

# RIHAM OSMAN

| Clinical Laboratory Research Intern

| Ph.D. Enthusiast

**OVERVIEW** A tenacious Clinical Laboratory Research Intern and Ph.D. Enthusiast with over a year and a half (1.5) of internship experience and extensive knowledge on cell culture including 3D cell culture, DNA purification and quantification followed by genotyping, platelet purification followed by Western blot, Enzyme-Linked Immunosorbent Assay (ELISA), and other advanced lab research techniques, within leading laboratories and universities in Lebanon and France, with a strong interest in Hemato-oncology and tissue engineering.

Dealing with experts from various cultures and backgrounds, as well as being a member of many cross-functional teams and proficiency in different languages helped me develop my social intelligence, which makes me open to assist any respectable research center that valorizes scientific experimentation, quality improvement, and transparency.

## KEY

**ACHIEVEMENTS** - (2021) On the occasion of World Cancer Day, the Naef K. Basile Cancer Institute (NKBCI) at AUBMC and the King Hussein Cancer Foundation (KHCF) launched an NGO competition in which I had the honor of writing the winning proposal for “the most creative idea competition to raise cancer awareness amid the Covid-19 pandemic.”

- (2019) A Master II internship typically takes six months. However, I was able to complete all of my assignments in four months instead of six.

## WORK

### EXPERIENCE

LEBANESE UNIVERSITY  
Lab Research Intern

02/2020 – Present  
Beirut, Lebanon

- Collecting specimens in the laboratory, such as blood, and conducting simple data entry activities, such as entering patients' personal information and medical history, preparing samples for further laboratory tests, and processing
- Using centrifugation to extract cells, precipitate DNA, purify virus particles, and discern subtle differences in molecule conformation in blood samples
- Performing the enzyme-linked immunosorbent assay (ELISA) immunological assay to

clarify a macrophage-colony stimulating factor (M-CSF) related mechanism of aseptic loosening of artificial hip joints and detect osteolysis in Lebanese multiple myeloma patients

QUALITY CONTROL CENTER LABORATORIES (CCIAT)  
Lab Research Intern

12/2019 (1 Month)  
Tripoli, Lebanon

- Observing the following techniques and methods, which I had already learned theoretically during the courses, helped me to understand how they are done:
  - Gas chromatography (GC)
  - Ion-exchange Chromatography (IC)
  - Real-time Polymerase Chain Reaction (PCR)
  - Enzyme-linked immunosorbent assay (ELISA) reader
  - High-Performance Liquid Chromatography (HPLC)

HÔPITAL PAUL-BROUSSE (INSERM LABORATORY)  
Lab Research Intern (Master II)

03/2019 – 06/2019  
Paris, France

- Using the following approaches, I investigated the functional effect of a single nucleotide polymorphism (SNP) in the LNK/SH2B3 gene in the development of a myeloproliferative neoplasm (NMP) based on platelets obtained from NMP patients expressing or not the SNP SH2B3:
  - The two hematopoietic lineages cell culture
  - The purification and quantification of DNA, followed by PCR to determine the genotype of the patients (if they possess the SNP or not)
  - The purification of platelets using several low-frequency centrifugations (to prevent platelet activation) and platelet aggregation inhibitors, followed by Phosphoflow-Fluorescence-Activated Cell Sorting (FACS), a flow cytometry-based single cell-based technique for measuring phosphorylated intracellular proteins and western blots to visualize the expression of intracellular target proteins
- Prepared reports that included procedures, findings, discussions, and conclusions and included them in the preparation of my master's thesis, using the techniques described above

SAINT JOSEPH UNIVERSITY OF BEIRUT (USJ)  
Lab Research Intern

07/2018 – 08/2018  
Beirut, Lebanon

- Visualized the procedure of an RT-qPCR, which is a quantitative technique: RNA is extracted from a Drosophila sample to synthesize cDNA, and then the qPCR is performed to measure the expression of genes coding for antimicrobial peptides

SAINT JOSEPH UNIVERSITY OF BEIRUT (USJ)  
Lab Research Intern (Master I)

01/2018 – 06/2018  
Beirut, Lebanon

- Observed the solubilization and filtration of crystals accompanied by gels to visualize the stability of *Bacillus Thuringiensis* var *krustaki* and *Bacillus Thuringiensis* var *israelensis* Cry crystals for 12 days
- Studied the delta-endotoxin effects of these two *Bacillus Thuringiensis* strains on human intestinal stem cells in vitro using a 3D model that aims to mimic the intracellular

medium and the WST test -1 (colorimetric assay) to quantify proliferation and cell viability

- Prepared reports that included methods, results, analyses, and conclusions and included them in the preparation of my master's thesis

#### WATER ESTABLISHMENT OF NORTH LEBANON

01/2017 – 02/2017

Lab Research Intern

Tripoli, Lebanon

- Tested the quality of water samples collected from various sources using the membrane filtration method, and determined if potential bacterial contaminants that can contaminate water existed, and performed mineral and pH tests

#### DAR EL SHIFA HOSPITAL'S LABORATORY

06/2016 – 07/2016

Lab Research Intern

Tripoli, Lebanon

- Studied microscopic organisms, such as bacteria, viruses, archaea, fungi, and protozoa as well as the harmful impact of chemical substances on living organisms and the practice of diagnosing and treating exposures to toxins and toxicants (toxicology) and microorganisms that are especially resistant to antibiotics

<b>EDUCATION</b>	Saint Joseph University of Beirut (USJ) Master's degree, Functional Genomics and Proteomics	2019 Lebanon
	Saint Joseph University of Beirut (USJ) Bachelor's degree, Biochemistry	2017 Lebanon

**CERTIFICATIONS** - Introduction to Project Management – Online Course (2020)  
- Covid-19 Contact Tracing – Online Course (2020)  
- Empowering Communication – USJ (2017)

**INTERESTS** Keeping up with the latest developments in the clinical laboratory industry, hematology, and tissue engineering.

**SKILLS** Organization skills, high level of accuracy, interpersonal communication, scheduling, numeracy, trend awareness, flexible adaption to work, persuasion, analytical skills, decision-making, active listening, time management, task management, problem-solving.

**LANGUAGES** Arabic (*Native Language*), English (*Professional Working Proficiency*), French (*Bilingual*), Spanish (*Elementary Working Proficiency*)

Tripoli, 7 July 2021