

# Arash Arashkia, PhD

Department of Molecular Virology

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*Updated on June 2025*

## Profile

Medical biotechnology researcher with over two decades of experience in vaccine design, viral immunology, and translational research. I actively contribute to collaborative, multidisciplinary projects with a primary focus on the development of both preventive and therapeutic vaccines, particularly against human papillomavirus (HPV).

## Education

**PhD, Medical Biotechnology | Pasteur Institute of Iran, Tehran | 2003–2009**

**MSc, Medical Biotechnology | Tarbiat Modares University, Tehran | 2000–2003**

**BSc, Medical Laboratory Sciences | Shahid Beheshti University of Medical Sciences, Tehran | 1997–1999**

**Associate's, Medical Laboratory Sciences | Guilan University of Medical Sciences, Rasht | 1992–1994**

## Languages

**Persian (Farsi):** Native; **Azari:** Native; **English:** Intermediate working proficiency

## Academic & Professional Appointments

**2015–Present** | Head, Department of Molecular Virology | Pasteur Institute of Iran

**2011–Present** | Faculty Member, Molecular Virology | Pasteur Institute of Iran

**2012–2020** | Head, Laboratory of Virology (Shemiran Branch) | Pasteur Institute of Iran

**2010–2011** | Postdoctoral Fellow, Molecular Virology | Pasteur Institute of Iran

**2020–2021** | Member, COVID-19 Laboratory Network Task Force | Pasteur Institute of Iran

## Key Research Projects

- HPV Vaccine Development
  - Immunoinformatic design of mutant HPV16 E7 constructs (2016–2018)
  - Therapeutic mRNA vaccine targeting HPV E6/E7 (2022–present)
  - Second-generation L2 antigen platforms (preventive vaccines)
  - Comparative immunological evaluation of HPV vaccines in murine models (2023–present)
- Novel Vaccine Platforms
  - TLR-agonist-based vaccine prototypes for broadly neutralizing antibodies (2020–2023)
  - Development of synthetic virus-like particles as novel vaccine delivery platforms (2022–present)

## Teaching & Training

Course Instructor, Pasteur Institute & Tehran University of Medical Sciences: Vaccinology; Genetic Engineering; Pharmaceutical Biotechnology; Advanced Medical Virology; Biosafety; New Topics in Biotechnology

Guest Lecturer, Alzahra University and Islamic Azad University: Undergraduate & graduate courses in biotechnology

Workshops & Short Courses: Outbreak Investigation & Control (COMSTECH, Islamabad, Dec 2023); HPV Vaccination & Diagnostics (Pasteur Institute, Sep 2023); Rotavirus Detection & Vaccines (Feb 2020); HPV: New Topics (Sep 2018); plus WHO/Pasteur Institute biosafety and qPCR trainings (2011–2016)

## Thesis Supervision

- Supervisor/Co-Supervisor of PhD Theses:
  - Fatemeh Hajari Taheri (2014–2019): CAR-T cells against VEGFR-2 (Pasteur Institute of Iran)
  - Fariba Dorostkar (2017–2020): CpG/STING agonist and HPV16 E7 immunogenicity (Tehran University of Medical Sciences)
  - Nasser Hashemi Goradel (2018–2022): PeptiCRAd prime-boost against HPV16 E7 (Tehran University of Medical Sciences)
  - Maryam Kадkhodazadeh (2019–2022): Universal adenoviral vector using the SpyTag/SpyCatcher (Pasteur Institute of Iran)
  - Maryam Mashhadi Abolghasem Shirazi (2020–2023): HPV L2 epitope-based vaccine with TLR agonists (Islamic Azad University of Medical Sciences)
  - Rahim Soliemani (2021–2023): HPV E6/E7 and HERV-K Env transcription study (Tehran University of Medical Sciences)

- Amirhosein Maali (2021–2024): SpyTag/SpyCatcher CAR-T targeting CD22 (Pasteur Institute of Iran)
- Saba Fegghi-Najafabadi (2021–ongoing): Anti-PSMA PD-1/CD28 switch CAR-T (Pasteur Institute of Iran)
- Vida Mohammadi (2021–ongoing): Modular SARS-CoV-2 RBD-HBsAg VLP vaccine (Pasteur Institute of Iran)
- Supervisor/Co-Supervisor of MSc Theses:
  - Hana Barzegar (2012–2013): HPV16 pseudovirion production (Islamic Azad University, Tehran)
  - Hengameh Sharifi (2012–2013): HPV18 pseudovirion construction (Islamic Azad University, Tehran)
  - Mahsa Joulai (2013–2014): Adenovirus virucidal activity assays (Islamic Azad University, North Tehran Branch)
  - Hojatollah Javanmard (2014–2019): NGF expression in HEK-293 vector studies (Tehran University of Medical Sciences)
  - Maryam Mashhadi Abolghasem Shirazi (2015–2016): Detoxified HPV16 E7 subunit vaccine (Islamic Azad University, Tehran)

### Service & Memberships at Pasteur Institute of Iran

- Member, Research Center for Emerging & Reemerging Infectious Diseases (2017–present)
- Member, Public Health Rapid Response Team (2011–present)
- Member, Biosafety Council (2013–2020; 2025–present)
- Member, Technology Committee (2020–2023)
- Member, Postgraduate Education Council (2018–2023)
- Member, Intellectual Property Valuation Committee (2014–2024)

### Honors & Awards

1. Faculty Excellence Award, Pasteur Institute of Iran (2020, 2023)
2. Full PhD Scholarship, Pasteur Institute of Iran (2003–2008)
3. National Entrance Exam: PhD 2nd rank (2003); MSc 3rd rank (2000)
4. First-rank BSc graduate, Shahid Beheshti University of Medical Sciences (1999)

### Publications

Author of more than 80 peer-reviewed articles in fields of HPV immunology, oncolytic virotherapy, adenoviral vectors, SARS-CoV-2 vaccines, and viral pathogenesis.

Google Scholar: <https://scholar.google.com/citations?user=VMrajREAAAAJ&hl=en>