



ZAGAZIG FACULTY OF MEDICINE

Strategic Research Plan

2014 -- 2018

Strategic Research Plan of Zagazig Faculty of Medicine

Preface

On behalf of the members of Zagazig Medical Research Council (ZMRC) I'm pleased to introduce the updated strategic research plan of our faculty. The current plan was formulated in May, 2010 and implemented in September, 2010. Our vision is to "become innovative researchers and have outstanding position of medical research at the national and international levels". The mission is to develop a research capacity and capability, improve our community health status and improve Zagazig University position within the larger research communities in the world. This mission was translated into focused research on the topmost priority health problems in Sharkia Governorate, considering the following targets: 1) Disease mapping of Sharkia Governorate via epidemiological studies, 2) Clinical-based applied research for health problems of the topmost priority, 3) Advanced basic science and experimental research via new technologies like stem cell, medical nanotechnology and human genome related research. The research in these directions was distributed in 4 phases: phase one: 2010-2012 (Initiation Phase) along with CIQAP project of the Faculty with 50% of research directed to disease mapping, phase two: 2013-2015 (Sustainability Phase) with 50% of research directed to applied medicine, phase three: 2016-2018 (Consolidation Phase) with 60% of research directed to applied medicine and phase four: 2019 for evaluation of the previous phases and preparation for the next plan. Evaluation of phase one of the research plan raised a lot of concerns that require reform of the current plan. We have studied these concerns and met with stakeholders at different levels to reintroduce our priorities and redefine our objectives in a clear and applicable way to achieve our research vision.

I would like to thank my colleagues; members of the ZMRC and Faculty Staff for their cooperation and commitment to fulfill this hard task for preparation of this updated research plan which is focusing on directing research to priorities perceived from a lot of meetings and activities with stakeholders. These priorities include fields of liver diseases particularly viral hepatitis, obesity and related complications, addiction, cancer and new technologies of stem cell and nanotechnology researches. We hope to take a step forward towards enhancing research in our faculty.

Dr Monkez M Yousif

Vice Dean for Postgraduate Studies & Researches

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Research Strategy Governness Bodies

Steering Committee: **Zagazig Medical Research Council (ZMRC)**

Chairman: **Dr Monkez M Yousif**

Professor of Internal Medicine

President of Zagazig Medical Research Council (ZMRC)

Vice dean of Postgraduate Studies and Research

ZMRC Secretary: **Dr. Seham Mahrous**

Professor of Clinical Pathology

Strategic Planning Advisor: **Dr Abdellatif Elmor**

Professor of Community Medicine

Teams of Initiatives:

Obesity:

1. Dr Seham mahrous: Professor of Clinical Pathology (Coordinator).
2. Dr Eman Al-Shorbagy: Professor of Internal Medicine.
3. Dr Nagwa Samy: Assistant Professor of Internal Medicine.
4. Dr Abdellatif Elmor Professor of Community Medicine.

Hepatitis:

1. Dr Sahar Zaghloul: Professor of Internal Medicine (Coordinator).
2. Dr Laila Sherief: Professor of Pediatrics .
3. Dr Hala Ismael: Professor of Tropical Medicine.
4. Dr Abdellatif Elmor Professor of Community Medicine.

Drug dependence:

1. Dr Ahmad omar: Professor of Clinical Toxicology (Coordinator)
2. Dr Iman Abdel Rady: Professor of Clinical Toxicology.
3. Dr. Arwa Elsheikh.

Cancer:

1. Dr Naglaa Ali Ramadan : Ass. Professor pathology of (Coordinator).
2. Dr Abdellatif Elmor Professor of Community Medicine.
3. Dr Rasha Lotfi Ass. Professor of Oncology
4. Dr Mona Fawzy Lecturer of Oncology

Nanotechnology:

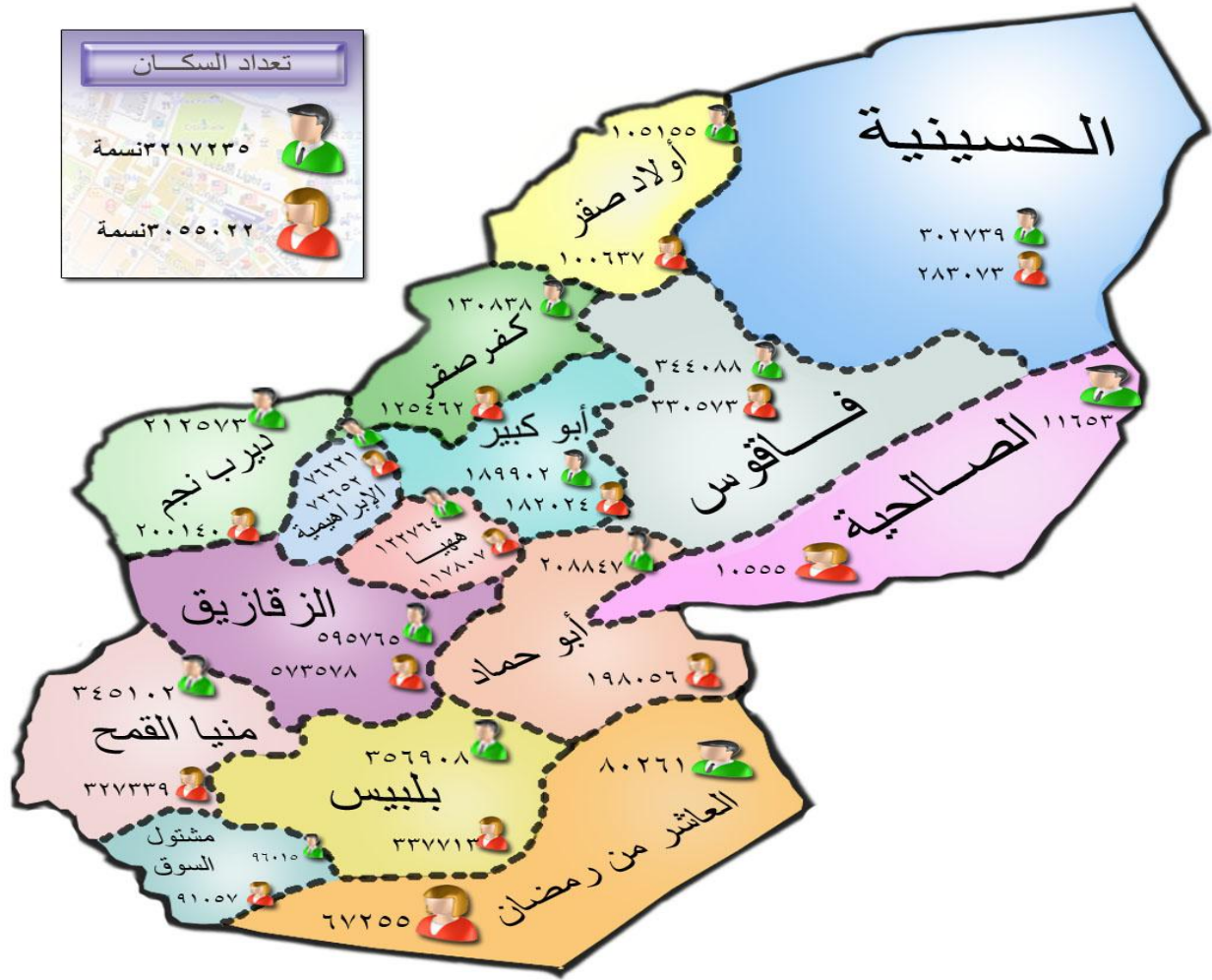
1. Dr Mahmoud noumier: Professor of Clinical Toxicology (Coordinator)
2. Dr Yara El-Fakharany

3. Dr Liala Sabik
4. Omaina Ibrahim
5. Dr Seham Mahrous

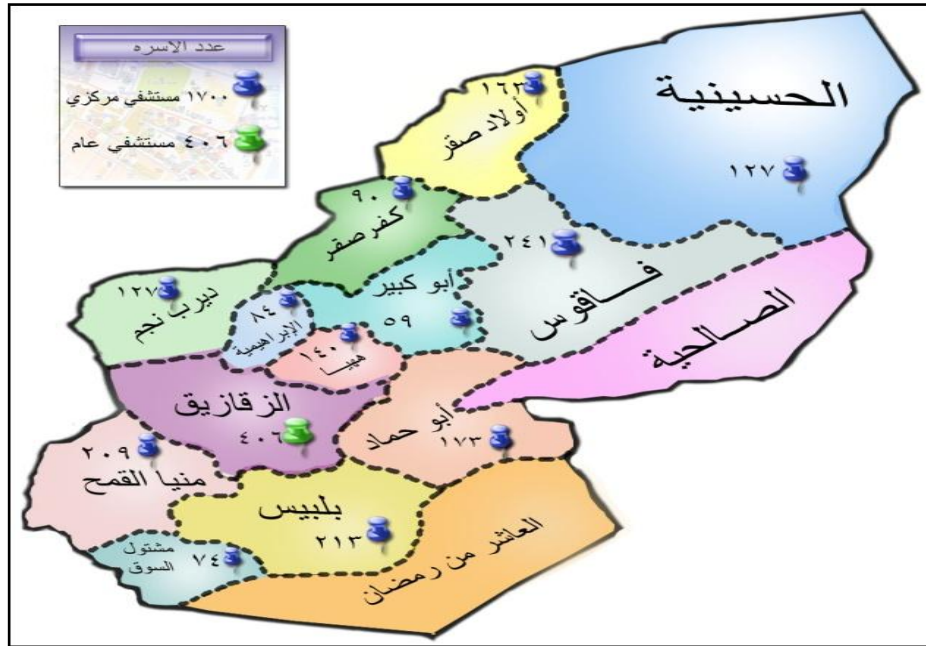
Introduction

Zagazig University is one of the largest Universities in Egypt. It has been established in 1974. Faculty of Medicine, Zagazig University (**FMZU**) provides mainly El Sharkia population with health care and health care providers. FMZU health care extends also, to the surrounding Governorates, the Arabian Gulf Area and other countries (Africa- Malaysia- Syria).

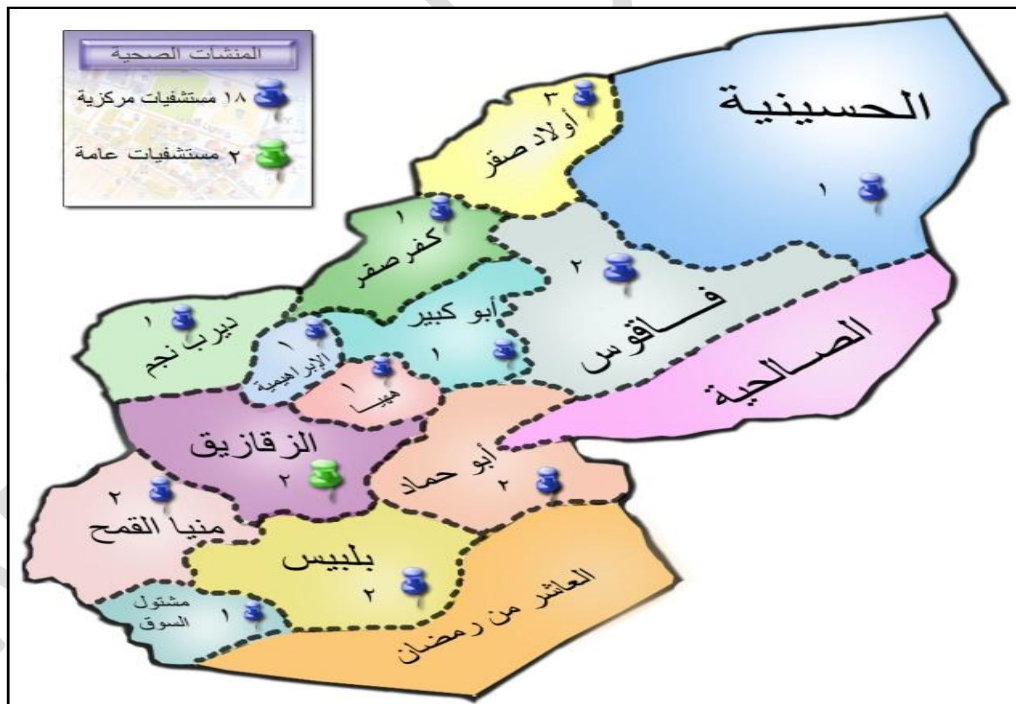
Faculty of Medicine, Zagazig University owes 9 hospitals that contain 2174 beds The faculty contains 35 departments; 26 Clinical with 9 Academic departments. Emergency and Disaster Medicine department is under construction. There are 73 Degrees: 38 master programs in our faculty; 28 Clinical and 10 Academic programs . and there are 35 MD programs; 26 Clinical and 9 Academic programs. There are 2 master programs under construction, the Endocrinology & Metabolism and the Emergency & Disaster programs The Plastic Surgery MD program is under construction also. There is also a Medical Education diploma Program.



تعداد سكان محافظة الشرقية في المراكز ال ١٥



عدد أسرة المستشفيات التابعة لمديرية الشؤون الصحية بالشرقية



مستشفيات محافظة الشرقية التابعة لوزارة الصحة

Strategic Research Planning Methodology

Strategic planning is a mean of establishing major directions for the university, college/school or department. Through strategic planning, resources are concentrated in a limited number of major directions in order to maximize benefits.

Zagazig Faculty of Medicine has engaged in an intensive, collaborative, and rigorous strategic planning process to guide our research over the next 5 years with the ultimate purpose of improving human health and reducing the burden of disease.

We did revise our current research situation (SWOT analysis) and after extensive workshops, meeting with stakeholders and brain storming we defined our values, vision, and mission and identified our research priorities.

Vision

To become an innovative faculty with an outstanding position of health researches at the national and international levels.

Mission

Improving our community health status via :

- Building distinguished research capacity of the Faculty .
- Having qualified researchers & community based research.
- Improving Infra structure of the faculty for scientific research.
- Having advanced Information Network technology Unit.
- Solving problem of fund raising for researchers.
- Incorporation of undergraduate students in scientific researches.
- Improving Zagazig University ranking among world universities. .

Values

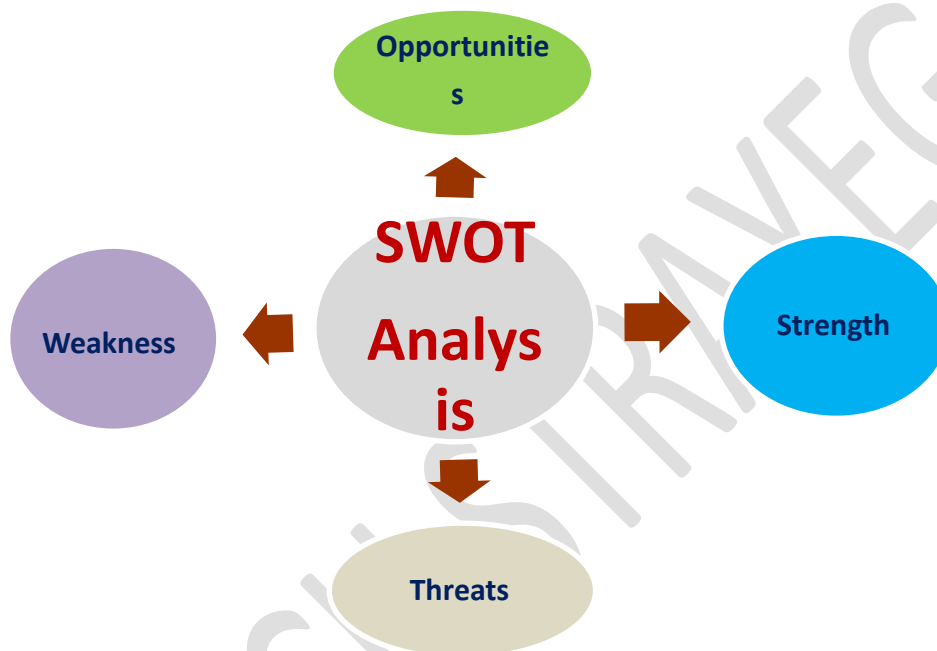
1. Reliability and Rigour In scientific research which means that

- the study protocol is being adhered to;
- the research is conducted in accordance with established ethical standards;
- meticulous records of all observations are maintained;
- data are analyzed and interpreted using appropriate statistical methods
- results are presented in such a way that other investigators can re-analyze the

data

2. Research Focus
3. Teamwork and Collaboration
4. Research sustainability
5. Research flexibility

SWOT Analysis



STRENGTHS

- There is approved faculty research plan since 2010, which was evaluated after the first stage.
- There were training courses to improve research capabilities of the research staff since 2010.
- Our University research plan is based on community needs, by which the second stage of our research plane was modified.
- Highly selected motivated and dedicated faculty staff and students
- Positive academic environment represented in the form of highly dedicated faculty, supportive skillful knowledgeable staff members at a high level of skills and knowledge.
- Wide range of postgraduates study programs.
- Reasonable infrastructure to start with and upgrade.

WEAKNESSES

- Very limited financial support and inadequate funding for scientific research.
- Limited scholarships and without good financial support.
- Resistance to change.
- Unsatisfactory communication between the different departments, as well as, between the staff themselves and between their students.
- Decreased number of staff participating in the research at the national and international levels.
- Increased educational load on the staff due to increased number of students.
- Brain drainage due to Immigration of the staff (internal or external).
- Little formal development for the future leaders.
- Little infra structure for stem cells and molecular biology.

OPPORTUNITIES

- The government is giving special attention to improve the research to cope with the international levels.
- Establishing a supporting university environment for good knowledge and transparent attitudes.
- Presence of well established national standards to assess the quality (NAQAAE)
- Establishing multiple communication channels with the big organizations both the governmental and the private ones to establish multicenter research projects.
- New opportunities to increase the amount of community based research.

THREATS

- Unsatisfactory link between the scientific research and community needs .
- Poor economic condition of the country.
- Exhausting lifestyles for doctors in Egypt.
- Minimal involvement of NGOs in funding the research projects .
- Some of our infrastructures are too old to suit scientific research.
- Faculty is not ready yet for modern research e.g. stem cells and molecular biology.

Research Priorities



Research priorities:

Five strategic research priorities have been selected (Obesity, Hepatitis, Oncology, Addiction and Nano/Stem Cell Technology) based on the following feedbacks:

1. 2010 UN Report about human health status of Sharkia Governorate, Egypt)
2. The most commonly encountered health problems in Sharkia Governorate (according to the University Research Plan).
3. Recommendations of the "awareness workshops" with faculty staff
4. recommendations of the "2nd Annual Conference of Zagazig Medical Research Council; 18/2/2014"

Seventy per cent (70%) of departments' researches should cope with the faculty plan while **30%** will be conducted according to Departments' special interest. Fund availability will be directed to research in the plan priorities. Implementation of the faculty research plan will be adopted by all faculty members and researchers and monitored according to a monitoring plan checked by ZMRC.

General Goals of the Strategic Research Plan

Action Plan of the Faculty of Medicine Zagazig University -(2014-2018)

GOAL 1: Enhance research environment

Major Objectives:

- To improve research capabilities of faculty staff.
- To improve the required infrastructure for the research.
- To improve awareness of faculty staff about research plan.
- To increase research scholarships.
- To incorporate undergraduate students in research activities.

Main Activities/ objectives	Responsible Team/Person	KPI	Resources	Time line
1.1 To improve research capabilities of faculty staff by: a-Training courses like: How to write a research proposal b-workshops of research methodology	Project management unit Department of Community Medicine	Annually 10% improvement		2014-2018
1.2 To improve research infrastructure: a-Scientific and Medical Research Center	Vice Dean of postgraduate and studies and research director of the center			2014-2018
b-Poison Control Center	Members of Clinical Toxicology And director of the center Vice Dean of postgraduate and studies and research			
c-Faculty Scientific Journal	Editorial Board of the Journal Vice Dean of postgraduate and studies and research Dean of Faculty	International journal		2014-2018
d-faculty publications storage		Electronic data base		2014-2018

e-Fund raising	Vice Dean of postgraduate and studies and research ZMRC	Presence of account number for Scientific research support fund		
		Allocation of 5% from the income of the specialized units for		2014-2018
To improve awareness of faculty staff about faculty research plan: 1-workshops 2-conferences	Vice Dean of graduate and scientific research			2014-2018
To increase research scholarships	Vice Dean of postgraduate and studies and research ZMRC	Tempus Projects Connect our researchers with wider world by building partnerships between our organization and national and international research centers. Annual joint supervision Annual publications of student's research activities		2014-2018
To involve undergraduate students in research projects	Department of community medicine and other faculty departments			

Goal No 2 Enhancement of community-based health research and improving the engagement of stakeholders.

Major Objectives:

- Health mapping of Sharkia Governrate through community based researches.
- To Identify the detemnants and risk factors for the top most common Health problems in Sharkia.
- To outline prevention programs for the top most health problems in Sharkia.

- To deepen and extend the cooperation between our organization and stakeholders

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
<p>- To commit to community health data collection and health improvement efforts through establishing research projects targeting major health problems affecting our locality by:</p> <p>1-Mapping studies</p> <p>2-Health education programs</p> <p>To deepen and extend the cooperation between our organization and all stakeholders by:</p> <p>1-Work shops</p> <p>2-Conferences</p>	<p>Community based researches of the 5 research fields 30% of the studies</p> <p>Vice Dean for Postgraduate Studies & Researches The council of scientific research</p> <p>Vice Dean for Postgraduate Studies & Researches The council of scientific research Teamwork of the 5 research fields</p>			<p>2014-2018</p> <p>2014-2018</p>

Medical Research Strategic Plans
Zagazig Faculty of Medicine
Obesity Action Plan
2014 - 2018

Obesity Research Strategy

Action plan (2014-2018)

Project Team :

Coordinator :Prof. Seham Mahrous

Prof. Eman Elshorbagy

Prof.Nagwa Samy

Prof.Abdellatif Almor

Obesity is an increasingly important public health concern in Egypt. An estimated (35 %.) of Egyptian adults (18.7 % males & 48.1 % females) are considered to be obese (National nutrition institute, Final report on the national study: National study for assessment of bone mineral density (BMD) among Egyptian adults and adolescents in Egypt, 2004.Egyptians are the fattest Africans, says WHO,2010 , With nearly 70 percent of its adult population overweight or obese, Egypt is also the 14th fattest country in the world, according to the most recent World Health Organization statistics issued for the year 2010.

Comprehensive Intervention and main Strategies:

Obesity is a complicated problem arising of interacting and multidimensional aspects.

WHO denotes that you have to manage obesity through a comprehensive strategy that considers: healthy Diets, healthy weight, active life, empowering people and community, healthy environment, policy change, and coordination with all stakeholders and NGOs.

Goals :

1-Prevention and control of obesity and its complications among Sharkia population through high quality community based researches and programs aiming to: promoting healthful diets, healthy weight and active life.

2-Identify the most effective strategic interventions and management modalities to prevent and treat unhealthy weight gain or to facilitate weight loss among obese people.

Major Objectives:

- Conducting epidemiological studies to assess obesity and its determinants in Sharkia governorate (2014-2015)
- Serves as a center of excellence and a guide Of research to mange obesity
- Identify the appropriate strategies for obesity prevention and treatment in real-world settings and diverse populations.
- Develop awareness and prevention programs to control obesity (2014-2016)
- Outline a comprehensive plan to prevent obesity and its complication in Sharkia(2014-2016)
- To introduce and facilitate different obesity treatment modalities in Zagazig University Hospitals(2014-2018)
- Use basic research and modern technology to advance obesity research and management.
- To coordinate with stakeholders to control and prevent obesity problems in Sharkia.
- Facilitate integration of research results into community programs and medical practice

Main Researches& Activities	Responsible Team/Person	KPI	Resources	Time line
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<p>Epidemiologic Research :</p> <p>1.1-Review Studies on Prevalence, incidence and Risk factors for obesity</p> <p>1.2-Collect and analyze relevant data from previous researches in the University and Ministry of Health and other International resources.</p> <p>1.3-Conducting studies to identify missing required data regarding prevalence and incidence of and most important risk factors</p> <p>1.4 Establishing a research unit for Obesity related researches in collaboration with Scientific and Medical Research center in Zagazig University.</p> <p>1.5 Developing a Program for detection of risk factors for Obesity between the medical personnel and plans for control.</p> <p>1.6 Sharing the National program for surveillance of preschool children for obesity & diabetes.</p> <p>1.7 Sharing the national program for reporting Obesity in Egypt.</p>	<p>Public health</p> <p>Internal Medicine</p> <p>Pediatrics</p>	<p>-All data about calculated prevalence is available</p> <p>-Finalize required data</p> <p>-Write an actual reports</p> <p>- Prevalence will be published in a paper</p>	<p>Funds available from departments and faculty & Pharmaceutical industries</p>	<p>2014-2015</p>
<p>Clinical Research :</p> <p>- Screening and early detection researches.</p> <p>- Research involving the diagnostic modalities.</p> <p>-Prediction and diagnosis of obesity complications</p> <p>- Management techniques and different treatment modalities.</p> <p>- Research for improvement of the drug formulation and development of new drugs.</p> <p>- Improve Measurement Tools,</p>	<p>Internal Medicine, Tropical, Pediatric, Community Medicine, Clinical Pathology and other departments with Obesity</p>		<p>college funding and donation</p> <p>Health Insurance, Ministry awards and Medical committee for students, employees and staff in the University, drug companies</p>	<p>2014-2018</p>

<p>Technology, and Methods</p> <p>-Cooperation with Ministry of Health to perform National program for surveillance of preschool children for Obesity.</p> <p><u>Treatment of co- morbidities and advanced research :</u></p> <p>Coronary Heart Complications:</p> <p>-Studies on Drugs Used.</p> <p>- Studies on management of Complications.</p> <p>Advanced research:</p> <p>-Stem cell based therapy in myocardial infarction</p> <p>- Epigenetic studies on stem cells to develop cardiac pacemaker cells.</p> <p>- Studies on stem cell therapy of heart failure.</p> <p>- Studies on Cardiovascular Regeneration by stem cells progenitors.</p> <p>- Studies on Stem Cell therapy of Coronary Heart Diseases.</p> <p>- Studies on the behavior of Stem Cell Derived Cardiac Differentiation.</p> <p>- Stem cell treatment of Cardiovascular diseases</p> <p>- Stem Cell Treatment of Critical Limb Ischemia.</p> <p>- Diabetes:</p> <p>-Studies on Drugs Used</p> <p>- Studies on management of complications</p>	team		and charity organizations	
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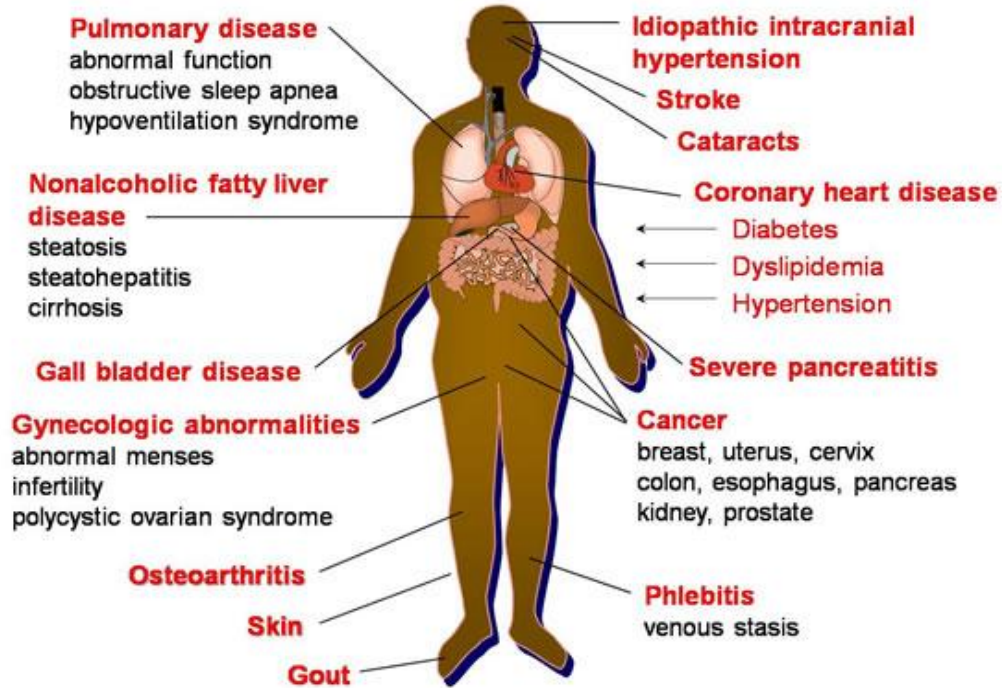
<ul style="list-style-type: none"> - Studies on Biochemical Changes - Studies on radiological findings - Studies on Gestational DM. <p>Advanced research:</p> <p>Studies on the Pancreatic development of Human Islets from Pluripotent Stem Cells.</p> <ul style="list-style-type: none"> - Studies on the use of mesenchymal stem Cells in prevention of diabetic complications - Role of bone marrow stem cells in treatment of diabetes - Role of stem cells in repairing the damaged renal tubules - Advance of researches on thyroid tissues autotransplantation and embryonic stem cell transplantation in therapy of hypothyroidism. - Mesenchymal stem cell therapy for diabetes through paracrine mechanisms. <p>Hypertension & Thrombotic complications</p> <ul style="list-style-type: none"> - Studies on Micro vascular anatomy of the eye. - Studies on vascular architecture of the brain - Studies on studying different areas of the brain. - Studies on studying the peripheral nervous system. - Stem Cell in Ophthalmology: - Stem cell treatment of Macular Degeneration and retina. <p>Reproductive Complications</p> <ul style="list-style-type: none"> -role of Stem Cells in treatment of male infertility. 				
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<p>- Studies on the Embryonic Stem Cells and their role in female infertility.</p> <p>- Stem cell research in erectile dysfunctions.</p> <p>- Studies on development of Germ Cell line from Molecular Control of adult bone marrow-purified very small embryonic-like stem cells.</p> <p>-Liver Disease & Dyslipidemia</p> <p>-Basic researches in drug trials in different stages of the disease</p> <p>-Basic research in molecular genesis of the disease, response to treatment</p> <p>-Autologus hematopoietic stem cell transplantation in end stage liver.</p> <p>-Orthopedic -Renal Complications</p> <p>-Studies on histological and ultra structure evaluation of healing in tissue injuries.</p> <p>- Neurological Complications:</p> <p>-Epigenetic Regulation of Neural Stem Cell Proliferation and Differentiation.</p> <p>- Studies on human neuronal stem cells and their regulation</p> <p>- Studies on the different levels of molecular control of neuronal lineage of embryonic stem cells.</p> <p>- Studies on Cell therapy in spinal cord Injuries.</p> <p>- Pluripotent stem cells in neurodegenerativeand neurodevelopmental diseases.</p> <p>-Cancer Risk</p> <p>-Studies on Stem Cell Role in Screening of</p>				
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<p>Malignancy.</p> <ul style="list-style-type: none"> - Gene expression and transcription factors in Cancer. - Studies on potential biomarkers for cancer diagnosis, prognosis and targets for stem cell therapy. - Role of stem cell in management of cancer -Prognostic significance of circulating tumour cells . <p>-Risk Factors:</p> <ul style="list-style-type: none"> - Projects to study the interaction between Obesity risk on body organs. -Studies to assess the molecular and genetic basis for Biologic Mechanisms Regulating Energy Balance and risk factors for obesity. <p>Develop and implement awareness and educational programs 2014-2018</p> <ul style="list-style-type: none"> -Training of trainers and health educators <p>In a wide range of knowledge and skills, such as:</p> <ul style="list-style-type: none"> - expertise in the basic, clinical, behavioral, and social sciences; epidemiology; - cultural competency; measures and methods; interventions; and translation and dissemination. 	<p>Public health</p> <p>Internal Medicine</p> <p>Pediatrics</p> <p>Physiology</p> <p>Rheumatology</p> <p>Psychiatry</p> <p>Anesthesia</p> <p>Medical education</p> <p>Quality Unit</p>	<p>-Training programs are available</p> <p>- Training is Implemented</p>	<p>Funds available from departments and faculty</p> <p>Pharmaceutical industries</p>	<p>2014-2018</p>
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Medical Complications of Obesity



Hepatitis Research Strategy

Action plan (2014-2018)

Prof Dr:Sahar Gouda Zaghloul

Prof Dr:AbdellatifElmor

Ass Prof : Hala Ismail

Goal: Control HCV through decreasing incidence and prevalence of HCV in Sharkia governorate

Objectives

No 1 Conducting Epidemiological studies to assess magnitude of the HCV and identifying its determinates risk factors in Sharkia during the 2014-2016

No 2 Implementing Intervention programs to control risk factors and to decrease Prevalence and incidence by 20 % through the years 2014-2018

No 3 Conduct Basic researches to discover new line of therapy and intervention 2014-2018

Main Researches& Activities	Responsible Team/Person	KPI	Resources	Time line
1.1 Collect and analyze relevant data from previous researches in the university and ministry of Health and other International resources	Internal Medicine, Tropical, Pediatric, Community Medicine, Clinical	- Finalize the required data - Write an actual reports	From departments, college funding, researchers	2014-2015

<p>1.2 Conducting studies to identify missing required data regarding prevalence and incidence, mode of transmission and most important risk factors e.g Renal patients, Oncology patients, Hematology patients.</p> <p>1.3 study epidemiology and natural history of liver cirrhosis , Hepatocellular carcinoma and co morbid factors (toxins, drugs, medical disease, HIV co infection)</p> <p>Study prevalence of hepatocellular carcinoma in Zagazig University hospitals</p> <p>1.4 Establishing a research unit for HCV related researches in collaboration with Advanced center for liver disease and Scientific and Medical Research center in Zagazig University</p> <p>2.1 Offer health service for early diagnosis and treatment of Hepatitis and its complication</p>	<p>Pathology and other departments with Hepatitis team</p> <p>The research coordinator of all departments and the administrative members of the research unit.</p> <p>The research coordinator of all departments and the administrative members of the research unit.</p> <p>Hepatitis team, Postgraduate and research vice dean</p> <p>Internal Medicine, Tropical Medicine and Pediatric Department, Liver center in Al Ahrar Hospital and Advanced</p>	<p>Ending 5 researches in epidemiology</p> <p>Ending 5 researches in epidemiology</p> <p>Establishment of the research unit, its place and members</p> <p>- Ending 10 researches in response to treatment and its complication</p> <p>- Treating 20000 patients</p>	<p>From departments, college funding, researchers</p> <p>From departments, college funding, researchers</p> <p>college funding and donation</p> <p>Health Insurance, Ministry awards and Medical committee for students, employees and staff in the University, drugcompanies and charity organizations</p>	<p>2014-2016</p> <p>2014-2016</p> <p>2014-2016</p> <p>2014-2018</p>
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<p>transplantation</p> <ul style="list-style-type: none"> - Study selection of the patients for transplantation - Study early and late post transplant complications - Study metabolic syndrome as a complication of liver transplantation 	Supervisors of the research in collaboration with Advanced Center for Liver disease	researches	College funding and researchers	2014-2018
<p>2.5 project in hepatocellular carcinoma</p> <p>Establishing a group for hepatocellular carcinoma</p> <p>Study management of HCC: surgicalVs non surgical</p> <p>Study outcome of radiofrequency ablation of hepatic tumors</p> <p>Study Nitric oxide as a marker for tumor regression in patients with HCC following loco-regional therapy</p>	Supervisors of the research and Research team	<ul style="list-style-type: none"> - Estabilshing stem cell therapy unjt - Training the team - Ending 2 researches 		2014-2018
<p>3.1 Basic research in stem cell therapy as therapeutic option of treatment</p> <p>Establishing a stem cell therapy unit</p> <p>Study stem cell therapy in liver cirrhosis and its outcome in human</p>	Supervisors of the research and Research team	Ending 5 researches in this field	College funding and researchers	

<p>Study stem cell therapy by different methods for liver disease in animals</p> <p>3.2 Basic researches in drug trials in different stages of the disease</p> <ul style="list-style-type: none"> - Study of surrogate markers of portal hypertension and hepatic elastography before and after non selective beta blockers <p>polymerase ‘Study the new drugs in treatment of HCV ‘inhibitors</p> <p>Study rate of response and side effect of the new drugs</p> <p>Study sustained virological response of the new drugs</p> <p>t Study comparing results of treatment with new drug and the current treatment with interferon and ribavirin</p> <p>3.3 Basic research in molecular genesis of the disease, response to treatment</p> <ul style="list-style-type: none"> - Study gene polymorphism and severity of the disease - Study genetic factors predispose to drug response 	<p>Supervisors of the research and Research team</p>	<p>Ending 7 researches in this field</p>	<p>College funding and researchers</p>	<p>2014-2018</p>
<p>3.3 Basic research in molecular genesis of the disease, response to treatment</p> <ul style="list-style-type: none"> - Study gene polymorphism and severity of the disease - Study genetic factors predispose to drug response 				<p>2014-2018</p>

<ul style="list-style-type: none"> - Study prevalence and prognostic significance of CXCL10 plasma level as a predictor of therapeutic response in chronic HCV patients. - Study squamous cell carcinoma antigen (SCCA) versus alpha fetoprotein (AFP) as a screening marker for hepatocellular carcinoma - Study Golgi protein 73 as a biomarker for early detection of hepatocellular - Study effect of single nucleotide polymorphism of RECK gene promotor on HCC susceptibility and clinicopathologic features - Study diagnostic role of vascular endothelial growth factor (VEGF) in HCC in HCV related liver cirrhosis 				
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Addiction Research Strategy

Action plan -(2014-2018)

Team

1. Dr Ahmad omar: Professor of Clinical Toxicology (Coordinator)
2. Dr Iman Abdel Rady: Professor of Clinical Toxicology
3. Dr Arwa El-Sheikh

GOAL 1:- Building Capacity to prevent and reduce drug dependence burden in Sharkia Governorate through high quality community based researches.

Major Objectives:

- To map the drug dependence problem in Sharkia Governorate through community based researches.
- To identify the targeted populations of drug dependence
- To outline prevention and awareness programs for reducing incidence of drug dependence in Sharkia.
- To assess the effectiveness of prevention programs to improve them according to community needs.

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
- Studies on Prevalence, incidence , Risk and targeted populations Prediction for the addiction problem.	Community medicine team	Finalize the required data	College funding and researchers	2014-2018
- Researchs to measure Prevalence and incidence of drug dependence problem in sharkia governorate	Toxicology team	Collect positive results of screening	College funding and researchers	2014-2018
Researchs to identify Risk factors and determinants of the addiction problem				
Studies to map the vulnerable groups -and targeted populations				
-Researchs to predict the most commonly abused drugs in sharkia governorate	Psychiatric medicine team	Write an actual reports	College funding and researchers	2014-2018
- Epidemiological studies to evaluate the effectiveness of prevention and awareness programs				

<p>-Including the undergraduate students in the mapping researchs</p> <p>-Networking with stakeholder and all responsible agents and institution to control and prevent drug dependence problems.</p> <p>-Partnership with NGOs to control and prevent addiction problem.</p>	All participants departments teams	Ending 2 researches in this field every year	College funding and researchers	2014-2018
	Community medicine team	60% of knowledge among different age population	<p>Scientific research support fund</p> <p>Zagazig University hospitals labs, centers and departments</p> <p>Donations for faculty's current account</p> <p>College funding and researchers</p>	2014-2018

<p>GOAL 2:-</p> <p>Conduct tailored clinical researches to reach good diagnosis, successful lines of treatment and effective rehabilitation programs</p> <p>Major Objectives:</p> <ul style="list-style-type: none"> - To improve diagnostic techniques used in cases of drug dependence in Zagazig University Hospital. - To apply recent and evidence based management modalities with better efficacy and less side effects. - To produce and disseminate high quality, evidence-based up-to-date drug dependence clinical and rehabilitation practice guidelines. 				
Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
<p>Studies concerning management modalities</p> <p>-Researches to identify different addicting agents presentations, complications and atypical presentations because of multiplicity of drugs.</p> <p>-Studies to evaluate of effectiveness of different methods of detox therapy, screening methods and confirmatory methods .</p>	<p>Toxicology team</p> <p>Toxicology clinical and laboratory team</p>	<p>Ending 3 researches in this field every year</p> <p>Ending 3 researches in this field every</p> <p>Ending 3 researches in this field every</p>	<p>Scientific research support fund</p> <p>Zagazig University hospitals labs, centers and departments</p> <p>Donations for faculty's current account</p>	<p>2014-2018</p> <p>2014-2018</p>

<p>-Studies to evaluate the effectiveness of different rehabilitation programmes and follow up of addicts .</p> <p>-Construct suitable specialized clinics & hospitals for drug dependence management</p> <p>-Applied research by Scientific papers and thesis To apply recent and evidence based management modalities with no or less side effects.</p>	Psychiatric medicine team	Ending 3 researches in this field every	College funding and researchers	2014-2018
	All participants departments teams	Ending 3 researches in this field every year		2014-2018
	Toxicology team and Psychiatric medicine team			2014-2018
<p>GOAL 3:</p> <p>Conduct tailored experimental research using nanotechnology and stem cell to improve management of drug dependence.</p>				

Major Objectives:

- To investigate alternative and new drugs for treatment and protection against different addicting drugs.
- To investigate role of stem cell therapy and nanotechnology in management of drug dependence

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
<p>-Conducting research studies, thesis and papers for Evaluating the toxic effects of the most commonly encountered drugs of dependence.</p> <p>-Searching new drugs of treatment with evaluation of their effects on decreasing addictive properties and their side effects.</p> <p>-Searching the role of stem cell therapy and nanotechnology in management of drug dependence</p> <p>-Joint supervision</p> <p>- Networking and partnership with National International institution in Nano technology and stem cells.</p>	<p>All participants departments teams</p> <p>Biochemistry</p>	<p>Ending 3 researches in this field every year</p> <p>Identify the prestigious Network.</p> <p>Partnership with 2 institutes.</p> <p>Joint supervision</p>	<p>Scientific research support fund</p> <p>Zagazig University hospitals labs, centers and departments</p> <p>Donations for faculty's current account</p> <p>College funding and researchers</p>	2014-2018

Cancer Research Strategy Action plan

ASSIST PROF: Naglaa Ali Ramadan

Prof Dr: Abdellatif Elmor

ASSIST PROF: Rasha Lotfi

Dr: Mona Hassanein

GOAL 1: Building a capacity to prevent and reduce cancer burden in Sharkia Governorate through high quality community based researches.

Major Objectives:

- To map the cancer problem in Sharkia Governorate through community based researches.
- To establish comprehensive cancer registry in sharkia.
- To Identify the determinants and risk factors for the top most common cancers in Sharkia.
- To outline prevention programs for the top most cancers in Sharkia Governorate.
- To Conduct programmes for screening and early detection of cancer in Zagazig University Hospital

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
1.1 - Studies on Prevalence, incidence and Risk Prediction for the most	Community medicine and all clinical	Ending 2 researches in this field	College funding and	2014-2018

common cancers	departments	every year	researchers	
1.2 - Radiological studies for early detection	Radio-diagnosis			
a- Mammogram for Breast Ca Screening.	Medical oncology	Ending 2 researches in this field every year	College funding and researchers	2014-2018
b- CT colonography for Colon Ca Screening.	All clinical departments			
c- LDCT for Lung Ca Screening.				
1.3 - Biomarkers for early detection	Pathology			
a- Breast Ca Tumor Markers Project" in collaboration with 'Oncology Department' for early detection of cancer breast.	Clinical Pathology	Ending 2 researches in this field every year	College funding and researchers	2014-2018
b - "Hepatocellular Carcinoma Tumor Markers Project" in collaboration with 'Oncology Department' for early detection of HCC .	Biochemistry			
c- Study squamous cell carcinoma antigen (SCCA) versus alpha fetoprotein (AFP) as a screening marker for HCC.	Medical oncology			
d-Study Golgi protein 73 as a biomarker for early detection of HCC	Surgery			
e- PSA for early detection of Prostate				
GOAL 2:- Conducting tailored clinical researches to improve the quality of life of cancer patients through: better diagnosis, state of the art of treatment				

modalities and improving the prognosis of cancer patients.

Major Objectives:

- To improve diagnostic techniques used in different kinds of cancers in Zagazig University Hospital.
- To apply recent and evidence based management modalities with better efficacy and less side effects.
- To produce and disseminate high quality, evidence-based up-to-date cancer related clinical practice guidelines.
- To improve the survival and quality of life of cancer patients in Zagazig University Hospital.
- Clinical networking with distinguished Cancer institutes inside and outside Egypt .

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
2.1- Studies on the radiological findings <ol style="list-style-type: none"> Various new MRI modalities including Mr mammography, MRA, , MRCP and MR Myelography. Recent computed tomographic examination, as Multislice CT examination in various tumors. Role of conventional angiography, MR angiography and Multislice CT in tumor Different Interventional Radiographic techniques in: Biopsy in malignant tumors Various embolization procedures in malignant tumors. Functional MR imaging including MR spectroscopy, 	Radio-diagnosis Medical oncology Pathology Clinical Pathology Community medicine All clinical departments	Ending 3 researches in this field every year	College funding and researcher s	2014 - 2018

Diffusion and Perfusion

2.2- Studies

concerning management modalities (Surgical, Chemotherapy and Radiotherapy)

- 1- Evaluation of efficacy of post-mastectomy breast repair procedures.
- 2- -Different techniques of surgical resection of esophageal cancer
- 3- Laparoscopic resection of cancer colon
- 4- Assessment of applicability and efficacy of some recent surgical treatment modalities like laparoscopic interventions,
- 5- Radiofrequency ablation techniques and use of -laser and Harmonica knife in surgical procedures
- 6- Project in hepatocellular carcinoma
Study:- management of HCC:
surgical Vs non surgical Study Nitric oxide as a marker for tumor regression in patients with HCC following loco-regional therapy
- 7- Laparoscopic versus conventional pelvic lymphadenectomy in pelvic malignancies.
- 8- Role of Sentinel lymph node in pelvic cancer.
- 9- Early cystectomy versus conservative management in treatment of TIG3 bladder cancer (Comparative study).

General surgery

Ending 3 researches in this field every year

College funding, researcher s

2014 - 2018

Hepatology Unit

Ending 2 researches in this field every year

College funding, researcher s and donation

2014 - 2018

General surgery

Ending 3 researches in this field every year

College funding, researcher

10- Limb sparing tumour surgery	Gynecology		s	
11- Bone and soft tissue reconstruction following tumour surgery.				2014
12- Role of Conventional and non-conventional methods in treatment of benign and malignant ORL- Head and neck lesions, including endoscopic, laser and power-assisted techniques.	Urological surgery	Ending 3 researches in this field every year	College funding, researcher s	- 2018
13- Reconstructive materials and techniques and their role in ORL- Head &Nek surgery	Orthopedic			
14- Radiotherapy and chemotherapy for head and neck neoplasms\				2014
15- Applied research about programs to improve quality of life of patients with cancer				- 2018
16- Studies about group therapy programs to improve survival for patients with cancer.		Ending 2 researches in this field every year		
17- Studies to find out suitable modalities to maintain proper functions of vital organs and systems of patient with cancer.			College funding, researcher s	
18- Studies for prevention programs and ways to decrease side effects of chemo and radiotherapy	ENT			2014
19- Studies in the field of anticancer biological therapy.				- 2018

2.3- Studies on Biopsy & cytology material

a - Studies on biochemical Markers

1. Immunophenotyping classification
2. Expression of glypican-3(GPC-3)and 8-hydroxydeoxyguanosine (8-OHdG) in chronic hepatitis C and relationship with hepatocellular carcinoma
3. Significance of Glut-1,Ki-67 and VEGF in diagnosis of surface epithelial tumours of the ovary.
4. Evaluation of the role of mutant IDH1, EGFR and Bcl2 protein expression in distinguishing diffuse astrocytoma from astrocytosis.
5. Significance of D2-40, claudin-4 and Glut-1 immunostaining in differentiating malignant pleural mesothelioma from metastatic adenocarcinoma and reactive mesothelial cells

b-Prognostic and predictive

Ending 3 researches in this field every year

College funding, researchers

Radiotherapy

Ending 2 researches in this field every year

2014 - 2018

College funding, researchers

Pathology &

Clinical pathology

All clinical departments

2014 - 2018

<p>biomarkers for risk of invasion and recurrence</p> <ol style="list-style-type: none"> 1. Tumor markers and their role in head and neck tumors. 2. Immunohistochemical expression of cluster of differentiation CD-68 and Ki-67 in astrocytoma 3. The value of immunoexpression of phosphatase and tensin homologue glucose transporter -1 and B-catenin in endometroid carcinoma and its precursor lesions 4. Diagnostic and predictive value of Survivin, p63 and CD15 in Non Hodgkin's lymphomas. 5. The significance of claudin1 and S100A4 expression in colorectal carcinoma 6. Predictive role of CDX2, MUC2 and MUC6 in progression of chronic gastritis to carcinoma 7. Expression of Enhancer of zest homologue 2 and cytokeratin 5/6 in triple negative versus non triple negative breast cancer: An immunohistochemical study. 8. Prognostic significance of Beclin-1 in DLBCL patients receiving immunochemotherapy. 9. CD68, Topo11α as prognostic factors in advanced stage HL. <p>c. Biomarkers for predictive response to therapy.</p> <p>d. Biomarkers for targeted therapy.</p>	<p>Pathology & Clinical pathology All clinical</p>	<p>Ending 3 researches in this field every year</p>	<p>College funding, researchers</p>	<p>2014 - 2018</p>
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	departments			
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GOAL 3:- :- Use of molecular biology and genetic counseling for Cancer Risk reduction and effective treatment

Major Objectives :

- Identify the genetic predisposition in cases of the common cancers in Zagazig University Hospital.
- To introduce best strategies to prevent or reduce the risk of cancer through monitoring of patients and population at risk.
- Strengthen networking and collaboration to the distinguished national and international Research center in molecular biology and genetic counseling

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Timeline
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	n			
<u>3.1-Molecular biology and Genetics</u> a. Studies on genetic predisposition of the Egyptian population to cancer and their role in screening 1. Genetic studies in cancer ovary and breast cancers (BRCA1, BRCA2) 2. Genetic studies for different ORL- head and neck disease. 3. Colon Cancer research project: all Colon Ca cases ≤ 50 years of age should be subjected to MAI and MMR genes testing. 4. CYP1A1 gene polymorphisms and smoking status as modifier factors for lung cancer risk 5. Impact of insulin-like growth factor 2, insulin-like growth factor receptor 2, insulin receptor substrate 2 genes polymorphisms on susceptibility and clinicopathological features of hepatocellular carcinoma 6. Methylation status and protein expression of RASSF1A in breast cancer patients 7. Role of DNA repair and cell cycle control genes in ovarian cancer susceptibility	Pathology Clinical Pathology Biochemistry Medical oncology All clinical departments	Ending 3 researches in this field every year	College funding and researchers	2014 - 2018

Addiction Research Strategy

Action plan -(2014-2018)

Team

4. Dr Ahmad omar: Professor of Clinical Toxicology (Coordinator)
5. Dr Iman Abdel Rady: Professor of Clinical Toxicology
6. Dr Arwa El-Sheikh

GOAL 1:- Building Capacity to prevent and reduce drug dependence burden in Sharkia Governorate through high quality community based researches.

Major Objectives:

- To map the drug dependence problem in Sharkia Governorate through community based researches.
- To identify the targeted populations of drug dependence
- To outline prevention and awareness programs for reducing incidence of drug dependence in Sharkia.
- To assess the effectiveness of prevention programs to improve them according to community needs.

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
- Studies on Prevalence, incidence , Risk and targeted populations Prediction for the addiction problem. - Researchs to measure Prevalence and incidence of drug dependence problem in sharkia governorate	Community medicine team	Finalize the required data	College funding and researchers	2014-2018
	Toxicology team	Collect positive results of	College funding and	2014-

<p>Researchs to identify Risk factors and determinants of the addiction problem</p> <p>Studies to map the vullnearble groups -and targeted populations</p> <p>-Researchs to predict the most comonly abused drugs in sharkia govrnorate</p> <p>- Epidemiological studies to evaluate the effectiveness of prevention and awarness programs</p> <p>-Including the undergraduate students in the mapping researchs</p> <p>-Networking with stakeholder and all responsible agents and isnstitution to contorl and prevent drug dependence probems.</p> <p>-Partnership with NGOs to control and prevent addiction problem.</p>	Psychiatric medicine team	screening	researchers	2018
		Write an actual reports	College funding and researchers	2014-2018
	All participants departments teams	Ending 2 researches in this field every year	College funding and researchers	2014-2018
	Community medicine team	60% of knowledge among different age population	Scientific research support fund Zagazig University hospitals labs, centers and	2014-2018

			department s Donations for faculty's current account College funding and researchers	
<p>GOAL 2:-</p> <p>Conduct tailored clinical researches to reach good diagnosis, successful lines of treatment and effective rehabilitation programmes</p> <p>Major Objectives:</p> <ul style="list-style-type: none"> - To improve diagnostic techniques used in cases of drug dependence in Zagazig University Hospital. - To apply recent and evidence based management modalities with better efficacy and less side effects. - To produce and disseminate high quality, evidence-based up-to-date drug dependence clinical and rehabilitation practice guidelines. 				
Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line

Studies concerning management modalities -Reserchs to identify different addicting agents presentations, complications and atypical presentations because of multiplicity of drugs. -Studies to evaluate of effectiveness of different methods of detox therapy, screening methods and confirmatory methods . -Studies to evaluate the effectiveness of different rehabilitation programmes and follow up of addicts . -Construct suitable specialized clinics &hospitals for drug dependence management -Applied research by Scientific papers and thesis To apply recent and eveidence based management modalities with no or less side effects.	Toxicology team	Ending 3 researches in this field every year	Scientific research support fund	2014-2018
		Ending 3 researches in this field every	Zagazig University hospitals labs, centers and department s	2014-2018
	Toxicology clinical and laboratory team	Ending 3 researches in this field every	Donations for faculty's current account	
	Psychiatric medicine team	Ending 3 researches in this field every	College funding and researchers	2014-2018
	All participants departments teams	Ending 3 researches in this field every year		2014-2018
				2014-2018

	Toxicology team and Psychiatric medicine team			
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GOAL 3:

Conduct tailored experimental research using nanotechnology and stem cell to improve management of drug dependence.

Major Objectives:

- To investigate alternative and new drugs for treatment and protection against different addicting drugs.
- To investigate role of stem cell therapy and nanotechnology in management of drug dependence

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
<p>-Conducting research studies, thesis and papers for Evaluating the toxic effects of the most commonly encountered drugs of dependence.</p> <p>-Searching new drugs of treatment with evaluation of their effects on decreasing addictive properties and</p>	<p>All participants departments teams</p> <p>Biochemistry</p>	Ending 3 researches in this field every year	<p>Scientific research support fund</p> <p>Zagazig University hospitals labs,</p>	2014-2018

<p>their side effects.</p> <p>-Searching the role of stem cell therapy and nanotechnology in management of drug dependence</p> <p>-Joint supervision</p> <p>- Networking and partnership with National International institution in Nano technology and stem cells.</p>		<p>Identify the prestigious Network.</p> <p>Partnership with 2 institutes.</p> <p>Joint supervision</p>	<p>centers and departments</p> <p>Donations for faculty's current account</p> <p>College funding and researchers</p>	
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Addiction Research Strategy

Action plan -(2014-2018)

Team

7. Dr Ahmad omar: Professor of Clinical Toxicology (Coordinator)
8. Dr Iman Abdel Rady: Professor of Clinical Toxicology
9. Dr Arwa El-Sheikh

GOAL 1:- Building Capacity to prevent and reduce drug dependence burden in Sharkia Governorate through high quality community based researches.

Major Objectives:

- To map the drug dependence problem in Sharkia Governorate through community based researches.
- To identify the targeted populations of drug dependence
- To outline prevention and awareness programs for reducing incidence of drug dependence in Sharkia.
- To assess the effectiveness of prevention programs to improve them according to community needs.

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
<p>- Studies on Prevalence, incidence , Risk and targeted populations Prediction for the addiction problem.</p> <p>- Researchs to measure Prevalence and incidence of drug dependence problem in sharkia governorate</p> <p>Researchs to identify Risk factors and determinants of the addiction problem</p> <p>Studies to map the vulnerable groups -and targeted populations</p> <p>-Researchs to predict the most commonly abused drugs in sharkia governorate</p> <p>- Epidemiological studies to evaluate the</p>	Community medicine team	Finalize the required data	College funding and researchers	2014-2018
	Toxicology team	Collect positive results of screening	College funding and researchers	2014-2018
	Psychiatric medicine team	Write an actual reports	College funding and researchers	2014-2018

<p>effectiveness of prevention and awareness programs</p> <p>-Including the undergraduate students in the mapping researchs</p> <p>-Networking with stakeholder and all responsible agents and institution to control and prevent drug dependence problems.</p> <p>-Partnership with NGOs to control and prevent addiction problem.</p>	All participants departments teams	Ending 2 researches in this field every year	College funding and researchers	2014-2018
	Community medicine team	60% of knowledge among different age population	<p>Scientific research support fund</p> <p>Zagazig University hospitals labs, centers and departments</p> <p>Donations for faculty's current account</p> <p>College funding and</p>	2014-2018

			researchers	
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GOAL 2:-

Conduct tailored clinical researches to reach good diagnosis, successful lines of treatment and effective rehabilitation programmes

Major Objectives:

- To improve diagnostic techniques used in cases of drug dependence in Zagazig University Hospital.
- To apply recent and evidence based management modalities with better efficacy and less side effects.
- To produce and disseminate high quality, evidence-based up-to-date drug dependence clinical and rehabilitation practice guidelines.

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
Studies concerning management modalities -Researchs to identify different addicting agents presentations, complications and atypical presentations because of multiplicity of drugs. -Studies to evaluate of effectiveness of different methods of detox therapy, screening methods and confirmatory	Toxicology team Toxicology clinical and laboratory team	Ending 3 researches in this field every year Ending 3 researches in this field every Ending 3 researches in this field	Scientific research support fund Zagazig University hospitals labs, centers and departments Donations for faculty's	2014-2018 2014-2018

<p>methods .</p> <p>-Studies to evaluate the effectiveness of different rehabilitation programmes and follow up of addicts .</p> <p>-Construct suitable specialized clinics &hospitals for drug dependence management</p> <p>-Applied research by Scientific papers and thesis To apply recent and evidence based management modalities with no or less side effects.</p>	<p>Psychiatric medicine team</p> <p>All participants departments teams</p> <p>Toxicology team and Psychiatric medicine team</p>	<p>every</p> <p>Ending 3 researches in this field every</p> <p>Ending 3 researches in this field every year</p>	<p>current account</p> <p>College funding and researchers</p>	<p>2014-2018</p> <p>2014-2018</p> <p>2014-2018</p>
<p>GOAL 3:</p>				

Conduct tailored experimental research using nanotechnology and stem cell to improve management of drug dependence.

Major Objectives:

- To investigate alternative and new drugs for treatment and protection against different addicting drugs.
- To investigate role of stem cell therapy and nanotechnology in management of drug dependence

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
<p>-Conducting research studies, thesis and papers for Evaluating the toxic effects of the most commonly encountered drugs of dependence.</p> <p>-Searching new drugs of treatment with evaluation of their effects on decreasing addictive properties and their side effects.</p> <p>-Searching the role of stem cell therapy and nanotechnology in management of drug dependence</p> <p>-Joint supervision</p> <p>- Networking and partnership with National International institution in Nano technology and stem cells.</p>	<p>All participants departments teams</p> <p>Biochemistry</p>	<p>Ending 3 researches in this field every year</p> <p>Identify the prestigious Network.</p> <p>Partnership with 2 institutes.</p> <p>Joint supervision</p>	<p>Scientific research support fund</p> <p>Zagazig University hospitals labs, centers and departments</p> <p>Donations for faculty's current account</p> <p>College funding and researchers</p>	<p>2014-2018</p>

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Nanotechnology Research Strategy Action plan -(2014-2018)

PROF Dr : Mahmoud Nomier

PROF Dr: Laila Sabek

Dr Yara El-Fakharany

Dr Omaimah Ibrahim

Dr Dalia Mosalam

Initiative researchers from the Unit.

GOAL 1:- Create a scientific basis to ensure the safe and responsible development of engineered nanoparticles and nanotechnology-based materials and products of medical importance Major

Objectives:

1- To develop the required infrastructure needed for medical nanotechnology research during 2014-2016

2- To establish awareness of stakeholders in the different departments of the faculty to the different

applications of nanotechnology.

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
1.1.1 Establishing Nanotechnology research unit in the Zagazig Scientific Medical & research center (ZSMRC) – faculty of medicine	Head of nanotechnology research project Nanotechnology research team	Fulfilling of equipments, methods, man power, chemicals Within the 1 st 6m	- STDF Project Programme Grant - The governorate funding	2014-2016
1.1.2 Develop equipment , chemicals and team needed for the nanotechnology research project	Nanotechnology research team - Members involved in the research work	-Insure the availability of national guidelines within the 1 st 3m -Insure the international Guidelines within the 2 nd 3m in the lab for application -Write half annual reports about the steps done & others needed	- University funding -National banks -Businessmen	
1.1.3 Collect national & international guidelines about different methods & protocols of nano-research.	Nanotechnology research team	standard operation procedure manual (SOP)available in the lab	-University funding -Business men	2014-2015
1.1.4 collection of data about regulatory measures used in other nanotechnology units nationally	Nanotechnology team , involved departments, administrative sectors Head of the nanotechnology	2 workshops in the	-University fund Pharmaceutical companies -Commercial labs - researchers	2014

&internationally 1.1.5 Formulate shared guidelines including the commonly used regulatory measures 1.1.6 Formulate a unique and scientifically based regulatory measures specific for the nanotechnology unit-faculty of medicine- Zagazig University 1.2.1 workshop to staff members, researchers and students 1.2.2. Training courses for the nanotechnology team , researchers on the nanotechnology research protocols, methods in co-operation with other nanotechnology units in Egypt	&Nanotechnology team	1 st 6 m 2 workshops in the 2 nd 6 m 2 training courses /year		
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GOAL 2:- Implementation of nanotechnology and stem cell research in scientific research & learning curricula

Objectives

1- To prepare 30 modern research theses & papers aiming at establishing and

investigating nanotechnology and stem cell use in medical aspects.

2- To develop under graduate curricula for medical students about the basics of nanotechnology and its applications by the end of 2016 .

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
2.1.1 Conducting research studies for development of new drug delivery system and using nanofilters for creating impurity free drugs using nanotechnology	-Epidemiology -clinical toxicology, -pharmacology Depts - nanotechnology team Epidemiology, Oncology, pathology, pharmacology, toxicology departments & nanotechnology team	Ending 5 researches in new drug delivery system Ending 5 researches in nanofilters uses Concluding 5 researches in usage of nanoparticles in treatment of cancer	-University funding, pharmaceutical companies, STDF University funding ,donations Pharmaceutical companies, businessmen	2015-2018
2.1.2 Conducting research studies to use nanoparticles in treatment of cancer	Epidemiology ,Internal Medicine, Pediatric colleagues & nanotechnology team	Ending 5 researches in new therapies of diabetes	University funding , drug companies and charity organizations Pharmaceutical companies Businessmen	
2.1.3 Conducting	Epidemiology	Ending 10 researches in nanotoxicology	Industrial companies	

research studies to use nanoparticles in discovering new therapies for diabetes	Clinical toxicology Occupational health nanotechnology team		Environmental associations	
2.1.4 Conducting research studies to investigate human risks & the toxic hazards of nanotechnology & nanomaterials	Medical education unit, nanotechnology team	Formulate the content Completing the ILO's completing the course & program	College funding	2015-2016
2.2.1. define the content of undergraduate curricula about the basics of nanotechnology	Medical education unit -Educational & Students affairs committee, - faculty council	Getting the approval		2016
2.2.2. Identify the intended learning outcomes (ILO'S)	responsible departments	Real implementation of the nanotechnology curricula in undergraduate program		

of the course	Medical biochemistry			
2.2.3 formulation of course specification & program	Pharmacology Clinical toxicology Oncology			
2.2.4 Approval of the course from responsible authorities				
2.2.5. Starting the course in the undergraduate studying programs				

GOAL 3:- Enhancing the scientific output from research work

Objectives:

- 1- To facilitate Exchanging of results between different nanotechnology research projects nationally & internationally
- 2- To communicate recommendations from the research work especially in terms of the occupational, public health, toxicological & environmental impact potentially associated with the findings of the studies to stakeholders.

Main Researches & Activities	Responsible Team/Person	KPI	Resources	Time line
3.1 .1 hold meetings to identify knowledge gaps , research strategies & results in nanotechnology research work	Supervisors of the research and Research team	Exchange the obtained data & results nationally and internationally	University & College funding and researchers	2014-2016
3.1.2 hold meetings to communicate results to researcher & stakeholders	Research team, involved departments in nanotechnology research projects	Discussion of obtained results in meeting and formulate it to be applicable.	College funding	2014-2018
3.1.3. questionnaires about the	Research team ,	Data collection and analysis of questionnaires result with recommendations Declaring progression points, activities & results to target	University & College funding College funding ,	

<p>expectations, achievements & difficulties concerning the nanotechnology research</p>	<p>involved researchers , ZSMRC</p>	<p>people and researchers and *dealing with pitfalls.</p>	<p>pharmacy companies</p>	
<p>3.1.4 quarter annual reports about the progression , pitfalls , activities& results of the research work</p>	<p>Nanotechnology team, involved departments in nanotechnology research projects</p>	<p>Mutual experiences in the area of nanotechnology through talks and researches of different national units concerned with nanotechnology in conferences and *construct the recommendations from the displayed works(different researches) in the closing session</p>	<p>University & college fund Pharmacy companies, business men, ZSMRC</p>	<p>2014-2018</p>
<p>3.1.5 Holding national conferences</p>		<p>Participation of all national and most international units concerned with nanotechnology</p> <p>Weigh of participants and importance of scientific subjects, results and</p>	<p>Businessmen -Pharmacy companies Governorate fund</p>	<p>2016-</p>

3.1.6 Holding international symposium every 2 years		recommendations. finalize researches and declare results and recommendations		2018
		Hold 2 conferences Print & distribute 50 brochures & booklets		
			Governorate fund Environmental protection societies - Egyptian society of clinical toxicology - Pharmacy companies	2017-2018
	Nanotoxicology team and other departments Nanotoxicology team Clinical toxicology Occupational health			2018

<p>3.2.1. awareness of stakeholders in industry by these recommendations through media, brochures, lectures, meetings, conferences</p>				
<p>3.2.2. awareness of stakeholders in ministry of environment & environmental protection societies with the recommendations concerning the environmental impact of nanotechnology and how to deal with through media, brochures, lectures, meetings, conferences</p>				

Financial source for research plan support:

The scientific research gets annual budget from the University's general budget, which is still not enough for scientific research support. So, our faculty exerted efforts to strengthen the expenditure on the scientific research which included:

- PCIQA project added more than 5 million LE for scientific research development from 2010 to 2012.
- The blood disease laboratory development project: from 2013 till now
- Getting 36 funded research projects from Zagazig University since 2009 till 2013. Their fund was estimated to be about 1,260000 LE.
- The construction of the scientific and applied research center. its budget till now about 1,500000 LE.
- The poison control center. About 700000 LE are added to it and it is under construction.
- Malyzian program contribution for development of the faculty's scientific laboratories which is estimated to be 8,000000 LE from 2012 to 2014.
- Allocation of 5% of the income of the faculty's specialized units which is approved by the University council in March 2014.
- Presence of an account number for Scientific research Support Fund. About 100000 LE are added to it from CIQAP project in February 2014.
- Financial support for the faculty members for international conferences' attendance which is increases annually.

Monitoring and Evaluation

The plan will be regularly evaluated against the selected Key Performance Indicators(KPI).Also it shall be checked and assessed on yearly basis to modify it according to the new situations. There will be internal assessment team in each department and the strategic plan of all the departments will be monitored by the ZMRC of the Faculty and the assessment directions will consider the following :

- 1) Built in KPI
- 2) % of National and International Publications.
- 3) How many research projects started in the specified fields?
- 4) How many multidisciplinary research projects?
- 5) Percentage of staff involved in research projects?

- 6) How many projects are our students involved in and what was their role?
- 7) Are the research projects running according to the scheduled time?
- 8) What are the primary results?
- 9) Ongoing peer networking shall be adopted to ensure smooth implementation and feedback.

Strategic Communication Plan

This plan will be engaged in valuable peer networking and shall be communicated to stakeholders through many channels :

- Faculty board and ZMRC to be launched and adopted officially.
- All head of department to be officially implemented.
- Workshops , meeting to orient staff and getting ongoing feed back and updating.
- Websites Posters , etc..

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