CURRICULUM VITAE

Personal Information

Name: Nikta Ziaei
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Education

1-Ph.D. Student, September 2023, Institute of Molecular and Translational Medicine, Faculty of Medicine and Dentistry, Palacký University, Olomouc, Czech Republic

2-Master of Science **(M.Sc.)**, 2017-2021, **Biotechnology**, Department of Animal Biotechnology**.** National Institute of Genetic Engineering and Biotechnology, Tehran, Iran.

Thesis title: **"Design and fabrication of gradient generator microfluidic device to determine the CPAs optimum concentration per exposure time during embryo vitrification".**

3-Bachelor of Science **(B.Sc.)**, 2013-2017, **Biotechnology,** College of Agricultural Engineering. Isfahan University of Technology, Isfahan, Iran.

Professional Experience

1-Contributed as a **Research Assistant in Dr. Marián Hajdúch M.D., research group, "preparation of 3D cultures for high-throughput screening"** Palacky University, **IMTM**, Olomouc, Czech Republic. **(April 2023 – September 2023)**

2- Contributed as a **Research Assistant, "Nanoscale graphene oxide effects, as a new cryoprotectant, on viability and quality of mouse vitrified-warmed blastocysts" project, NIGEB, Tehran, Iran (2021-2022).**

3- Contributed as a **Lab Assistant in the microfluidic chips fabrication Laboratory, NIGEB, Tehran, Iran (2021-2022).**

4- Contributed as a **Research Assistant, "Fabrication of three-dimensional printing prototype of embryo vitrification microfluidic device" project, NIGEB, Tehran, Iran. (2021-2022)**

Publication

1-Toward embryo cryopreservation-on-a-chip: A standalone microfluidic platform for gradual loading of cryoprotectants to minimize cryoinjuries. Published in Biomicrofluidics (2021).
Pouria Tirgar, Fatemeh Sarmadi, Mojgan Najafi, Parinaz Kazemi, Sina AzizMohseni, Samaneh Fayazi, Ghazaleh Zandi, **Nikta Ziaei**, Aida Shoushtari Zadeh Naseri, Allen Ehrlicher, Mojtaba Dashtizad*.

2-Thermally conductive graphene-based nanofluids, a novel class of cryosolutions for mouse blastocysts vitrification, Published in Reproductive Biology (2022).
Samaneh Fayazi, Nasrin Damvar, Shiva Molaeian, Fatemeh Sarmadi, Parinaz Kazemi, Pouria Tirgar, Maryam Bagherzadeh, Sadaf Esfandiari, **Nikta Ziaei**, Mojtaba Dashtizad*.

Manuscript in Preparation

1-Zandi GH, **Ziaei N**, AzizMohseni S, Dashtizad M. Development of gradient generator microfluidic chip to determine the CPAs optimum concentration per exposure time for embryo vitrification. **Target Journal: Lab On a Chip.**

2-Zandi GH, **Ziaei N**, Dashtizad M. Deep looking on molecular pathway involve in gamete and embryo cryopreservation. **Target Journal: Human Reproduction Update.**

Patent

Dashtizad M, Fardmanesh M, Tirgar P, Sarmadi F, Kazemi P, Najafi M, Fayazi S, **Ziaei N**, Zandi GH. Certificate of Patent Registration. " fabrication process of microfluidic chip for vitrification of mouse blastocyst" NIGEB, Tehran, Iran. Invention Reg. book NO.106076, September 2021, International Classification: A01N1/02.

Skills

Laboratory skills:

Cellular Biology techniques:
-Cell culture
-Western blot
-Protein isolation
-Animal lab care and handling (Mouse)
-In-vitro embryo production (IVF - IVM - IVC)
-Vitrification of oocyte and embryo
-Micromanipulation of gamete and embryo

Molecular Biology techniques:

-Performing PCR
-DNA and RNA isolation and analysis

Microfluidic chip

-Fabrication of microfluidic chip:
Soft Lithography
Plasma Binding

Honor

Top Student, **top ranked (1th) M.Sc. students**, National Institute of Genetic Engineering and Biotechnology (NIGEB), 2021.

Ranked 30th within approximately 3000 participants in Nationwide University Entrance Exam, Iran, 2017.

Workshop and symposium

1-Contributed as an attendance “Genome Editing " CRISPER-Cas system"” symposium and workshop organized by National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran, Nov.2017
2- Contributed as an attendance “Molecular Genetic Techniques "Genetic Engineering and PCR"” workshop organized by National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran, Dec.2017.
3-Contributed as the Executive Committee member “CRISPER” symposium and workshop organized by National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran, Nov.2018.
4- Contributed as an attendance " Microfluidic and its applications in medicine and engineering" The 2th national Congress organized by Sharif University of Technology, Tehran, Iran, Mar.2018
5-Contributed as an instructor, "Mouse Embryo Vitrification" workshop, organized by National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran, Jul 2022.

6-Contributed as an instructor, "Mouse In-vitro Embryo Production" workshop, organized by National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran, Aug.2022.

Conference Presentation

Ziaei N, AzizMohseni S, Dashtizad M. Design and Fabrication of Microfluidic Device to generate Gradient Concentration of Cryprotectants for Vitrification Mouse Embryo. The 21th national and 9th International Congress on Biology, Feb.2021, Semnan, Iran.

Research Interests

-Gene Therapy/Editing
-Cellular and Molecular Bioscience
-Genetics
-Bioinformatics
    -RNA-sequencing
    -Single cell sequencing
-Biomedical & Bioengineering Application in Medicine
-Microfluidics Application in Biomedicine
-Biomaterials and Tissue Engineering
-Stem Cell's Biology

Language

English (Professional working proficiency)
Persian (Native or bilingual proficiency)

Reference

Dr. Marián Hajdúch M.D., Director of the Institute of Molecular and Translational Medicine, Palacky University in Olomouc, CZ
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Dr. Morteza Daliri, Associate Professor in Embryo immunology, Department of Animal Biotechnology, NIGEB, Tehran, Iran
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