



# Erfan Asgari



## EDUCATION AND TRAINING

01/11/2024 Genoa, Italy

**PHD(DOCTOR OF PHILOSOPHY)** University of Genoa

**Field of study** Biochemistry

01/09/2019 – 22/03/2024 Genova, Italy

**MASTER'S OF MEDICAL AND PHARMACEUTICAL BIOTECHNOLOGY** University of Genoa

- Execution of gene cloning with pET-28c (+) vector by restriction enzymes, encompassing RNA extraction, cDNA synthesis, PCR amplification, and transformation into E. coli TOP10 cells.
- Cultured E. coli BL21 Gold DE3 cells for HSP70-6XHis protein expression, optimizing conditions for enhanced yield.
- Using Immobilized Metal Affinity Chromatography (IMAC) using TALON resin, proficient in purifying His-tagged proteins to high purity.
- quantification and purity assessment using SDS-PAGE and Bradford assay for protein. Familiar with Western blotting techniques for protein detection and analysis.
- HPLC analysis and Malachite Green assays for ATPase activity measurement.
- Sulforhodamine B (SRB) for cytotoxicity evaluation

**Final grade** 107 out of 110 |

**Thesis** Biological evaluation of novel HSP70 inhibitors as candidate drugs combined with F508del CFTR correctors to contrast cystic fibrosis

22/09/2014 – 21/07/2018 Gorgan, Iran

**BACHELOR'S DEGREE** Professor Ahad Yamchi - Gorgan University of Agricultural Sciences and Natural Resources

Spearheaded a bioinformatics project to analyze whole proteomics data of HT29-colon cancer cells:

- MASS data refinement using a self-designed Python API for KEGG database gene mapping.
- Performed Protein-Protein Interaction (PPI) analysis using Cytoscape, identifying novel genes using GeneMania and a custom Python API for KEGG database.
- Collaborated closely with other groups, providing them with precise data to advance the project's objectives.

**Field of study** Biotechnology(Agricultural) | **Final grade** 17.27 out of 20

## DIGITAL SKILLS

### Gene Cloning

NEBulder HiFi DNA Assembly | Plasmid extraction | Plasmid Transformation | Agarose gel electrophoresis

### Recombinant Protein Production and Purification

6X-His Tag recombinant protein production in E.coli and purify using TALON and Nickle resin | GST-Fusion recombinant protein production and Purification | GST-fusion protein assay | Bradford Assay | SDS-PAGE | Western blot | Malachite Green Assay | HPLC Analysis | Cytotoxicity assay using Sulforhodamine B (SRB) | NCBI tools

### Bioinformatics

UniProt | restriction Enzyme | Protein - Protein Interaction analysis: Cytoscape – GeneMania | Proteins and nucleotides BLAST | Programmin language PYTHON | Bioinformatics Tools for Multiple Sequence Alignment | KEGG Pathway Enrichment Analysis | Primer Design : using Oligo7 and Primer 3 | Multialin, an online tool specified for Multiple Sequence Alignment (MSA) | AutoDock | Linux (Ubuntu Arch Linux) | Experience in Phylogenetic analysis | R Programing

## Communication Skills

hard-working attitude | Teamwork | Good time management | Responsibility | Presenting | Good listener and communicator | Motivated | Decision-making | Reliability | Written and Verbal skills

## ICDL Skills

Microsoft Powerpoint | Microsoft Word | Microsoft Excel

## Bioinformatics

Network analysis: Cytoscape

## Hobbies

Tennis | Professional Soccer player | Acting theater | horse riding | Badminton | Fitness

## WORK EXPERIENCE

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09/10/2016 – 21/01/2017 Gorgan, Iran

**BIOCHEMISTRY TEACHING ASSISTANT** DR. AHAD YAMCHI - GORGAN UNIVERSITY OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

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01/05/2024 – 31/10/2024 Genova, Italy

**RESEARCH FELLOW** PROFESSOR MICHELA TONETTI - UNIVERSITY OF GENOA - DIPARTMENT OF EXPERIMENTAL MEDICINE(DIMES)

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**Department** Experimental Medicine - Biochemistry (DIMES)

## LANGUAGE SKILLS

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Mother tongue(s): **PERSIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	B2	B2	B2	B2
<b>ITALIAN</b>	A1	A1	A1	A1	A1

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Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## CONFERENCES AND SEMINARS

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23/11/2023 – 25/11/2023 XXX CONVENTION OF INVESTIGATORS IN CYSTIC FIBROSIS, Verona, Italy

**Lead optimization of MKT-077 analogues as Hsp70 allosteric inhibitors combined with F508del CFTR correctors: a multi-drug approach to contrast cystic fibrosis. 20TH Convention of investigators in cystic fibrosis**

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