



**International Federation of Medical
Students Association – Egypt**
(IFMSA-EGYPT)



**The Arab Society for Medical Research
National Research Centre – Cairo, Egypt**
(ASMR)

Research Training Program for the Medical Students

Under the Theme:

Students and Research Initiative "Towards Better Health"

Under The Patronage of

Prof. Dr. Hany El Nazer

President of National Research Centre- Egypt,
President of Arab Society for Medical Research

ASMR Director: Prof. Dr. Karam Mahdy

Secretary General of Arab Society
National Research Center

IFMSA Directors

Mohamed Salama Draz

National Project Coordinator

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National Officer of Medical Education

July 30th, 2008– October 2nd, 2008
National Research Centre
Cairo - Egypt

INTRODUCTION

Scientific research plays a very important role in our efforts to maintain health and combating diseases. Research helps us create new knowledge and develop proper tools for the use of existing knowledge. Not only does it enable health care providers to diagnose and treat diseases, research also provides evidence for policies and decisions on health and development the need for more research, However, the knowledge and tools available are not always adequate to tackle existing health problems and there is a constant and never-ending need to generate new information and develop improved and more effective ways of protecting and promoting health and of reducing disease.

Here we are preparing to hold a unique project called (Students and Research Initiative - Towards Better Health).

The project will be held at the National Research Centre, in collaboration with Arab Society for Medical Research (ASMR), under patronage and with support of Prof. Dr Hany El Nazer (president of NRC- Egypt, president of Arab Society for Medical Research), The project will begin July 30, 2008 and continue according to its time plan.

Our main goal is to improve medical research in all Egyptian medical schools with good use of all available resources, to raise medical services level and to have high quality research that exceeds international levels in both number and quality, especially when students are part of such actions.

We have a lot of invisible powers, we have students who are in need for more activities to help them to be updated, broad minded, highly skilled, powerful workers, aiming and working to help community and moreover having the spirit o try the challenge.

We have research, which is always the best for solving and treating any problem, but here in our country we always have a defect and for many reasons research is not always our way to solve our problems. Therefore, we have the power but still need more clarification for how to use it.

Our community has many medical and non-medical problems that increase more and more, and here appears the need for this powerful solution "Research". We will work on research not only to solve community problems but also to improve research field itself.

The project focuses on students and research and it works on development of both. For students, it works on improvement of students skills at both personal and medical level by their involvement in research filed either as research assistant or as a student researcher. For research, it works to improve it in both quality and quantity, which will be achieved by students sharing in project.

We are aiming to help both students and research to serve each other to be better, towards the best and towards better health.

GENERAL PLAN

The training course will be conducted as three phases;

Phase I: It includes training of 54 medical student from Egypt by July 2008 (see detail plain)

Phase II: training of Arabian Medical students, the proframe will be settled by March, 2009.

Phase III: training of International Medical students, the proframe will be settled by March, 2010.

Benefits of Engaging Medical Students in Health Research

Targeting medical students early in their careers is a long-term strategy for promoting health research in general. Most of the research to date, on the effectiveness of such a strategy, has shown that research experience, as a medical student, is strongly associated with postgraduate research involvement. Engaging medical students in 'Health Research' will assist them to:

- Understand the role of research in quality medical practice.
- Use modern communication and information technology to access and manage medical information.
- Apply the principles of evidence-based medicine in clinical decision-making.
- Solve health problems.
- Contribute to the published research output of their faculty .
- Identify future careers, establish important contacts, and secure better residency positions.
- Become trained in the design and execution of scientific studies.
- Have a better understanding of the innovative medical techniques, materials, and tools.
- Enhance analytical thinking abilities.
- Bring breadth and depth to their medical education.
- Improve eligibility for postgraduate specialty training programs and academic appointments.
- Contribute to the medical literature by publishing the results; and become more informed medical clinicians.

Even if the experience of doing research as a student does not lead to a later career in academic medicine, research experience can help improve students' skills in :

- Searching and critically appraising the medical literature.
- Independent continued learning.
- Writing research papers .

Vision

Having best medical research field all over the world with best medical students and doctors dealing with it, towards better health is the idea of this training

Goal

Improvement of medical research in all Egyptian medical schools with good use of all available resources, to raise medical services level and to have high quality research that exceeds international levels in both number and quality, especially when students are part of such actions.

Objectives

- To orient medical students about research and its methodologies.
- To enable students to share in research activities at undergraduate level.
- To improve students' skills at both personal and medical levels.
- To enable students to be more creative and motivated to help their communities and solve their problems.

Expected outcome of the training course

- Increasing number of medical research at national level.
- Improving quality of active working research.
- Spread of research, with variation, to involve all fields of medicine in all medical schools.
- Sharing more in medical research activities at international level.
- Focusing on research that can help community and solve its problems.

DETAILED PLAN FOR PHASE I PROGRAMME

1st generation of young researchers "Trial Project"

The training will be in the form of practical application of medical students in active research projects which requires prior training on the basis of medical research before the practical application.

As a future plan for the project, there will be a system for inviting and exchange of Arabic and International students from different Arabic countries to share in this research projects.

Phase one of training programme will be conducted as two steps;

Step I: Workshop on "Basics of the Medical Scientific Research Methodology " during the period from 30th July – 7th August, 2008

Step II: Participating research projects during the period 7th August – 2nd October, 2008

The details of each step will include the following:

I – Workshope on:

"Basics of the Medical Scientific Research Methodology "

30 July – 7 August, 2008

I. Director of the workshop:

Prof. Dr. Ammal Mokhtar, Research Prof. of Public Health and Community Medicine; Community Medicine Dept., National Research Center- Egypt

II. Introduction

Scientific and medical research is conducted for many reasons; to develop and test new drugs, treatments, vaccines, or diagnostic techniques; to discover how diseases develop and why they occur in some people and not others; to better understand the aging process...etc.

The importance of conducting medical research based on solid scientific evidence is now well recognized yet not widely implemented, and thus reducing the possible impact on health services in developing countries. The immediate consequences are stagnation of the quality of service delivery and ill health of the population.

Some ways to develop a better health system are: to promote research relevant to problems in the field, to strengthen the human and material resources for this research and to create a mechanism, which would assist researchers to address their own country needs. Development of appropriate technologies and training of personnel in research methodology is components of such a mechanism.

III. Objectives:

1. to provide participants with the skills in the area of research, to enable them to identify the research needs in their countries and to perform research studies and proposals of high quality in their respective areas of specialty
2. to enable participants to critically read, appraise and interpret medical scientific literature within the frame of research synthesis and evidence based medicine.

IV. Duration of the workshop: seven days along one week starting from 30th July to 7th August 2008

V. Theme of the workshop

The workshop on Research Methodology will focus on clinical research issues such as study design, basic of sampling, data collection, analysis and processing and systematic review of the literature and ethical and human rights issues in research

VI. Topics of the workshop:

1. Scientific methods
2. Formulation of research question and setting objectives
3. Study designs and its types;
 - Descriptive studies: cross sectional study, case reports, case series

- Case-control study
 - Cohort study
 - Intervention studies: randomized controlled trial (individual and cluster)
4. The clinical situation with special emphasis on sensitivity, specificity and predictive values
 5. Sampling and sample size
 6. Survey and surveillance
 7. Questionnaires and interviews
 8. Data collection, measurements with special emphasis on precision and accuracy
 9. Common pitfalls with special emphasis on bias, confounding and validity
 10. Ethical issues
 11. Fundamentals for planning a research protocol

VII. Expected workshop outcome:

By the end of the course, participants will be able to:

- 1) Describe the characteristics of the different study designs used in clinical research and understand when to apply a certain study design and describe its advantages and disadvantage
- 2) Identify types of samples and principles of sample size calculation
- 3) Explain the following terms and their relevance in clinical research
 - Bias
 - Confounding
 - Effect modification
- 4) Describe the different research strategies in social science and during conducting surveys
 - types of questionnaire
 - qualitative research
- 5) Discuss basis for data collection, analysis and processing and basic statistical methods used to analyze medical data
- 6) Discuss the ethical issues when conducting clinical research

VIII. Trainers:

The trainers are experts who are specialists in related topics being professors and assistant Prof. of public health and community medicine as well as medical ethics' and research projects

The Preliminary Workshop Program

Date	Time	Topic	Purpose	Speaker
30 th of July	10:00 -10:30	▪ Welcome and Introduction		
	10:30 -12:00	Introduction to Research & Research Methodology	To build understanding of the principles/basis of research; its major elements, the research process, steps in development of research proposal and components of the research methodology	▪ <u>Prof. Dr/ Ammal Mokhtar,</u> <i>Research Prof. of Public Health and Community Medicine</i>
	12:00 -12:30	<i>break</i>		
	12.30 – 14:30	Selecting & formulating research problem	<ul style="list-style-type: none"> ▪ To provide guidelines for planning and prioritizing problems for research and formulation of Research Questions ▪ To go through a step-by-step process of setting objectives 	▪ <u>Prof. Dr Nihad Ahmed,</u> <i>Research Prof. of Public Health and Community Medicine</i>
31 st of August	10:00 -12:00	Research Design & descriptive study	To provide over view on types of studies with special emphasis on the exploratory and descriptive research); with special emphasis on cross sectional study	▪ <u>Dr. Amany Tawfeek,</u> <i>Research of Public Health and Community Medicine</i>
	12:00 -12:30	<i>break</i>		
	12.30 – 14:30	Analytical studies (Case control study vs. cohort study)	To identify criteria for selecting both types, the basic steps in conducting each study and basis for its analysis (relative risk, attributable risk/odds ratio); with special emphasis on (prospective –longitudinal and retrospective studies)	▪ <u>Prof. Dr. Samia Abdel Razak,</u> <i>Research Prof. of Public Health and Community Medicine</i>

Date	Time	Topic	Purpose	Speaker
3 rd of August	10:00 -12:00	Intervention studies (Randomized clinical trials)	To identify criteria for selecting this type of the study in human, the basic steps in conducting a intervention studies	▪ <u>Prof. Dr. Hanaa Emmam,</u> <i>Research Prof. of Public Health and Community Medicine</i>
	12:00 -12:30	break		
	12.30 – 14:30	Sampling	To identify types of samples and principles of sample size calculation	▪ <u>Assist. Prof. Dr. Walaa Foaad,</u> <i>Research Assist. Prof. of Public Health and Community Medicine</i>
4 th of August	10:00 -12:00	Validity, Reliability, sensitivity, specificity bias and confounding	To Explain the terms and their relevance in clinical research	<u>Assist. Prof. Dr. Somia Ibrahim,</u> <i>Research Assist Prof. of Public Health and Community Medicine</i>
	12:00 -12:30	break		
	12.30 – 14:30	conducting surveys and surveillance	To identify how to use Survey and surveillance and differences between them with special emphasis on pretest and pilot study	<u>Prof. Dr. Aida Abdel Mohsen,</u> <i>Research Prof. of Public Health and Community Medicine</i>
5 th of August	10:00 -11:00	Selection of variables and data collection tools (questionnaire and interviews)	To identify types of variables and identify data collection techniques and tools with special emphasis on questionnaire and interviews	▪ <u>Dr. Thanaa Rabah,</u> <i>Research of Public Health and Community Medicine</i>
	11.00 – 12:00	Qualitative vs Quantitative research	To define type of research to be used and its criteria (cons and prons)	<u>. Dr. Lobna Ahmed,</u> <i>Research of Public Health and Community Medicine</i>

Date	Time	Topic	Purpose	Speaker
	12:00 -12:30	break		
	12.30 – 14:30	data processing and analysis, data presentation and basic statistical methods	To identify content of the plan, how to process and present data (Manually, By computer, Categorizing and Coding) To discuss basic statistical methods used to analyze medical data	▪ <u>Prof. Dr. Iman Salama,</u> <i>Research Prof. of Public Health and Community Medicine</i>
6 th of August	10:00 -12:00	Ethical issues when conducting clinical research	To identify principles of ethical theories , process of informed decision making, health and human rights	▪ <u>Prof. Dr. Waffaa Abdel Ala,</u> <i>Research Prof. of Pathology, moderator of research ethics committee</i>
	12:00 -12:30	break		
	12.30 – 14:30	Formulation of research protocol	To demonstrate headings of the research protocol	▪ <u>Prof. Dr. Amina,</u> <i>Prof. of Pathology,</i>
7 th of August	10:00 -12:00	implement working group activity	To practically apply what was learnt in the course through solving case studies as working group activities	▪ <u>Prof. Dr/ Ammal Mokhtar</u>
	12:00 -12:30	break		
	12.30 – 15:00	Presentation of the nine ongoing projects (each for 15 min)	To provide participants with an overview on the ongoing NRC nine projects.	▪ <u>Principal investigators of the ongoing nine projects</u>

II. Participating in Research Projects

7th August – 2nd October, 2008

54 medical students from 12 faculties of medicine all over Egypt will share in 9 research projects as two groups (27 student in each group and 3 students per research project) and this will be arranged as follows:

Group one: August 7th till September 4th (4 weeks)

Group two: September 7th till October 2nd (4 weeks)

Program: practical participation in the research work, including the practical and experimental, for at least 3 days/week for 4 weeks.

The participation in research projects step comprised of dealing with training the students on nine ongoing projects in NRC with the following concepts:

- Egyptian terrestrial plants and Red Sea marine fungi will be subjected to comprehensive bioassay guided chemical investigations to evaluate their activities in preventing and treating some skin diseases, osteoporosis and certain types of cancer
- Preparation and evaluation of dietary supplement for protection from the occurrence of chronic inflammatory disease, atherosclerosis and some types of cancer.
- Design, develop and evaluate new functional foods formula by adding, concentrating or extract the active ingredients to be tested for management of obesity and diabetes
- Screen 1000 Egyptian children for renal diseases, and establishment of a true reference value for urinary chemical constituents of that age group
- Characterize the avian influenza virus in Egyptian poultry at molecular level and use killed virus to induce immunity in chicken and mice
- Delivery of effective biomarkers for accurate early diagnosis of prostate cancer with high specificity. Use of these biomarkers in screening of prostate cancer mainly in high risk group
- Establishment of sustainable environmental management system in an Egyptian village with a population less than 1000 capita. All the environmental problems encountered in drinking water and sanitation will be investigated thoroughly. Also, their impact on health will be taken into consideration
- Proper clinical assessment, define the spectrum of chromosomal abnormalities and study the molecular defects in candidate genes responsible for familial congenital heart disease
- Establishment of Egyptian genetic database and molecular characterization of the prevalent mutational patterns of some genetic disorders

Thus, beyond the adoption, adaptation and application of existing knowledge, there remains a substantial need for research to create new knowledge and technologies and to translate these into effective interventions that will enable people to be healthy ... everywhere.

The details of the nine active NRC projects are as follows:

Research Project: 1

Title of the Project		Phenolic Phytopharmaceuticals for preventing and treating certain diseases.											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Pharmaceutical chemistry, Biological evaluation											
Type of RE Project		Lab. Work											
Department/Hospital		Department of Chemistry & Plant Taxonomy											
Head of Department		Dr. Heba Hassan Barakat											
P.I. co. P.I.		Dr. Mahmoud Nawar Dr. Mohamed Amin El.Ansary											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim: Egyptian terrestrial plants and Red Sea marine fungi will be subjected to comprehensive bioassay guided chemical investigations to evaluate their activities in preventing and treating some skin diseases, osteoporosis and certain types of cancer.											
		Background: The used plant derived drugs are actually pure phenolics isolated from terrestrial plants or marine plant. Phenols are considered among the most potent and therapeutically promising bioactive plant substances because they possess diverse effects on biological systems.											
		Techniques employed: Chemical and Biological.											
		Role of the student: Training and share experimental works.											
		Outcome: Acquiring experience in lab. Drug research.											
		Working hours : 8-10 h											
		Number of students (per period/per year) : 2-3											

Research Project: 2

Title of the Project		The Use of Advanced Technologies for Production and Evaluation of Novel Dietary Supplements for Reducing the Risk of Chronic Disease											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Medical nutrition											
Type of RE Project		Experimental work											
Department/Hospital		Department of Food sciences & Nutrition											
Head of Department		Dr. Ibrahim Mohamed Badawy											
P.I. co. P.I.		Dr. Sahar Yousif El-Oqbi Dr. Doha Abdou Mohamed											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim: preparation and evaluation of dietary supplement for protection from the occurrence of chronic inflammatory disease, atherosclerosis and some types of cancer.											
		Background: One of the most important problems that face different communities in the world is combating diseases. Drugs used for treatment may be expensive or may have severe side effects. The solution may reside in food which may have beneficial effects towards diseases.											
		Techniques employed: Experimental animal evaluation.											
		Role of the student: Training and share experimental work.											
		Outcome: Acquiring experience in experimental works.											
		Working hours : 8-10 h											
		Number of students (per period/per year) : 2-3											

Research Project: 3

Title of the Project		Formulation and development of special and natural formulae by adding and concentration of active ingredients to control leptin and insulin resistance in obesity and type 2 diabetes.												
Organization		National Research Centre												
Country		Egypt												
Institution		NRC Cairo. Egypt												
Medical Domain		Medical nutrition												
Type of RE Project		Clinical trials and Biochemical evaluation.												
Department/Hospital		Department of Food sciences & Nutrition												
Head of Department		Dr. Ibrahim Mohamed Badawy												
P.I. co. P.I.		Dr. Salwa Ahmed Mostafa El- Shebiny Dr. Laila Hana Mousad												
Language(s)		English												
Duration of the Project (in weeks)		48 weeks												
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)	
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)	
Description of the Project		Aim : Design, develop and evaluate new functional foods formula by adding, concentrating or extract the active ingredients to be tested for management of obesity and diabetes												
		Background: Obesity and type 2 diabetes are complicated by the development of both leptin and insulin resistance respectively. Different formulae of natural functional foods showed a decrease in many of the obesity and diabetic complications.												
		Techniques employed : Clinical and Biochemical												
		Role of the student : Training clinical and biochemical research												
		Outcome : Aquiring experience in clinical and biochemical medical nutrition												
		Working hours : 8-10 h												
		Number of students (per period/per year) : 2-3												

Research Project: 4

Title of the Project		Screening Egyptian children for renal diseases with emphasis on chronic kidney disease children aiming at ameliorating their complications and give them better life style.											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Clinical chemistry											
Type of RE Project		Lab. Work											
Department/Hospital		Department of Clinical & Chemical Pathology											
Head of Department		Dr. Shadia Hassan Ragab											
P.I. co. P.I.		Dr. Iman El- Ghrory Dr. Manal Fouad Mohamed											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim: Screen 1000 Egyptian children for renal diseases, and establishment of a true reference value for urinary chemical constituents of that age group.											
		Background: Chronic kidney disease (CKD) is an important chronic disease in Egypt. Because of the absence of renal diseases registry in Egypt, true magnitude and end stage renal disease is not available.											
		Techniques employed: Medical treatment and lab. Work.											
		Role of the student: Training and share Lab. Work.											
		Outcome: Acquiring experience in diagnosis, and lab work.											
		Working hours : 8-10 h											
		Number of students (per period/per year) : 2-3											

Research Project: 5

Title of the Project		Immunological and molecular characterization of the causative avian influenza virus isolate of the 2006 epidemic in Egypt with perspectives of diagnostics and vaccine production											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Molecular, biochemical and immunological Parasytology											
Type of RE Project		Experimental animal and Lab. Work											
Department/Hospital		Department of Therapeutical Chemistry											
Head of Department		Dr. Abd El- Hamid Zaky											
P.I. co. P.I.		Dr. Mahmoud Bahgat Dr. Mohamed Ahmed Ally											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim: Characterize the avian influenza virus in Egyptian poultry at molecular level and use killed virus to induce immunity in chicken and mice.											
		Background: Outbreak of the avian influenza in Egypt resulted in massive losses in poultry, It becomes clearly evident that there is an urgent need for more adequate epidemiological and diagnostic measures that enables early alert for possible up coming outbreaks.											
		Techniques employed: Molocular and immunological.											
		Role of the student: Training and share experimental work.											
		Outcome: Aquiring experience in immunological research.											
		Working hours : 8-10 h											
		Number of students (per period/per year) : 2-3											

Research Project : 6

Title of the Project		Application of Molecular Biomarkers for Early Detection Of Prostate Cancer in Egyptian patients											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Medical Molecular Genetic											
Type of RE Project		Lab. Work											
Department/Hospital		Department of Medical Molecular Genetic											
Head of Department		Dr. Yahia Zakaria Gad											
P.I. co. P.I.		Dr. Mona Lotfy Esawy Dr. Yahia Zakaria Gad											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim: Delivery of effective biomarkers for accurate early diagnosis of prostate cancer with high specificity. Use of these biomarkers in screening of prostate cancer mainly in high risk group.											
		Background: Prostate cancer is a major public health problem. In developed countries, prostate cancer is the most commonly diagnosed malignancy in males and the second leading cause of cancer related deaths. Curative therapeutic options for the majority of cases depend on early detection											
		Techniques employed : Molecular genetic											
		Role of the student : Training and share medical and molecular works											
		Outcome : Aquiring experience in medical field (diagnosis) and molecular genetics											
		Working hours : 8-10 h											
		Number of students (per period/per year) : 2-3											

Research Project : 7

Title of the Project		Environmental Management of Water and Wastewater in Egyptian Villages and its Impact on Health											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Environmental health											
Type of RE Project		Clinical & Lab. Work											
Department/Hospital		Department of Water Pollution											
Head of Department		Dr. Azza Mohamed Abd El-Menaem											
P.I. co. P.I.		Dr. Sohair Imam Mohamed Dr. Salwa Anis Shehata											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim: Establishment of sustainable environmental management system in an Egyptian village with a population less than 1000 capita. All the environmental problems encountered in drinking water and sanitation will be investigated thoroughly. Also, their impact on health will be taken into consideration.											
		Background: Wastewater is one of the greatest environmental problems in Egypt. Only 4% of rural areas are served with efficient sanitation and hygienic acceptable systems, the remaining are served by what so called "trenches" which is a way just a bottomless cesspool. This way of wastewater disposal is practiced in very poor villages and causes serious environmental and hygienic problems.											
		Techniques employed: Clinical ; field studies											
		Role of the student: Training and share clinical and environmental field studies											
		Outcome: Aquiring experience in clinical diagnosis & environmental health problems management											
		Working hours : 8-10 h											
		Number of students (per period/per year) : 2-3											

Research Project: 8

Title of the Project		Identification of Genetic Defects in Congenital Heart Diseases												
Organization		National Research Centre												
Country		Egypt												
Institution		NRC Cairo. Egypt												
Medical Domain		Clinical Genetic and Cytogenetics												
Type of RE Project		Clinical and Lab. Genetic research												
Department/Hospital		Department of Molecular Genetics & Enzymology												
Head of Department		Dr. Ibtessam Mohamed Ramzy												
P.I. co. P.I.		Dr. Ibtessam Mohamed Ramzy Dr. Mona Omar Hassan												
Language(s)		English												
Duration of the Project (in weeks)		48 Weeks												
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)	
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)	
Description of the Project		Aim: Proper clinical assessment, define the spectrum of chromosomal abnormalities and study the molecular defects in candidate genes responsible for familial congenital heart disease.												
		Background: Congenital heart defects are the most common developmental anomaly all over the world. To date; very few studies were performed in Egypt for studying the genetic basis of cardiovascular defects (CVDs).												
		Techniques employed: clinical and laboratory												
		Role of the student: Training and share medical field work and cytogenetics												
		Outcome: Acquiring experience in clinical evaluation and cytogenic studies												
		Working hours : 8-10 h												
		Number of students (per period/per year) : 2-3												

Research Project: 9

Title of the Project		Data Base Establishment for Genetic Disorders											
Organization		National Research Centre											
Country		Egypt											
Institution		NRC Cairo. Egypt											
Medical Domain		Genetics											
Type of RE Project		Clinical and biochemical genetics											
Department/Hospital		Department of Cytogenetics											
Head of Department		Dr. Alaa Khalil											
P.I. co. P.I.		Dr. Amal Mahmoud Mohamed Dr. Mona Omar El-Roby											
Language(s)		English											
Duration of the Project (in weeks)		48 Weeks											
Availability	Y1	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
	Y2	Jan (Y/N)	Feb (Y/N)	Mar (Y/N)	Apr (Y/N)	May (Y/N)	Jun (Y/N)	Jul (Y/N)	Aug (Y/N)	Sep (Y/N)	Oct (Y/N)	Nov (Y/N)	Dec (Y/N)
Description of the Project		Aim : Establishment of Egyptian genetic database and molecular characterization of the prevalent mutational patterns of some genetic disorders											
		Background: Defects in gene sequences represent the major underlying pathological mechanism in heritable genetic diseases.											
		Techniques employed: Clinical, Biochemical genetics											
		Role of the student: Training and share lab genetic works											
		Outcome: Acquiring experience in clinical and lab genetic research											
		Working hours: 8-10 h											
		Number of students (per period/per year) : 2-3											

MONITORING AND EVALUATION

Monitoring is one of the mandatory sections for the project implementation. Continuous reporting from the coordinators and work team is ensured via the Monitoring and Evaluation plan of action. A report of Monitoring and Evaluation will be developed each month and after finishing each research project and also final report after finishing the projects of first group of applicants. Monitoring and Evaluation of the project include assessment of process and results. Quantitative indicators and qualitative ones are identified for the project goal achievement.

Process Monitoring

The process indicators include

- . Copies of all letters of support and collaboration
- . Copies of each printed publication and handouts
- . Photos of all stages of the project
- . Final movie report of the project
- . Report of the first generation of project

Results Evaluation

The results indicators include

- . Number participants vs. Publication
source of information is data base records (program record)
- . Quality of participants servicing
source of information is participants feedback (questionnaire)
- . Quality of scientific program, operational techniques and organization
source of information is applicants feedback (questionnaire)

Reporting system

A reporting system will be settled to ensure efficiency of project implementation and to hold back any unexpected errors or problems. This will be as follows

- . Reports from local coordinators of project.
- . Report after finishing each stage of project.
- . Reports of national coordinator.
- . Report after finishing each research project.
- . Reports from collaborating associations, faculties and centers.
- . Reports from doctors and students sharing in project.

Registration

Number of accepted student:

54 students will be accepted according to IFMSA recommendation.

Registration Fees: 300 L.E.

Registration Fees include:

- Workshop attendance, engagement on the research project, attendance certificate, coffee breaks during the workshop.

Ways of payment:

Cash: direct to IFMSA directors

Bank Information for ASMR:

Arab African International Bank, NRC- Branch, Swift code: ARAIEGCX, Account No. 548254. The Arab Society for Medical Research

Note: The IFMSA will transfer the total amount of payment for all the students (54) (16200 L.E.) through the ASMR Bank before June 15, 2008.

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