Under 2<sup>nd</sup> revision at Chem.*

- CONFERENCES** **A. Farahpour**, N. Ramezani, S. Askarian, R. Kazemi Oskuee, and A. Banisadr, "Using FTIR spectroscopy to characterization Poly( $\beta$ -amino ester) synthesized with spermine end group," *4<sup>th</sup> Iranian Applied Chemistry Conference*, 23-25 July 2019.
- A. Farahpour**, N. Ramezani, and R. Kazemi Oskuee, "Synthesis of poly ( $\beta$ -amino ester) based on polyethyleneimine and characterization using FTIR", *4<sup>th</sup> Iranian Applied Chemistry Conference*, 23-25 July.
- M. Khalifeh, R. Kazemi Oskuee, A. Badiee, N. Ramezani, A. Sahebkar, **A. Farahpour**, A. Mahmoodi, A. Boostan, "Enhanced Delivery of DNA to Liver Cells via Lactose-Targeted Lipid Coated Calcium Phosphate (LCP) Nanoparticles." *8<sup>th</sup> International E-congress on Nanosciences and Nanotechnology*, February 17-18, 2021, Mashhad University of Medical Sciences, Mashhad, Iran.
- POSTERS** **A. Farahpour**, N. Berisha, D. A. Heller R. V. Ulijn, "Directed discovery of peptide/drug depot materials through sequence-selective co-assembly." *NanoBioNYC*, Fall 2023, GC/CUNY, NY, New York, USA.
- WORKSHOPS**
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|---|----------------------------|
| <b>Open Educational Resources (OER) Workshop</b>  | 2023 July 12 <sup>th</sup> |
| <b>Pharmaceutical studies, isoesters and GMPs</b> | 2018 November 26           |
| <b>In silico drug design</b>                      | 2018 July 18               |
| <b>Gaussian and Gaussview software</b>            | 2018 May 10                |
| <b>Nanotechnology, Theory and Application</b>     | 2015 December 21           |
| <b>Health, Safety, Environment (HSE)</b>          | 2017 November 15           |
| <b>Biosafety</b>                                  | 2017 November 15           |
- HONORS AND AWARDS**
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| City University of New York graduate fellowship award  | 2022 |
| NanoBioNYC student awards in Biomedical Materials category for the work titled Cancer Drug Delivery  | 2023 |
| Awarded Summer 2023 Cohort of the Open Knowledge Fellowship: The Fellowship is hosted by the Mina Rees Library.  | 2023 |
| Merit-based admission offer to the M.Sc. program polymer chemistry, at Ferdowsi University of Mashhad, without participating in the national graduate school entrance exam | 2017 |
| Ranked 3rd among graduated chemistry students entering the B.Sc. program in (Exceptional Talents Award)  | 2017 |
| Ranked 3rd among graduated chemistry students entering the M.Sc. program in (Exceptional Talents Award)  | 2020 |
- TEACHING EXPERIENCES**
- Adjunct Lecturer**, Hunter College, City University of New York
- Inquiries - Nature of Matter (Laboratory). *Fall 2023*
- Teaching Assistant**, Ferdowsi University of Mashhad
- Principles and Industries of Paint, *Dr. Navid Ramezani* *Spring 2019*
- Teaching Assistant**, Ferdowsi University of Mashhad
- General Chemistry , *Dr. Navid Ramezani* *Spring 2020*
- INSTRUMENTATION EQUIPMENT**
- Mass spectrometer (LCMS)**  
**High-Performance Liquid Chromatography (HPLC)**  
**Dynamic light scattering (DLS)**  
**Circular dichroism (CD) spectrometer**  
**UV/Vis spectrometer**  
**Peptide Synthesizer**

**Fluorometer**  
**Infrared spectroscopy (FTIR)**  
**Nuclear magnetic resonance spectroscopy (NMR)**  
**Luminometer**

**LANGUAGE**

**Persian:** Native

**English:** Professional working proficiency