



TO MAGNIFICA RETTRICE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 6964

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Oncology and Hematology-Oncology**

Scientist- in - charge: Prof.ssa Claudia Alteri

[Name and surname]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Hassanbeiki
Name	Elahe

PRESENT OCCUPATION

Appointment	Structure
-	-

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree			
Specialization			
PhD			
Master	QUANTITATIVE BIOLOGY	UNIVERSITÀ DEGLI STUDI DI MILANO	2024
Degree of medical specialization			
Degree of European specialization			
Other			



REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date registration	of Association	City

FOREIGN LANGUAGES

Languages	level of knowledge
English	C1
Italian	B1

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award

TRAINING OR RESEARCH ACTIVITY

<p>description of activity:</p> <p>1. During Research Trainee, under the supervision of Prof. Alteri Claudia, I conducted whole-genome sequencing analysis of <i>Pseudomonas aeruginosa</i> isolates to investigate antimicrobial resistance mechanisms. My responsibilities included performing quality control of raw sequencing reads using FastQC, trimming adapters with Trimmomatic, and assembling genomes with SPAdes. I validated the quality of genome assemblies using QUAST and annotated them with Prokka to identify functional genes and resistance markers. To streamline workflows, I developed custom pipelines using shell scripting and Python for automated alignment, variant calling, and data management. Through Snippy and AMRFinder, I identified key resistance genes and mutations in <i>Pseudomonas aeruginosa</i> isolates. Additionally, I constructed phylogenetic trees using IQ-TREE to analyze evolutionary relationships between isolates and addressed challenges in genome assembly by fine-tuning SPAdes parameters and troubleshooting bioinformatics tools.</p> <hr/> <p>2. During my master's research, I investigated the influence of <i>E. coli</i>'s meroligoploid nature on gene expression by examining its replication and regulatory mechanisms. my work involved integrating mathematical modeling with both bulk and single cell RNA sequencing data to uncover positional patterns in gene expression associated with replication. this allowed me to separate the effects of global factors, such as DNA accessibility and transcriptional machinery availability, from specific regulatory influences like transcription factor mediation. my findings contribute to understanding how gene copy number variations impact expression levels, potentially informing</p>
--



growth rate predictions. this research provided me with a solid foundation in quantitative biology, enhancing my skills in mathematical modeling, machine learning, and big data analysis.

3. During my internship in Laboratory of Amir A'lam Hospital in Tehran, I conducted laboratory examinations on bodily fluid specimens to detect microorganisms, including bacteria, viruses, and pharmaceuticals. I performed Polymerase Chain Reaction (PCR) to amplify and identify specific genetic markers in microbial DNA, aiding in pathogen detection. Additionally, I utilized SDS-PAGE to analyze protein samples, enabling the study of protein expression and molecular weight. I also applied ELISA techniques for antigen and antibody detection, which provided critical insights into immune responses and pathogen presence. My role extended to bacterial cultivation and cell counting under a microscope, as well as managing laboratory operations, including organization, equipment procurement, and scheduling. This experience allowed me to apply theoretical knowledge in a hands-on environment, enhancing my laboratory skills and gaining practical exposure to various essential techniques in molecular biology.

PROJECT ACTIVITY

Year	Project
2024	laureato frequentatore (Research Trainee) in Università degli studi di Milano
2023-2024	Masters Thesis in Università degli studi di Milano
2016_2017	Internship in Laboratory of Amir A'lam Hospital in Tehran

PATENTS

Patent

CONGRESSES AND SEMINARS

Date	Title	Place

PUBLICATIONS

Books
[title, place, publishing house, year ...]
[title, place, publishing house, year ...]
[title, place, publishing house, year ...]



Articles in reviews
[title of the article, review, place, publishing house, year ...]
[title of the article, review, place, publishing house, year ...]
[title of the article, review, place, publishing house, year ...]

Congress proceedings
[title, structure, place, year]
[title, structure, place, year]
[title, structure, place, year]

OTHER INFORMATION

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: 09 Nov 2024 ,Milan