



**DASMAN DIABETES INSTITUTE**  
Summer Internship Program  
Research • Medical • Operations



# SUMMER INTERNSHIP MANUAL

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### OVERVIEW

DDI Summer Internship program is a unique opportunity for university students to contribute to the work of the Dasman Diabetes Institute (DDI). Our internship program 8 weeks a year, i.e. June to July at Dasman Diabetes Institute.

Our internship program offers unique opportunity for university students and recent graduates in Kuwait to learn first-hand what a think tank is all about.

The interns also provide research assistance contribute their research, analysis and writing skills to a study intended for publication in a specific research area. The Responsibilities may include primary research, literature reviews, survey design and execution, statistical analysis, and technical writing.

In order to carry out a complete evaluation of our internship program, it is essential that internship coordinators, work supervisors and students complete the appropriate evaluation forms. This will help us to evaluate not only each individual internship experience, but also will show us how effectively the overall program is working. It is important to have feedback on this internship program. Therefore, we request that you give us any suggestions you consider helpful in making this program work well. We hope to broaden our internship contacts and provide internships that challenge and supplement the education our students are experiencing at Dasman Diabetes Institute.

### INTRODUCTORY PROGRAM

What is it about an internship that is so valuable? Why should you consider doing one? What advantages will you have over students who do not participate in an experiential education experience?

#### **An internship:**

- Gives you a chance to explore career fields through first-hand experience.
- Promotes development of confidence, maturity, responsibility, and skill in research practices.
- Increases the development of decision-making and analytical skills through experience in actual work environments.
- Creates a better understanding of theory by its actual application in practice.
- Helps you develop a more positive attitude toward research work as a result of seeing its usefulness on-the-job, which often leads to better grades.

- Helps you gain professional experience to include on your resume, which can significantly improve your marketability to employers.
- And greater advancement upon graduation as a result of previous experience.
- Provides useful contacts that may lead to future employment.
- Provides the support of a faculty mentor during the difficult first entry into a professional career.
- Furnishes academic credit for learning that takes place on the job.

### **ROLE EXPECTATIONS AND RESPONSIBILITIES**

#### **STUDENT**

- The intern should complete a learning agreement that defines the nature of the work experience, the learning objectives, and academic expectations. Though this contract is developed collaboratively with the Internship coordinator and the work supervisor, the student needs to reflectively plan for the internship since it represents another aspect of his/her academic program. It should reflect a level of academic rigor similar to that encountered in the classroom.

#### **INTERNSHIP COORDINATOR**

- The Internship coordinator serves as a mentor and facilitator to the student during the internship experience. The coordinator should meet consistently with the student at arranged times throughout the internship period to evaluate progress and give advice when needed.
- The Internship coordinator helps the student develop a learning contract or a suitable alternative that is relevant and workable. The student should play a major role in the initial planning and formulating stages of the internship in order to shape the learning goals to meet his or her individual needs and to fully understand the extent of his or her responsibility for the success of the experience.
- The Internship coordinator should make several contacts with the work supervisor during the internship. It is important to monitor the progress of the internship from a variety of viewpoints and to maintain close relationships with all participants.

### **WORK SUPERVISOR**

- The research project supervisor must assist with and agree to the terms established in the learning agreement.
- The supervisor should take an active role in mentoring and guiding the student to help meet learning goals, and be available for meetings or conversations with both the student and the internship coordinator.
- The research supervisor should complete the evaluation forms in a timely fashion and return them to the internship coordinator.

### **INTERNSHIP TIMELINE**

#### **TWO MONTHS PRIOR TO THE START OF THE INTERNSHIP:**

- The student should meet with the Internship Coordinator, review the Internship Manual, and site listing (provided by the Internship Coordinator); identify a site and preceptor; discuss a broad (initial) work plan with the preceptor and share the same with the work supervisor and Internship Coordinator.
- The Internship Coordinator will ascertain agreement between the research supervisor and students;

#### **ONE-MONTH PRIOR TO START OF INTERNSHIP:**

- The student is expected to fulfill all institution's requirements such as your copy of valid civil ID, related academic records, copy of CV, and HBV titer results.
- Once all the prerequisites are complete and the internship placement is made, the student is officially ready to begin the internship. Please note that students that are unofficially volunteering are not officially in a recognized internship until a formal agreement is in place.

#### **ONE-WEEK PRIOR TO STARTING THE INTERNSHIP:**

- The student must develop customized learning objectives for the internship in consultation with the Internship coordinator and supervisor; develop a detailed work plan; and obtain final approvals on the work plan (including objectives) from all parties involved, including the supervisor, and Internship

Coordinator (one-week prior to starting the internship). The Internship Confirmation Form will be signed by all parties to confirm the final work plan.

**DURING THE INTERNSHIP:**

- At the end of each week the student will submit a brief progress report to Internship Coordinator. These will be saved and also included in the final report.

**FINAL WEEK OF THE INTERNSHIP:**

At the end of the summer internship program, the interns are required to prepare poster presentation on the basis of project you experienced at DDI.

The following items must be submitted to the Internship Coordinator and Supervisor during the final week of the Internship.

- Final Internship Report
- Supervisor’s evaluation of the intern
- Student’s self- evaluation of internship experience and organizational assessment

## PROGRAM SESSIONS

The DDI Internship program is conducted ONLY ONE session in a year as per the below schedule. The duration of each session is 8 weeks. The interns can either choose one of the below option.

Internship	Internship Timeline	Applications Open	Application Deadline
Summer	June- July (2 months)	February 1	April 30

## APPLICATION

The applicant has to choose one of the sectors, either Research, or Medical or Operations sector, once you choose the sector you may have to choose 2 specializations out of which one will be assigned to you for your summer Internship as field of specialization at DDI. Please refer below specializations.

## INTERNSHIP SPECIALIZATIONS

Research	Medical	Operations
<ol style="list-style-type: none"> <li>1. Genetics and Bioinformatics</li> <li>2. Microbiology and Immunology</li> <li>3. Biochemistry &amp; Molecular Biology</li> <li>4. Population Health</li> <li>5. Animal and Imaging Core Facility</li> <li>6. Special Services Facilities</li> </ol>	<ol style="list-style-type: none"> <li>1. Diagnostics Imaging Center (DIC)</li> <li>2. Life Style</li> <li>3. Clinical Services</li> <li>4. Training and Education</li> <li>5. DAFNE</li> <li>6. Clinical Care Research &amp; Trials</li> </ol>	<ol style="list-style-type: none"> <li>1. Geo Health</li> </ol>

## PROGRAM SCHEDULE

WEEKS	DAYS	PROGRAM
First Week	Day 1	Registration, Induction and Dasman Tour
	Day 2	Orientation on "Lab Safety procedures and Emergency Codes" Introduction to <b>Biostatistics</b> Introduction to <b>Bioinformatics</b>
	Day 3	<b>National Dasman Diabetes Biobank Training</b>
	Day 4	
	Day 5	Training on " <b>How to make Posters</b> " Interns Reporting to respective Unit Supervisors
	2nd to 8th Week	
		Submission of posters to the Coordinator for printing
		<b>Poster Presentations day</b> - posters to be presented by all the interns either by individual or a team; and Issuance of Certificate to Interns

## INTERNSHIP TRAININGS

### I. Good Clinical Practice (GCP) Trainings

Good Clinical Practice (GCP) is a process that incorporates established ethical and scientific quality standards for the design, conduct, recording and reporting of clinical research involving the participation of human subjects.

Compliance with GCP provides public assurance that the rights, safety, and well-being of research subjects are protected and respected, consistent with the principles enunciated in the Declaration of DDI and ensures the integrity of clinical research data. The conduct of clinical research is complex and this complexity is compounded by the need to involve a number of different individuals with a variety of expertise, all of who must perform their tasks skillfully and efficiently.

#### 1. Research Ethics

Research that involves human subjects or participants raises unique and complex ethical, legal, social and political issues. Research ethics is specifically interested in the analysis of ethical issues that are raised when people are involved as participants in research. There are three objectives in research ethics

The following is a general summary of some ethical principles:

1. **Honesty:** Strive for honesty in all scientific communications. Honestly report data, results, methods and procedures, and publication status. Do not fabricate, falsify, or misrepresent data. Do not deceive colleagues, research sponsors, or the public.
2. **Objectivity:** Strive to avoid bias in experimental design, data analysis, data interpretation, peer review, personnel decisions, grant writing, expert testimony, and other aspects of research where objectivity is expected or required. Avoid or minimize bias or self-deception. Disclose personal or financial interests that may affect research.
3. **Integrity:** Keep your promises and agreements; act with sincerity; strive for consistency of thought and action.
4. **Openness:** Share data, results, ideas, tools, resources. Be open to criticism and new ideas.
5. **Respect for Intellectual Property:** Honor patents, copyrights, and other forms of intellectual property. Do not use unpublished data, methods, or



- results without permission. Give proper acknowledgement or credit for all contributions to research. Never plagiarize.
6. **Confidentiality:** Protect confidential communications, such as papers or grants submitted for publication, personnel records, trade or military secrets, and patient records.
  7. **Responsible Publication:** Publish in order to advance research and scholarship, not to advance just your own career. Avoid wasteful and duplicative publication.
  8. **Respect for colleagues:** Respect your colleagues and treat them fairly.
  9. **Legality:** Know and obey relevant laws and institutional and governmental policies.
  10. **Animal Care:** Show proper respect and care for animals when using them in research. Do not conduct unnecessary or poorly designed animal experiments.

## 2. Lab Safety and Quality Guidelines

1. Be considerate for the safety of yourself as well as the safety of your fellow workers by performing your job in a correct manner by following the Laboratory Best Practice Standard Operating Policies and Procedures, disposing dangerous waste in proper receptacles and reporting unsafe conditions to your supervisor.
2. Understand and know how to use all types of hand held fire extinguisher in the laboratory.
3. Acquaint yourself with laboratory instructions in case of fire, accident, explosion or other emergency.
4. Learn the layout of the building and the location of emergency exits, telephones, firefighting equipment and how it works. Please consult the Emergency Evacuation Guidelines & DDI Emergency Response Code document, a copy of which is kept in the laboratory at all times.
5. Obtain first-aid treatment and report injuries to the BRD-LST no matter how minor. In case of accident, please fill in the Adverse Event / Incident Report Form detailing the nature of the incident and the corrective action taken. Most important, be alert! Most accidents are due to carelessness.

## II. Trainings

### 1. Proposal Writing

The Interns will have brief orientation / lecture on how to write a Research proposal by DDI

#### What is Research Proposal?

A research proposal is intended to convince others that you have a worthwhile research project and that you have the competence and the work-plan to complete it. Generally, a research proposal should contain all the key elements involved in the research process and include sufficient information for the readers to evaluate the proposed study.

Regardless of your research area and the methodology you choose, all research proposals must address the following questions: What you plan to accomplish, why you want to do it and how you are going to do it.

The proposal should have sufficient information to convince your readers that you have an important research idea, that you have a good grasp of the relevant literature and the major issues, and that your methodology is sound.

### 2. Reference Tools and Literature Review

The DDI Library will house a modern resources which provides a welcoming and well managed facility that will encourage research of DDI community. The institute of the 21<sup>st</sup> century will focus on knowledge. Hence, the Library will be the heart of all research and academic activities taking place at DDI. It will act as the core facility center and function as knowledge hub. The researchers and students will use their center as an extended facility for their research, education and learning purpose.

### 3. Poster Presentation

At the end of your Internship program, you are required to do poster presentation on what you have learned from the project you are involved.

Research **posters** summarize information or research concisely and attractively to help publicize it and generate discussion. The **poster** is usually a mixture of a brief text mixed with tables, graphs, pictures, and other **presentation** formats.

### III. National Dasman Diabetes BioBank Training

Overall internship goal to expose interns on how to provide high quality human and animal biomaterials in a manner that is safe, well documented, efficient and ethically sound, to all interested investigators who have received approval from the Ethical Review Committee, which functions as Institutional Review Board for DDI for academic testing and research.

#### Internship Projects:

1. Laboratory safety aspects, Importance of Biobank, human biomaterials processing,
2. Nucleic acid extraction and characterization,
3. Basic histological techniques,
4. Cryopreservation methods,
5. Data and Sample quality management, confidentiality issues

#### Internship Trainings:

1. Pre-Analytical Laboratory Skills
2. Data and Quality Management & Assessment

### IV. Specialization Training

After the first of basic trainings, the interns will be moved to their respective specialization department for 7 weeks. The work supervisor will train throughout the program. At the end of the program, the interns are required to do a poster presentation on the basis of project you experienced at DDI.

## CONTACT

#### INTERNSHIP COORDINATOR

**DR. VEERAMANI MARIMUTHU**

**MANAGER LIBRARY, RESEARCH OPERATIONS AND PROJECT MANAGEMENT (ROPM) &**

**INTERNSHIP COORDINATOR**

DASMAN DIABETES INSTITUTE, KUWAIT

PHONE: +965 2224 2999 EXT. 6066,

EMAIL: [SUMMERINTERNSHIP@DASMANINSTITUTE.ORG](mailto:SUMMERINTERNSHIP@DASMANINSTITUTE.ORG)