

UNIVERSITY OF DAMMAM RESEARCH STRATEGIC PLAN

1436-1446^H / 2015 - 2025^G

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Note: To explore the electronic version of this manual (with all appendices excluding no. 8), kindly follow the link of UOD webpage: <http://www.uod.edu.sa/en/administration/deanships/deanship-of-scientific-research>

MESSAGE FROM H.E. DR. ABDULLAH AL-RUBISH PRESIDENT, UOD



We in the University Of Dammam (UOD) are privileged to be in the midst of defining our future through the process of strategic planning at a time of immense change in the role that higher education will play in the diversification of the Kingdom's economy and in achieving national objectives for the future prosperity and well-being of the Kingdom. Notably, the KSA's 8th Five Year Plan projects that the largest increase in the labor force will be in the Science and Technology fields. In that context, the Ministry of Economy & Planning has stated its intent:

“To diversify the economic base”; and, “to move forward a knowledge based economy”.

It also has committed significant resources to the expansion of the Kingdom's technology transfer capabilities and to providing significant grants for universities to enhance their research achievements in the fields of science and technology. In concert with these initiatives The Ministry of Higher Education stated its endorsement in the Kingdom's Second Year Plan as follows:

- “Making the Kingdom one of the leading countries in the region in the field of Science, Technology and Innovation by the year 2020”
- “Establishing and supporting creativity and innovation centers”

UOD is positioned to be a prominent contributor in fulfillment of these national plans through its expanded research mission as articulated in this Research Strategic Plan. It sets ambitious yet obtainable and realistic goals and underscores our commitment to a transformational and new entrepreneurial approach to research, discovery, innovation and technology transfer; and, to becoming a vital contributor to our regional and national economy, prosperity and well-being.

H. E. Dr. ABDULLAH M. AL RUBAISH
President, University Of Dammam

MESSAGE FROM PROFESSOR DR. ABDUSALAM A. AL-SULAIMAN VICE PRESIDENT FOR POSTGRADUATE STUDIES AND SCIENTIFIC RESEARCH, UOD



Representing the University Of Dammam's (UOD) first Research Strategic Plan we realize this moment as an inspiring opportunity to articulate the strategic direction and aspirations for our Research Mission into the future. We recognize and embrace the challenge to fulfill the opportunities, even obligations, embodied in our new role in UOD as our Kingdom commits its investment in universities to prepare its graduates to excel in a knowledge based economy that focuses on innovation in the science and technology sectors for its future diversification, growth and well-being.

Our Mission Statement, to create a stimulating environment that will foster intellectual curiosity, creativity, innovation and entrepreneurialism in scientific research and discovery to serve the national development objectives and humanity, underscores this commitment. Its initial set of **23** Strategic Objectives provides insight into our planned transformation of the research enterprise from one primarily focused on basic research to one that extends and channels that intellectual curiosity toward discoveries having potential to create innovative intellectual properties that can be leveraged to both, to improve health and well-being, but, also to realize the Kingdom's vision for developing a vibrant biotechnology based economy.

This ambitious goal for our research mission requires an unwavering commitment to develop a sound foundational infrastructure of policies, guidelines and procedures that can efficiently and effectively nurture this expanded research mission for both students and faculty. Although this inaugural Research Strategic Plan will allow this journey to begin, we recognize the inevitable need for its constant evolution and revision to meet yet unknown opportunity.

PROF. ABDUSALAM A. AL SULAIMAN

Vice President for Postgraduate Studies
and Scientific Research



EXECUTIVE SUMMARY

a. Responding to a New Strategic Opportunity

The University Of Dammam (UOD) was birthed as a new and independent University on 8 September 2009, rising from the structure of the former Dammam branch of King Faisal University. Now positioned as an independent University, UOD has the strategic opportunity to define its future, develop its strategic assets and become a benchmark of quality for the Kingdom's institutions of higher education. In no small measure, the development of a robust research mission to ignite a vibrant environment of intellectual curiosity throughout UOD is critical for the achievement of this aspiration.

Through its size and scope, UOD also now assumes an important role and responsibility for the future growth, prosperity and wellbeing not only of the Dammam-Khobar region but also the entire Eastern Province. To that end, UOD's research enterprise now has a strategic opportunity and responsibility to develop its assets and programs in concert with this new institutional role and seize this unique moment to develop and advance new knowledge and discovery not only to the benefit of human wellbeing but also the region's opportunities for economic development.

Recognizing these new obligations and opportunities, this Strategic Plan for Research records significant to-date foundational achievements and plots an ambitious course for growth and development of the research mission at UOD and its anticipated benefits for students and faculty, as well as the local community, the Eastern Province and the Kingdom at large.

Finally, we have taken special notice and focus on compliance with all National Commission for Assessment and Academic Accreditation (NCAAA) standards and guidelines for Standard 10 (Research) in our approach to planning, development and conduct of our research mission. This focus has included those identified as “good practice in relation to Research” as described in the *Quality Standards for Post-Secondary Institutions*

b. University Design for Research

The strategic design for the research mission of UOD is founded on the following basic principles:

- Create a research environment that adheres to and advances the highest Islamic values, ethics and morality standards for research and discovery
- Advance and support research that focuses on improvement of health, wellbeing and economic prosperity within the Eastern Province, the Kingdom and the Gulf States region
- Become a core resource that advances and attracts high quality research and discovery throughout the respective colleges of UOD
- Advance intellectual curiosity within UOD through development of programs aimed at attracting student and faculty participation in research activities.
- Develop the Center for Research and Medical Consultations (CRMC) as an institutional and regional resource to advance high quality research, scientific discovery and consultative studies

- Advance the realization and attraction of science and technology based companies to the University’s envisioned “UOD Medical Sciences City” and the subsequent “Biotechnology Business Park”

With the CRMC at its Core, the following diagram depicts the respective entities with which the research enterprise will spawn and develop integrative relationships to advance research, discovery and consultative studies for achievement of the institution’s research mission

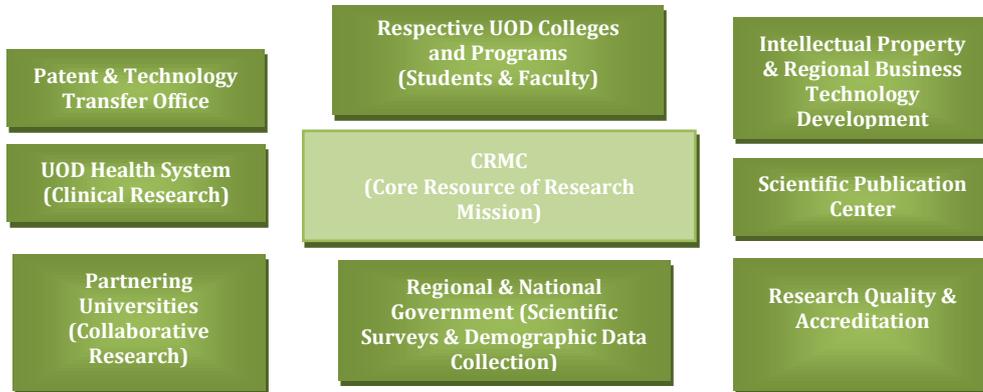


Fig.1: Connectivity of Research Mission at UOD

c. Research Mission, Vision & Values

Mission Statement

To create a stimulating environment that will foster intellectual curiosity, creativity, innovation and entrepreneurialism in scientific research and discovery to serve the national development objectives and humanity

Vision Statement

The research vision of UOD is:

“To be prominent in scientific research, discovery and consultative studies to create a culture of intellectual curiosity, entrepreneurialism and innovation for the benefit of the University, its community, the Eastern Province and humankind”

Values Statement

UOD is committed to a group of values that guide all its work including research, and on which it builds its relationships with its stakeholders and the community. Some of these values are:

- Respect for human rights of justice, dignity and freedom, and respect for individuals and the community*
- Respect for others and helping them to achieve their welfare*
- Embrace the principle of transparency and responsibility towards the law and the community*
- Commitment to integrity and honesty*
- Appreciation of professional excellence, seeking quality and innovation, encouraging scientific research within ethical bounds*
- Appreciation of individual and institutional knowledge*
- Creating an entrepreneurial environment that prizes good performance and ethical standards*
- Respect of teamwork, exchange of experiences and encouraging professional activities*

d. Research Strategic Goals for UOD

The over-arching Strategic Goal for the research mission is to:

“Create a culture of intellectual curiosity & scholarship and conduct research of the highest ethical standards to generate new knowledge through research & discovery to advance the well-being and welfare of humankind”

To pursue this strategic end, the following specific strategic research objectives have been created for the next 5-10 years to realize this outcome. They are:

- Objective 1** Utilize the CRMC as the location for the development of additional multidisciplinary Centers of Research Excellence (CORE)s
- Objective 2** Develop Centers of Clinical Excellence (COCE) linked to the CORE to enhance health education, research and care delivery for the Eastern Province
- Objective 3** Prepare research faculty recruitment plan and recruit 2-3 multidisciplinary cohorts of experienced, funded investigators in selected research areas to provide leadership, direction, and enhanced credibility for the research enterprise
- Objective 4** Establish Junior Research positions in the COREs for postgraduate applicants and other trainees

- Objective 5** Expand opportunities for increased participation of Faculty and Students in research, including student and junior faculty mentoring program
- Objective 6** Create a reward system that includes incentives for extramurally funded research and promotion criteria that recognizes and promote collaborative investigations, including intra & inter-departmental and inter-college collaboration
- Objective 7** Create a research program in Public Health, housed in CRMC that builds its own research programs and supports the COREs
- Objective 8** Expand technology transfer (commercialization) program that provides both reputational and financial returns on UOD’s investment in intellectual property generating research, and, contributes to priorities for economic development and diversification in KSA and the Region.
- Objective 9** Formulate and implement robust policies and programs to consistently ensure high ethical standards in the conduct of research at UOD
- Objective 10** Develop and market a scientific publishing initiative in the CRMC
- Objective 11** Create a Center of Entrepreneurialism (CE) within the CRMC
- Objective 12** Create a Biotechnology Innovation Center (BTIC)
- Objective 13** Create a biotechnology Incubator to launch bio-medical technology related “start-up” businesses in the “UOD Medical Sciences City”
- Objective 14** Generate knowledge related to the complex nature of our world by engaging in research in the humanities to address dynamic changes and rapid developments

- Objective 15** Complete Development of the “UOD Medical Sciences City”
- Objective 16** Develop plans for and initiate the creation of a Biotechnology Business Park
- Objective 17** Enhance the Bridge between UOD’s research mission and stakeholders within the community and business leadership
- Objective 18** Develop a General Clinical Research Center (GCRC) in association with the UOD King Fahd Hospital of University and Clinics
- Objective 19** Obtain International Accreditation for Research Standards for respective units of UOD where research is conducted, including the University hospital
- Objective 20** Establish UOD wide criteria and approval process for awarding designation of “Research Center” and “Research Institute”
- Objective 21** Develop internal and external benchmarks against which selected outcomes of monitoring key performance indicators can be compared to gauge success in conduct of the research mission
- Objective 22** Create External International Advisory Council to the Vice President of Post-Graduate Studies and Scientific Research
- Objective 23** Create and implement a standardized scoring system to rank quality and determine funding of internally supported research projects

e. Immediate Priorities

The workgroup has specified the following as immediate priorities for improvement of output from research activities:

1. Identify additional external sources and seek additional funding for research;
2. Establish benchmarks to define scholarly Research in UOD;
3. Acquire “Institute” designation for the CRMC
4. Launch three support units in Patent and Technology Transfer Office, including assistance with a) intellectual property registration; b) feasibility studies; and, c) marketing units in order to facilitate translation of Research and scholarly activities into applications within the academic or professional fields concerned; and,
5. Begin processes to ultimately create a Biotechnology Business Park where government and private institutions invest in scientific research and development of a biotechnology economic sector
6. Assign “tactical” responsibility for leadership of each objective’s tasks that begin within the immediate future (next 6 months).

This ends the Executive Summary. The following main text of the Research Strategic Plan stems from this overview and provides a detailed account of our current position (resources & achievements), our goals and objectives for the next 5 years, our planned pathways to achieve those goals & objectives and our commitment to research excellence at the University Of Dammam.

PROLOGUE: A NEW STRATEGIC OPPORTUNITY

The Approach for Planning the Research Mission

Our approach for planning the research mission of UOD is first to envision the research enterprise as it will be in a fully mature state following the sequential advancements achieved through accomplishment of envisioned milestones in that journey. In other words, it is a conceptual process of planning back from the future.

There are several initial steps in that journey that have been either undertaken or accomplished (see Appendix 1). But, there are many more tasks yet to be achieved that are defined in this Strategic plan. This plan, however, must be viewed as vibrant and open to continuous revision, as tasks, objectives and even endpoints should be open for reconsideration and modification to allow agility in responding to future yet unrecognized and unanticipated opportunities to advance the long term vision for the research mission at UOD. Therefore, one should view the following timeline graph (Figure 2) as a “calendar in flux” as future achievements and opportunities will refine the dates of accomplishment and generate new aspirations, goals and objectives for the future growth and development of the UOD research mission.



Fig. 2: Milestone Achievement Timelines for UOD Research & Discovery Enterprise

Stage I (2009 – 2012)

- a. First set of research goals & objectives for KFU-Dammam initiated
- b. Rebirthing of KFU-Dammam as the independent University of Dammam (UOD)

Stage II (2013-2014)

- a. Completion of construction (after 15 year delay) and initial “out-fitting” of Prince Mohammed Bin Fahd Abdulaziz Center for Research & Consultative Studies (PMFACRCS)
- b. Establishment of two CORE’s within the PMFACRCS
- c. Renaming of PMFACRCS as the CRMC
- d. SCRELC formation,
- e. The Monitoring Office for Research & Research Ethics at University of Dammam was implemented.
- f. Occupancy of new research animal housing facility
- g. Development of first Research Strategic Plan
- h. Begin planning for creation of the “UOD Medical Sciences City

Stage III (2015- 2020)

- a. Achievement of 2014 research strategic plan 5-yr. goals and objectives (see Gantt Charts – Chapter 4)
- b. Launching of the “UOD Medical Sciences City”

- c. Open the planned biotechnology incubator
- d. Begin planning for the development of the Biotechnology Business Park

Stage IV (2020-2025 & Beyond)*

- a. Initial occupancy of the Biotechnology Business Park
- b. Continued growth in collaborative development of the Biotechnology business sector in partnership with community leadership
- c. Obtain a mature state and growth rate of the research & discovery enterprise

* A new set of objectives and initiatives will be developed for this period. They will be based on progress over the initial 5-year period of this Strategic Plan (2015-2020) and in response to yet unknown new opportunities for continued pursuit of our strategic vision for the research enterprise.

Work Group for Planning

The work group overseeing compliance with the NCAAA Standard 10 (Research) and UOD's development of the Research mission's strategic plan is composed of the following individuals:

Chairman: Prof. Abdulsalam Al-Sulaiman, Vice President for Postgraduate Studies and Scientific Research, UOD

Vice Chair: Prof. Amein Al-Ali, Director of the Center for Research and Medical Consultations (CRMC)

Members: Dr. Naif Al-Masoud, Dean of Scientific Research, UOD

Dr. Fahd Al-Khamis, Vice Dean of Scientific Research, UOD

Dr. Ebtessam Al-Suhaimi, Vice Dean of Scientific Research, UOD

Prof. Eljazi Al-Afaleq, Vice Dean of Postgraduate Studies, UOD

Dr. Meneerah Al-Jafary, Director, PTTO, UOD

Secretary: Mr. Muhil Sakthivel, Quality Management Officer, UOD

Consultant: Richard H. Dean, MD

President & CEO, Emeritus

Wake Forest University Health Sciences

Winston-Salem, NC USA

The charge for this group has been to oversee and review information collected for the 2014 NCAAA report and to provide insight for, and participation in, the development of the Research Strategic Plan.



**CHAPTER 1:
CONTEXT FOR PLANNING**

The creation of an encompassing Research Strategic Plan is built from many external and internal sources of input and guidance. Such sources and processes that have been engaged in this planning process include:

- Assurance of its compliance with all regulatory agencies, including the NCAAA & Self-Study Document (SSD)
- National, regional and local stakeholders
- The parent University
- Institution wide self-study, including an environmental review and SWOT analysis
- External benchmarks & comparative data
- Internal workgroups impacted by and potentially engaged in the missions of scientific research and consultative study
- External planning consultants & review teams

1. Accreditation and the Research Mission

1. a. Introduction

In the process of developing this Research Strategic Plan, we have been mindful of and incorporated measures to assure compliance with qualitative, and quantitative accreditation guidelines. In this process, we have benchmarked the completed plan guidelines for compliance with general standards; and, those specifically focusing on Standard 10 (Research) in Handbook 1 of the National Commission for Academic Accreditation & Assessment entitled “*Standards and Processes for Quality Assurance and Accreditation*”.

Likewise, we have reviewed and affirmed our plans as “good practice” in relation to Research as described in the *Quality Standards for Post- Secondary Institutions* under the headings:

- Institutional Research Policies;
- Faculty and Student Involvement;
- Commercialization of Research;
- Facilities and Equipment; and,
- Human Resources (manpower)

Address of these topics is provided in Chapters 2 and 3.

Finally, our output oriented metrics and Key Performance Indicators have incorporated measures recommended in the above mentioned NCAAA Handbook 1 to monitor our achievements against our planned accomplishments, past performance and other internal and external benchmarks.

1.b. Meeting NCAAA Standards

In 2008, as KSA-Dammam, we undertook our first Self-Assessment Study (SAS) and completed our first institution wide Strategic Planning process in 2009. These tasks and associated documents provided a clear picture of the Research mission’s status at that time. That status, six years ago, was underscored by the 2008 Self Study summary statement regarding the #10 Standard (Research):

“Research activity is currently focused through the efforts of individual faculty members. A strategic initiative will be the development of the Prince Mohammed Center as a multi-disciplinary and ethical research center linked to local industry”

And

“Involvement of students and postgraduates in research activity is an emerging priority.”

As previously shown in Figure 2 and Appendix 1, progress over the ensuing 6 years and the achievements of many of the articulated goals and objectives related to Standard #10 (Research) in the 2009 University wide strategic plan reflect significant accomplishments, and commitment, in relation to the NCAA stated guidelines. Those achievements provide the foundation on which this 2014 Research Strategic Plan is now based.

2. Environmental Review Related to Research at UOD

2.a. External Environment

Several factors in the external environment have important influence on the directions being pursued by the UOD research mission. Many of these factors are drawn directly from the University wide UOD “Strategic Plan 2011-2014” dated March 2011 (noted in *“italics”*). They are:

- *“The KSA’s 8th Five Year Plan projects that the largest increase in the labor force will be in the Science and Technology fields.”*

- *“The government’s well publicized commitment to building a world-class higher education system, with strong research funding, call attention to the opportunities for productive employment and collaborative research in Saudi universities.”*
- *“In the first years of this decade (1st) there were only 2,119 research projects conducted in government research centers. Of these, 31.6% were in medicine.”*
- *“The University research environment in the Kingdom is changing at a fast pace. University research, in concert with Saudi and international industries, is seen as the strategic avenue for the economic development and diversification of Saudi Arabia. It is also the beacon for the preparation and deployment of scientists, engineers, technical professionals as well as business executives and managers. (Chapter 19, Science & Technology. Eighth Development Plan [1425/1426-1429/1430] A.H. [2005-2009] A.D. on Saudi Ministry of Economics & Planning [<http://www.mep.gov.sa>])”*
- *“The King Abdullah University of Science and Technology, even in its initial planning, has already set a much higher standard for University research in the Kingdom through its appointments of officers, partnerships with the best-of-the-best international universities, as well as with the largest multinational and Saudi corporations.”*

- *“The government has plans to spend SAR 32 billion (\$8.6billion USD) on research and development as part of its 20-year National Science and Technology Plan. Included in this funding are allocations to universities for research in Biotechnology, Nanotechnology, etc.”*
(Ministry of Economy & Planning. 8th Development Plan, op.cit., Ch 19)”

In addition, the Ministry of Higher Education’s Plan to achieve Excellence in Science & Technology (© Ministry of Higher Education General Department for Planning & Statistics, 2010 King Fahd National Library Catalogue-in-Publication Data) the following initiatives were articulated:

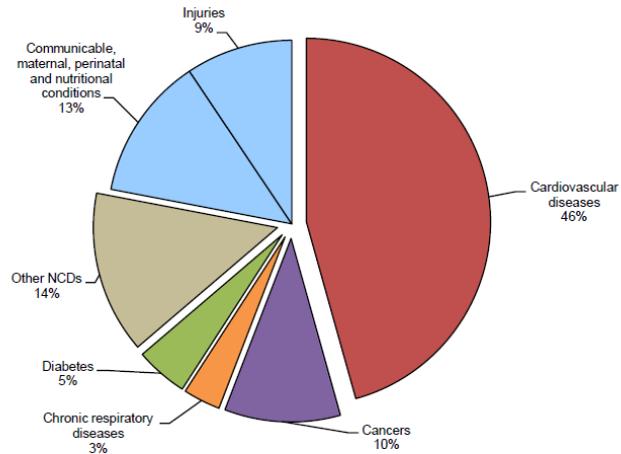
- Research excellence centers at Universities (invested SAR 600 million) were to be created to develop:
 - Research Centers of Biotechnology
 - Research Centers of Genomic Medicine
- Science Parks and Technological Incubators (e.g. King Fahd University of Petroleum & Minerals established the Dhahran Techno Valley)
- Creation of Scientific Research Chairs program
- In the Kingdom’s Second Five –Year Plan the MOHE stated:
 - “Making the Kingdom one of the leading countries in the region in the field of Science, Technology and Innovation by the year 2020” (page 30); and,

- “The project for establishing and supporting creativity and innovation centers (page 31)

Further, in the Ministry of Economy & Planning “Brief Report on the Ninth Development Plan 1431/32 – 1435/36 (2010 – 2014)” it stated its intent “to diversify the economic base”; and, “ to move forward a knowledge based economy” and "to support the drive toward a knowledge economy” (page 39) through:

- Boosting the Kingdom’s capabilities in technology transfer” (page 40);
- “Providing grants for strategic projects at universities and national research centers amounting to SR 900 million per year” (page 63);
- “Establishing fifteen (15) King Abdullah City for Science and Technology (KACST) affiliated national technological innovation centers at universities” (page 69),
- “Establishment and equipment of ten (10) distinguished research centers” (page 69); and,
- “Establishment of a minimum of eight (8) technology incubators at KACST and universities” (page 69). We see these strategic national objectives as both timely and powerful incentives to shaping the objectives for our research strategic plan to advance research into discovery; and, ultimately to develop technologies that are transferable into benefits for humankind.

Finally, The World Health Organization’s data regarding the relative prevalence of common non-communicable diseases in the Kingdom provides insight into health issues within our region. These data are depicted in the following pie-chart (Figure 3).



Total deaths: 90,000
NCDs are estimated to account for 78% of total deaths.

Fig.3: World Health organization –Non Communicable Diseases (NCD) KSA -2014

2.b. Internal Environment

- Historically, the culture of the University has been predominately “instructional”. In contrast, a culture of “intellectual curiosity/discovery “is new and narrow but widening.
- Recently initiated student positions in research are attracting growing numbers of students to the research experience
- The recently opened and equipped the CRMC provides a dramatic expansion in resources and technologies available for life-sciences research
- There are no economic incentives for high levels of research productivity & extramural funding unrelated to the economic benefit of promotion.
- There is significant interest within the University leadership to develop collaborative partnerships with local businesses & community leaders

2. c. Research Faculty & Scholarly Activities

Growth in the involvement of UOD faculty in research activities is shown in the following graph (Figure 4). The somewhat expedient growth over the past two years underscores the emergence of a culture of intellectual curiosity within the University.

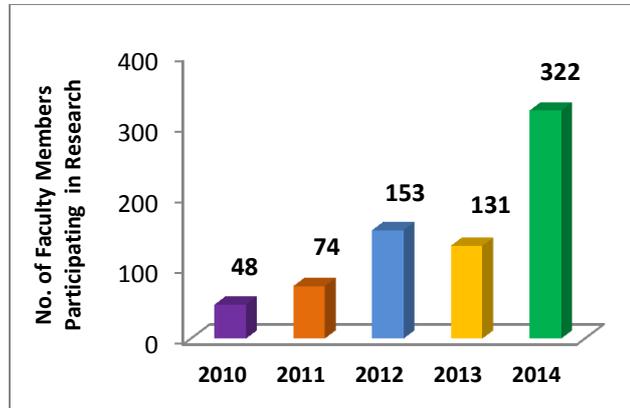


Fig.4: Number of Faculty Members Participating in Research (2010-2014)

Research and scholarly inquiries approved through the Standing Committee for Research Ethics on Living Creatures (SCRELC) is both broad based and increasing over the past two years. Only 35 grants were approved in a total of six (6) professional disciplines or schools in 2013. In contrast, 231 such grants have been approved in 2014 to support research projects in twenty (20) colleges and programs. Of these 231 grants, 168 were awarded to investigators in the life sciences, with Medicine (69), Dentistry (37) and Applied Medical Sciences (47) being the dominant awardees disciplines. This growth is highlighted in Figure 5 below. A complete grouping of the awards, showing the quantity attained by respective colleges and their constituent departments is provided in Appendix 2.

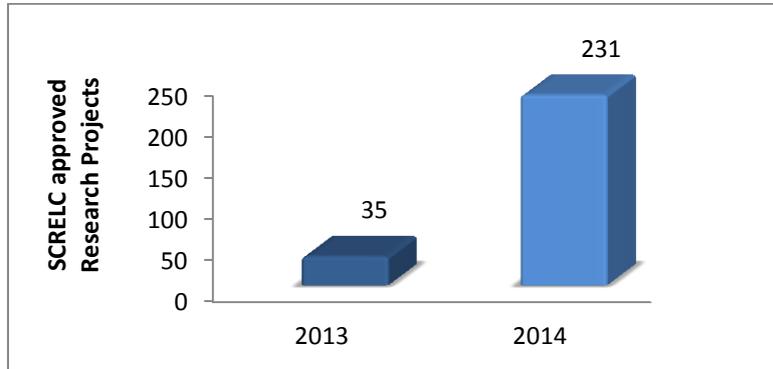


Fig.5: SCRELC* Approved Research Projects (2013 versus 2014)

* The Standing Committee for Research Ethics on Living Creatures (SCRELC) was established on October, 2013

2.d. Current Support Resources for Research

There has been a noticeable increase in funds allocated for research by UOD over the recent 3 years. Figure 6 shows that there is a 185 % increase (almost two fold) in the research funding by UOD over the past three years (2012 → 2014), i.e., from **14.7** million SAR in 2012 to **27.2** million SAR in 2014. This support represents **2.7** percent of the University's total budget, (excluding hospital related operations) in 2014.

This annual growth in research funding over the most recent 5-year period is shown in the following graph.

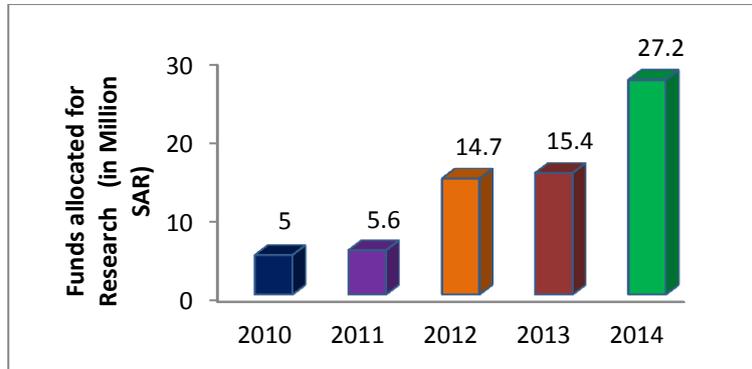


Fig.6: Funds allocated to Research

2.d.i. Sources for potential funding of Research include the following:

Internal Sources:

- Deanship Council for Scientific Research (UOD –DSR)

External Sources

- KACST
- SABIC
- ARAMCO
- Private Foundations
- Individuals

2.d.2. Physical and Technological Resources

The primary institutional resources developed to support research at UOD are:

- The Center for Research and Medical Consultations CRMC; and,
- The Animal Housing Facility.

A detailed description of these facilities and technologies is provided in Chapter 2.

Other technological resources supporting the research mission include access to scientific journals and publication services provided by the Central University Library and the tracking and analytic services provided by the Deanship of Quality & Academic Accreditation

2.e. Management and Operating Environment for Research

The oversight, management and operational support services for the research mission include:

- The Standing Committee for Research Ethics on Living Creatures “(SCRELC).
- Deanship Research Council
- Patent & Technology Transfer Office (PTTO)
- Office of Knowledge Exchange & Collaboration
- Collaboration with UOD Campus Central Library and Publishing Center
- Office of the Department of Quality & Academic Accreditation

The roles that each of these resources plays in the realization of our strategic vision and goals for Research at UOD are provided in Chapter 2.

3. SWOT Summary of Research at UOD

Identification and analysis of the strengths, weaknesses, opportunities and threats of the current University wide enterprise, including its research mission, was performed both by internal surveys and external review over a 12 month period concluding with a full Self Study Report dated 17 February, 2014. The following Table 1 provides a synopsis of the important Strengths and Weaknesses gathered through those exercises as they relate to the research enterprise.

Table – 1: Current Strength and Weakness of Research at UOD

S. No.	Strengths	Weaknesses
1	Development of Research Guidelines	Lack of available funding for research
2	Policies defining what constitutes research	Not focused on interdisciplinary research
3	Mechanisms to enhance research collaboration	Skilled Manpower shortage English vocabulary skill is low
4	Policies for biological & medical ethics	Little awareness of guidelines and policies by faculty
5	Manual on Plagiarism & ethical standards in reporting research	Need for benchmarking of Scholarly research activities

S. No.	Strengths	Weaknesses
6	Awareness of relevance of research in Promotion criteria	Need for development of units within Patent & Translation Office (registration, feasibility study & marking)
7	Faculty alignment of research activities with their teaching responsibilities Laboratory space & equipment	Need for mechanism to recognize & reward excellence in research
8	Center for Research and Medical Consultations (CRMC)	Assistance for teaching staff to develop collaborative research
9	Encouraging research and allocating grant for research	Poor participation in research by female faculty members

4. Benchmarking of UOD Research and Strategic Data Needs

4. a. Benchmarking

The relatively brief history of research at UOD creates some unique benchmarking dilemmas at this early stage of its maturation. On the one hand, comparing UOD to other institutions similarly in their early development of their research mission limits UOD's stated aspirations. Alternatively, use of mature, research intensive, universities clouds the picture of UOD's current achievements. Nonetheless, use of such

mature universities to which UOD realistically aspires for comparative benchmarking provides an appropriate level of achievement to which UOD desires to be measured.

UOD has established the Office of Knowledge Exchange & Collaboration that makes regional and international links with renowned, specialized educational and research institutions. This acts as a central coordinating office for UOD's international initiatives, ventures and activities. This office is the single point of contact for all the University's international initiatives to ensure the efficient execution of these agreements and to streamline the process.

Current scientific collaborations within the KSA, the Gulf region and international institutions from which we will develop benchmarks for our research achievements are listed below:

KSA

1. King Abdulaziz City for Science & Technology (KACST)
2. King Fahd University of Petroleum and Minerals (KFUPM)
3. Private and governmental companies (e.g. ARAMCO, etc.)

International

1. Boston University School of Medicine, USA
2. Imperial College London, United Kingdom
3. University of Queensland, Australia

4. University Medical Complex Utrecht, The Netherlands
5. University of Strasbourg, France
6. University of Gottenings, Germany
7. University of Miami, USA
8. Harvard University, USA
9. Monash University, Australia
10. University of Alabama, USA
11. Cambridge University, UK

Our initial set of planned benchmarking data on which we will compare our progress to these institutions will include the following:

- Number & percent of Research faculty by College
- Total Intramural & Extramural funding for Research and % of institution's total budget represented by research funding
- Scientific articles published in referred journals
- Other Scholarly publications (chapters, monographs, books, etc.)

Likewise, we now are assembling the data elements and will engage our regional industry partners to refine benchmarks to define continuous success in our goals for interactions with industry, our output of scientific

discovery and the impact of our Consultative Studies and services on our community and the Eastern Province. The preliminary data points will include the following KPIs (Table 2, Template):

Table – 2: Planned Data Elements Tracking Industry Related Interactions

KPI	Number Base Period	Number Current Period
Companies Served		
Industry Research Projects		
Faculty Sabbaticals- Industry		
Patented Discoveries		
Licensed Discoveries		
Spin-off Businesses		

4.b. Key Performance Indicators

Creating key performance indicators (KPIs) on which success is measured is critical in establishing an environment in which achievement is both measured and valued. They serve an additional role of driving an organization toward goals that might otherwise become idled by daily operations or stagnant from lack of focus and absent comparison of outcomes to desired results. To this end, we adopted and followed the original set of 6 KPIs in compliance with NCAA standards. In addition, we have created an additional 14 KPI's that also have been followed since the 2009/10 academic year. All KPIs are shown in the following Table 3. Further detail regarding the data used for calculation of these KPI's is provided in Appendix 3.

Table – 3
Key Performance Indicators (2010 – 2014)

S. No	KPI Detail	2010	2011	2012	2013	2014
1	Number of publications in refereed journals per full time teaching staff	0.09	0.09	0.22	0.25	0.27
2	Number of citations in refereed journals to publications by full time teaching staff as a proportion of full time teaching staff	0.30	0.26	0.38	0.21	0.05
3	Proportion of full time teaching staff with at least one refereed publication during the previous year	12	11	19	25	29

4	Proportion of post graduates whose dissertation / thesis is placed on central library of UOD - (i) PLAN-A(Coursework + Research based Thesis)	100	100	100	100	100
5	Proportion of post graduates whose dissertation abstracts are published locally (i) PLAN-A	100	100	100	100	100
S. No	KPI Detail	2010	2011	2012	2013	2014
6	Number of papers or reports presented at academic conferences during the past year per teaching staff	0.03	0.03	0.07	0.04	0.07
7	Research income from external sources generated in the past year per teaching staff (SAR)	2779	2855	17440	15403	27752
8	Proportion of Total Operating Funds allocated to Research	0.43	0.42	1.26	1.39	2.68
9	Average time of completion (years) by post graduate students in PLAN-A	4.8	4.1	4.3	3.7	4
10	Average time of completion by post graduate students in PLAN-B (Course work only)	2	2	2	2	2
11	Average time of completion by PhD students	4.9	5	5.1	4.8	4.9
12	Proportion of PhDs whose dissertation / thesis is placed in central library of UOD	100	100	100	100	100

13	Proportion of PhDs whose dissertation abstracts are published locally	100	100	100	100	100
14	Percentage of Research students in the students body	0.24	0.26	0.41	0.79	0.60
15	Research income generated by full-time faculty SAR	2779	2855	8608	7950	14084
16	Proportion of faculty holding competitive research grants	2.1	3	8.5	6.5	13.8
S. No	KPI Detail	2010	2011	2012	2013	2014
17	Total Number of postgraduate Students engaged in funded research projects	0	0	07	0	13
18	Total budget allocated to postgraduate students (in SAR)	0	0	324900	0	272145
19	Total Number of undergraduate Students engaged in funded research projects	0	0	0	0	116
20	Total budget allocated to undergraduate students (in SAR)	0	0	0	0	420000

There is no doubt that UOD's attention to very strategic institutional issues such as the birthing of an entirely new University out of KFU-Dammam and its decade long construction of an entirely new University campus could have had an impact on its focus toward stated timelines for achievement of other 2009 KFU-D Strategic Plan Objectives. Yet, there has been significant growth in scholarly and research

initiatives over the intervening years despite these confounding influences. A snap shot of that growth is summarized in the Table 4 below.

Table – 4: Synopsis of Growth in Research Related Parameters

S. No.	Performance Indicator	5 year Growth 2010 → 2014
1	Number of Publications in refereed journals	157 – 267
2	Number of Citations of faculty in refereed journals	542 – 45
3	Number of papers or reports presented by teaching staff at academic conferences during the past year	48 – 67
4	Number of Ph.D. 's completed	28 – 18
5	Number of post-graduate projects completed	32 – 28
6	Number of undergraduate Students engaged in funded research projects	0 – 116
7	Number of Extramurally Funded Research	35 – 231
8	Number of Conference conducted	4 – 7
9	Number of U.S. Patents Filed	0 – 7
10	Number of Workshops/Training courses	4-7



**CHAPTER 2:
UNIVERSITY DESIGN FOR RESEARCH:
ORGANIZATIONAL STRATEGIES**

1. Introduction and Discussion

The research mission for UOD is early in its development and maturation. Its greatest focus and achievements to date have been in the development of the infrastructure on which a robust research mission can be based. The centerpiece of this infrastructure is the recent occupancy and initiation of research activities in the Center for Research and Medical Consultations (CRMC) and, the development of the administrative infrastructure and institutional policies, procedures and guidelines to assure high quality in the conduct of laboratory, animal and human research activities. With these foundational assets birthed and operational, we now focus on the growth and development of the research mission as articulated in this Research Strategic Plan. The strategies undertaken to assure oversight of the research mission, the ethical conduct of research and the ongoing growth of research and scholarly activities throughout UOD are articulated in the following sections.

2. Design for Assurance of Ethical Conduct of Research

Ethical conduct of all scholarly activities related to research at UOD is monitored and overseen by the UOD “*Standing Committee for Research Ethics on Living Creatures (SCRELC)*”. Its stated mission is to:

“Ensure the welfare, well-being and humane care and use of all Living Creatures used in research, and that research conducted at its premises is ethical, scientifically justified, and performed in accordance with Shari’a and the Kingdom’s Law and regulations”.

The SCRELC is composed of eleven (11) senior faculty members and chaired by Professor Abdulsalam A. Al-Sulaiman, Vice President of Scientific Research & Graduate Studies and Chairman of the Scientific Council. Its all-inclusive Manual of policies, procedures, guidelines and operations for oversight of the ethical conduct of research is provided in Appendix 4.

In addition to organizational oversight provided by the SCRELC to assure compliance, symposia and other forums will be used to enhance institutional awareness and focus on the ethical conduct of research by both students and faculty.

The Monitoring Office for Research & Research Ethics at University of Dammam has seven (7) senior faculty members. The Monitoring Office for Research & Research Ethics at University of Dammam plays a key role in scientific research projects by conducting periodic ethical evaluation, monitoring approved research projects at research ground level, encourage researchers to work in accordance to the SCRELC and National Committee of Bioethics (NCBE) policies and protect living creatures (Appendix 5).

3. Administrative Structure for Oversight and Support of Research

The administrative structure (business and management plan) created to oversee and support the research mission of UOD is graphically shown in Figure 7 below.

a. Deanship Scientific Research Council

Headed by the Dean of Scientific Research, and composed of 11 senior administrative and faculty leaders it serves as the primary institutional oversight committee that reviews research project applications, selects approved proposals for intramural funding and monitors the conduct of such research projects. It distributed 23.9 million SAR in 2014 for the support of UOD investigators. Rules and guidelines for submission of research proposals to the Council are provided in Appendix 6.

b. Patent & Technology Transfer Office (PTTO)

The Patent & Technology Transfer Office (PTTO) serves to encourage faculty members by helping them protect their intellectual Property rights, perform early feasibility studies and assist in marketing their intellectual property. Due to the limited frequency of patent filings, the actual management of patent applications, etc. is contracted to an external vender experienced in providing such services. The Guide to UOD's Intellectual Property Policies is provided in Appendix 7.

c. Office of Knowledge Exchange & Collaboration

The Office of Knowledge Exchange & Collaboration has been established to facilitate regional and international links with renowned, specialized educational and research institutions. This acts as a central coordinating office for UOD's international initiatives, ventures and activities. This office is the single point of contact for all the University's international initiatives to ensure the efficient execution of these agreements and to streamline the process.

d. Collaboration with UOD Campus Central Library

The new UOD campus Central Library and associated learning resources will be a vital supporting resource for the research mission. It has the necessary resources to collaborate with faculty, staff and students working in the research arena to provide access to all necessary scientific publications, worldwide, and aid in intellectual inquiry regardless of the specific area of study. In addition, it will play a critical collaborative role in the development of the UOD "Publishing Center". It has the facility to translate book, monograph and scientific research manuscripts from Arabic into the English language and assure that all scientific work, independent of language of origin, is available for publication.

e. Deanship of Quality & Academic Accreditation (DQAA)

The DQAA plays a vital role in support of the research mission through its systems to assure compliance with all standards for quality and academic accreditation and by its assignment of personnel to directly

support the research mission's leadership in achievement of this goal. These DQAA personnel assimilate the data regarding metrics and KPIs to monitor success in pursuit of the mission's goals and objectives; and, provide administrative support to the Vice President and the Research Dean in their oversight of all components of the research mission.

f. King Fahd Hospital of the University (KFHU)

Construction of the new KFHU and associated medical and dental clinical facilities within the health sciences geographic cluster of the new campus is scheduled for occupancy in 2016. Once all of these related facilities are occupied, Objective 15 (Development of the "UOD Medical Sciences City") will be achieved. Also, KFHU intends to attain international accreditation for its support of clinical research (9) and in its support role within the planned development of the General Clinical Research Center (Objective 18).

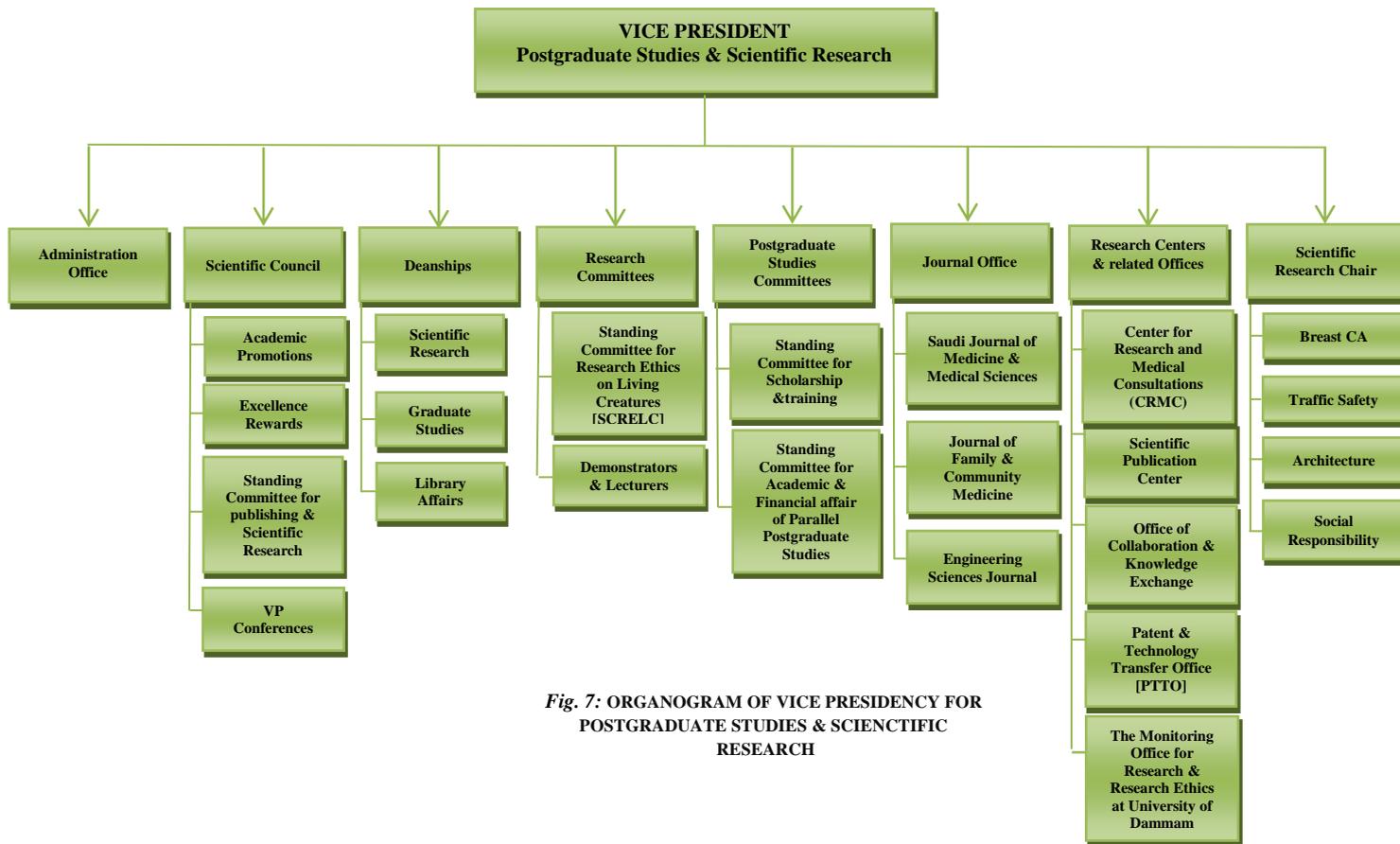


Fig. 7: ORGANOGRAM OF VICE PRESIDENCY FOR POSTGRADUATE STUDIES & SCIENTIFIC RESEARCH



Fig. 8: Center for Research and Medical Consultations (CRMC)

4. Center for research and Medical Consultations

Previously named the Prince Mohamed Bin Fahd Abdulaziz Center for Research and Consultative Studies, the CRMC is an important organizational asset for UOD and serves as UOD's strategic incubator for:

- a) Inter-disciplinary research (both clinical and laboratory research)
- b) Outreach initiatives for research & consultative studies in partnership with other academic institutions, government and industry
- c) Advancement of research and scholarly activities throughout UOD
- d) The site of the planned Public Health Sciences population based surveys and research
- e) The headquarters site of the planned "Publishing Center" of scientific journals and books

Figure 8 shows the infrastructure of CRMC. An application for re-designation of the Center to achieve "Institute" status has been submitted to the granting agency at King Abdulaziz City of Science and Technology (KACST) and is awaiting approval. Designation as the Institute of Research and Medical Consultation will:

- Mark a significant achievement for the research mission;
- Open a new source of extramural funding from KACST; and,
- Further advance the growth and success of the entire UOD research mission.

With construction completed in 2013, it has 74,270 sq. ft. of laboratory and office/administrative space. Currently, approximately 95% of it is “out-fitted” and 50% is occupied. In total, approximately 100 million SR was invested to complete construction of the CRMC and approximately 40 million SR for purchase of its initial scientific instruments. It houses the first two core laboratories serving many approved research projects (the Genomics Core & the Stem Cell Research Core). In addition, applications for two Centers of Clinical Excellence (COCE) have been developed and are currently pending approval and funding by KACST. They are:

- i. iPS Cell Research Center of Excellence for the Treatment of Hemoglobinopathies; and,
- ii. Vascular Medicine Center of Excellence in Education, Research & Training.

In total over 18 major laboratories in the CRMC are equipped and available to serve investigators. A complete inventory of all research laboratories and equipment in the CRMC is provided in Appendix 8.



Fig. 9: Animal Research Housing Facility.

The animal research housing facility is located adjacent to the CRMC (Figure 9) and consists of 37,600 sq. ft. of housing space. It is equipped to house both small animals (e.g. rodents, birds and rabbits, etc.) and large animals (e.g. sheep goats and baboons). At present, only rodents and rabbits are housed in the animal house for use in studies by investigators in the two CORE's.



**CHAPTER 3:
BLUEPRINTING FOR DEEP STRATEGY
FOR RESEARCH AT UOD**

There are multiple components to building a Deep Strategy for Research. At its core, a Deep Strategy:

- Articulates the essential purpose for having a research mission
- Focuses on the value to outcomes and constituencies
- Insists on an integrative approach to all strategic initiatives
- Creates a new knowledge-base on which improvement to humankind is based
- Builds sustainable systems and capacities that will maintain long range achievements

When applied to an actionable agenda, achievement of objectives toward our Deep Strategy will be gauged against our impact in the following areas:

1. Improving the Quality of Life
2. Connecting to Students and the Education mission
3. Integrating with the Clinical enterprise
4. Regional Economic Development
5. Positioning the Research Enterprise as a Strategic Asset

1. Improving the Quality of Life

UOD has a foundational and traditional commitment to improving the quality of life through its clinical enterprise and its cluster of health professions colleges and programs. The development of a vibrant research enterprise, as outlined in this strategic plan will enhance that commitment through fostering intellectual curiosity and implementation of the associated research initiatives.

Two specific components of this commitment to *improve quality of life* have already been initiated in the two Centers of Clinical Excellence (COCEs.), the “*iPS Cell COCE for Treatment of Hemoglobinopathies*” and the *Vascular Medicine COCE for Education, Training & Research*” (Strategic Objective 2).

Finally, the recent approval to develop a UOD College of Public Health will enhance our capacity for development of the CRMC based research program in Public Health that will build its own research programs and support the CORE’s in advancing health in the Eastern Province (Strategic Objective 7). This program also is envisioned to have component epidemiologists and biostatisticians that will conduct surveys and perform statistical analysis of collected data on health risk factors and disease, etc. in the Eastern Province that ultimately will translate into population-based *improvements of the quality of life*.

2. Connecting to Students and the Education Mission

A robust research enterprise is critical to the development of a culture of intellectual curiosity within the entire University. Likely, the most impactful consequence of such an environment is the infusion of such intellectual curiosity into the education mission and its constituent student population. The multiplier impact of imprinting intellectual curiosity into the future graduates, independent of their subsequent life's direction, serves to uplift their future contribution to society and the future of humankind. It is with this premise that we plan to create a program for vibrant interactions with UOD students through provision of seminars, development of grants for student participation in research, awards for student achievement in research, etc. (Strategic Objective 5). Progress in pursuit of this goal since 2010 is shown in the following graph (Figure 10):

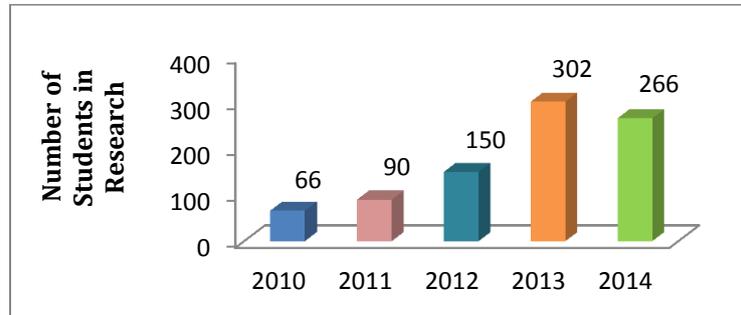


Fig.10: Tracking Students Participating in Research Projects per Year

Bar graph showing number of Students participating in research projects in the past five academic years at UOD.

3. Integrating with the Clinical enterprise

The new University hospital, Dental hospital and medical clinics under construction within the new University campus's master landmass development plan and the close proximity of these clinical facilities to the CRMC create a significant advantage for success in the development of clinical research within the UOD's research enterprise. Once all construction is completed for these health related facilities, it will be marketed as the "UOD Medical Sciences City" and can be seen as the nucleus around which the realization of the Biotechnology Business Park can be realized.

The planned development of multidisciplinary Centers of Clinical Excellence (COCE) that will integrate with the Centers of Research Excellence CORE's (Strategic Objective 2) will ignite clinical research at UOD and foster achievement of its mission to advance the wellbeing of humankind. Further, the plan to create a designated "General Clinical Research Center" in conjunction with the University hospital and clinical enterprise will provide the facilities to perform clinical research in a facility designed and staffed solely for the conduct of clinical research.

4. Connection to Regional Economic Development

UOD is an integral partner with the region in its economic development. While UOD's education mission will strive to fulfill regional workforce needs in all economic sectors, including health care and science & technology sectors, an important objective of the research enterprise is to develop strong interactions with the Research and Development components of industry partners to advance their evolution and development of new products through discovery. Likewise, our research mission's deep strategy of leading a biotechnology economic development initiative will add important diversification to the region's economy through creation of patented and licensed intellectual properties that can attract partnering businesses to the region as well as create new companies through commercialization of such discoveries. The initial framework for achieving these goals and objectives is built from the organizational, facilities, and intellectual assets depicted in this Research Strategic Plan (Strategic Objectives 8, 11, 12, 13, 16 &17). The cumulative lists of tasks embodied in the tasks associated with the respective objectives of this plan underscore the means with which these ambitions will be realized.

5. Positioning the Research Enterprise as a Strategic Asset

Our goal is to build the research mission with the Deep Strategy of it becoming a strategic asset to the:

- University,
- Local & regional economy, and
- Entire GCC

Asset for the University

The research mission will become a strategic asset to the University through many venues. First, it will be the site spawning an institutional environment of intellectual curiosity and raise the aspirations of students by engaging them in meaningful research. Second, through the expansion of scientific discoveries and associated publications, UOD will acquire strategic reputational benefits from the broader academic community (KSA, GCC & International) both for its investigative achievements and their impact on the quality of life for humankind. Third, the initiative to develop population based survey assets and bio-statistical resources within the planned public health sciences research program in the CRMC should lead to strong partnerships with other research and academic sites, regional businesses and government.

Asset for the Local & Regional Economy

The research mission will become a strategic asset to the local & regional economy through its Public Health Sciences studies leading to improvement in the quality of life for the region. Also, the research enterprise will enhance the local economy through its leadership in developing a biotechnology business sector for the region. Finite contributions to such an economic diversification will include UOD's creation of new licensed intellectual property and spawning and/or recruitment of life-sciences companies to the region.

Asset to the Entire GCC

Finally, the research mission will become a strategic asset and benchmark for the KSA and the entire GCC region through the impact of its translational research & discoveries and their commercialization. Not

only will success in technology transfer have a direct economic impact locally, it, also, will garner broad GCC attention & stimulate greater interest in growth of economic diversity in the entire GCC.

The tasks to be undertaken to realize all of these aspirations are provided in the Gantt Charts attached to this Strategic Plan narrative (Appendix 9).



**CHAPTER 4:
STRATEGIC GOALS & OBJECTIVES
FOR RESEARCH & DISCOVERY**

Strategic Goal for Research

Create a culture of intellectual curiosity and conduct research of the highest ethical standards to generate new knowledge through research in health, industry, and the humanities to advance the well-being and welfare of the community.

A key goal for any educational institution should be to instill intellectual curiosity and professional ethics in its students to prepare them to be life-long learners in their chosen careers. At the core of such a goal is an environment of intellectual inquiry fostered by a faculty engaged in ethical research and discovery. To this end, UOD intends to build selected robust multi-professional and multidisciplinary research programs in the CRMC to serve as a nucleus to spawn a culture of intellectual curiosity and accomplishment across the full research continuum that includes basic laboratory, clinical, population-based and translational research. In addition, programs to educate students and faculty to instill the practice of professional ethics will be a vital part of the research experience. The following 23 objectives have been created to achieve this goal. Specific metrics to measure our progress toward these objectives; and the tasks identified to achieve them are provided in Appendix 8.

- Objective 1** Utilize the CRMC as the location for the development of additional multidisciplinary Centers of Research Excellence (CORE)s
- Objective 2** Develop Centers of Clinical Excellence (COCE) linked to the CORE to enhance health education, research and care delivery for the Eastern Province
- Objective 3** Prepare a research faculty recruitment plan and recruit 2-3 multidisciplinary cohorts of experienced, funded investigators in selected research areas to provide leadership, direction, and credibility for the research enterprise
- Objective 4** Establish Junior Research Faculty positions in the COREs for postgraduate research applicants and other trainees
- Objective 5** Expand research opportunities for increased student & faculty participation in research, including student & junior faculty mentorship programs
- Objective 6** Create a reward system that includes incentives for extramurally funded research and promotion criteria that recognizes and promotes collaborative investigations, including intra & inter-departmental and inter-college collaborations
- Objective 7** Create a research program in Public Health, housed in CRMC that builds its own research program and supports the COREs
- Objective 8** Expand technology transfer (commercialization) program that provides both reputational and financial returns on UOD's investment in intellectual property generating research and contributes to priorities for economic development and diversification in KSA and the Region.

- Objective 9** Formulate and implement robust policies and programs to consistently ensure high ethical standards in the conduct of research at UOD
- Objective 10** Develop and market a scientific publishing initiative in the CRMC
- Objective 11** Create a Center of Entrepreneurialism (CE) within CRMC
- Objective 12** Create a Biotechnology Innovation Center (BTIC)
- Objective 13** Create a biotechnology Incubator to launch bio-medical technology related “start-up” businesses in the “Medical Sciences City”
- Objective 14** Generate knowledge related to the complex nature of our world **by** engaging in research in the humanities to address dynamic changes and rapid developments
- Objective 15** Establish the Health related Campus as the “UOD Medical Sciences City”
- Objective 16** Develop plans for and initiate the creation of a Biotechnology Business Park
- Objective 17** Enhance the Bridge between UOD’s research mission and stake-holders within the community and business leadership
- Objective 18** Develop a General Clinical Research Center (GCRC) in association with the UOD King Fahd Hospital and Clinics
- Objective 19** Obtain International Accreditation for Research Standards for respective units of UOD here research is conducted, including the University hospital
- Objective 20** Establish UOD wide criteria and approval process for awarding designation of “Research Center” and “Research Institute”

- Objective 21** Develop internal and external benchmarks against which selected outcomes of monitoring key performance indicators can be compared to gauge success in conduct of the research mission
- Objective 22** Create External International Advisory Council to the Vice President of Post-Graduate Studies and Scientific Research
- Objective 23** Create and implement a standardized scoring system to rank quality and determine funding of internally supported research projects

A total of 77 major tasks have been identified for these 23 initial Strategic Objectives created to achieve the University's stated Strategic Goal for Research. Appendix 8 includes these specific objectives and associated tasks, along with the metrics and to monitor progress toward their achievement.



**CHAPTER 5:
STAGES OF VISION REALIZATION-
STRATEGIC INITIATIVES 2009-2024**

1. Discussion & Analysis

Strategic planning at UOD has an immense array of evolving components of change that are simultaneously occurring across the entirety of its being, including:

- Creating an entirely new organization structure and support resources
- Building an entirely new campus location with significant increases in its size & resources
- Significant increases in the breadth of its academic programs (new colleges & programs)
- Creating a new hospital & associated clinical practice facilities
- Assuming an expanded leadership role in the Eastern Province
- Birthing of a new Research enterprise for the University

Each of these long-ranging strategic initiatives demands its own deep strategy, including short, intermediate and long range planning to realize the vision for their respective roles in the mature University. Orchestration of this complex evolution requires staging of all activities and initiatives; for, in no small measure, the pursuit of each initiative has significant impact on the remaining components of this metamorphosis. So is the case for the Research mission.

Essentially each of the identified objectives for birthing of a new and more robust research enterprise is partially dependent on prerequisite achievements in another objective. For instance, one cannot have a

Center of Clinical Excellence unless there first is a Center for Research Excellence. Likewise, there must be research facilities visibly well underway before one can realistically entertain recruitment of accomplished investigators to pursue their research interest at UOD. Further, the creation of an environment of intellectual curiosity demands that there be a faculty present and engaged in activities demonstrating such curiosity. Finally, each of these objectives require the presence of the appropriate institutional oversight functions, policies and procedures to ensure the proper conduct of research and management of intellectual achievements and property. For those reasons, it is logical and critical that staging of the foundational components of the research strategic plan be achieved in advance of more outwardly visible accomplishments in outcome-oriented measures of success.

As previously noted, significant components of the abovementioned foundational tasks have been achieved over the past five years and are recorded in Appendix 1 “Accomplishments to Date in Research Mission (2009-2014)”.

2. Impact of Research Resources on Staging

Construction and occupancy of the CRMC has been the most time consuming and most critical resource on which the future growth and development of the new research mission is dependent. Begun ~15 years ago, its construction was completed in 2013. The presence of this facility allows active pursuit of most of the respective research objectives without “resource availability” being a limiting factor. Similarly, once the new clinical facilities are operational, intense effort can be expended to further recruit clinical scientists to expand planned COCE’s.

Finally, plans for development and marketing of the scientific “Publishing Center” in the CRMC (Objective 10) in collaboration with the Central Library facilities and plans for recruitment of public health investigators (Strategic Objective 7) can now be initiated for occupancy of reserved space provided in the CRMC.

3. The Stages of Vision Realization

As previously discussed, the stages in realization of the Vision for research at UOD are, in no small measure based on both sequential and simultaneous achievement of interrelated Strategic Objectives. Stages in the realization of this vision are shown below:

Stage I (2009-2012)

- Creation of initial set of research objectives in association with creation of first KFU-D Strategic Plan from which the new Research Mission is spawned
- Develop oversight structure, policies & procedures to assure ethical conduct of research (done)
- Develop business plan and recruit leaders of initial CORE (done)
- Develop plans for and recruit initial cohort of junior research faculty to CORE (done)

STAGE II (2013-2014)

- Complete construction and outfitting of CRMC (done)

- Accomplish immediate/priority Action Plans for Research identified in the 2014 UOD Self Study Report
 - Identify external sources and seek additional funding for research
 - Create Policies & Procedures for the process of approval and funding of Research in UOD
 - Establish benchmarks to define scholarly Research in UOD
 - Launch three support units in the Office of Patent and Technology Transfer, including assistance with a) intellectual property registration; b) feasibility studies; and, c) marketing units
 - Begin processes to ultimately create a Biomedical Scientific Park where government and private institutions invest in scientific research.
- Develop reporting software for recording % research effort, funding sources for research project, etc. (done)
- Create software to track patent applications, awards and licensing agreements (done)
- Recruit and appoint Assist. Director for Technology Asset Management (done)
- Initiate partnering relationships with regional businesses and government to identify needs for population based data (underway)
- Initiate tasks to develop Public Health Sciences research program in CRMC (underway)
- Launch second CORE in the CRMC (done)
- Launch first Center of Clinical Excellence - pending

- Acquire “Institute” designation for the CRMC from KACST, thus becoming the *Institute of Research and Medical Consultations* (IRMC) - pending
- Recruit two additional established investigators for the Center for Research and Medical Consultations (CRMC)
- Develop criteria for and select initial cohort of students for student research fellowships (done)
- Build a culture of continuous planning (underway)

STAGE III (2015-2020)

- Develop and initiate campaign to market research opportunities to attract students and junior research faculty
- Implement population based public health sciences survey and research initiatives in collaboration with the new College of Public Health, regional businesses and the government sectors
- Develop and accomplish identified annual milestones of achievement for growth in extramural funding of research, scientific publications, number of research faculty and number of students engaged in research activities
- Continue to expand the research enterprise through continued growth in extramural funding for research & discovery
- Develop business plan and obtain approval and funding for development of the UOD “*Publishing Center*” of scientific journal articles, monographs and books

- Create Centers of Entrepreneurialism and Innovation, respectively
- Develop an accredited General Clinical Research Center
- Conclude occupancy of constituent facilities and programs with naming of the UOD “Medical Sciences City”
- Initiate business plan for development of the Biotechnology business park in collaboration with business and government partners
- Launch a biotechnology Incubator
- Maintain a culture of continuous planning

STAGE IV (2020-2025 & Beyond)

- Initial occupancy of the Biotechnology Business Park
- Continued growth in collaborative development of the Biotechnology business sector in partnership with community leadership
- Obtain maturation and steady-state growth of the research & discovery enterprise

As noted earlier, further identification of specific new objectives and initiatives for this period will be defined as a consequence of progress over the initial 5-year period of this Strategic Plan and in response to yet unrecognized opportunities in the continued growth of the research mission and through our focus on its strategic long-range goals.



**CHAPTER 6:
EXECUTING THE PLAN**

1. Planning for Implementation

UOD has embarked on an ambitious agenda of planning a magnificent new campus, a full campus community, new colleges and clusters and new hospitals (medical and dental). Planning of the Research mission similarly is ambitious and is envisioned to become a valued resource not only for UOD but also for the community, regional businesses, the Eastern Province, KSA and GCC. Its goal for growth encompasses objectives that will:

- Birth new discoveries;
- Enhance human well-being;
- Stimulate economic development for the region; and,
- Inculcate an atmosphere of intellectual curiosity throughout the students and faculty.

To achieve these end-points, it is imperative that planning for the research mission be synchronized with University wide planning. Further, implementation of the research strategic plan must maintain a sense of “sequential achievement” as many of its objectives are dependent on the successful implementation of foundational elements that will facilitate more outwardly visible results. The following schematic underscores the importance of this mind frame.

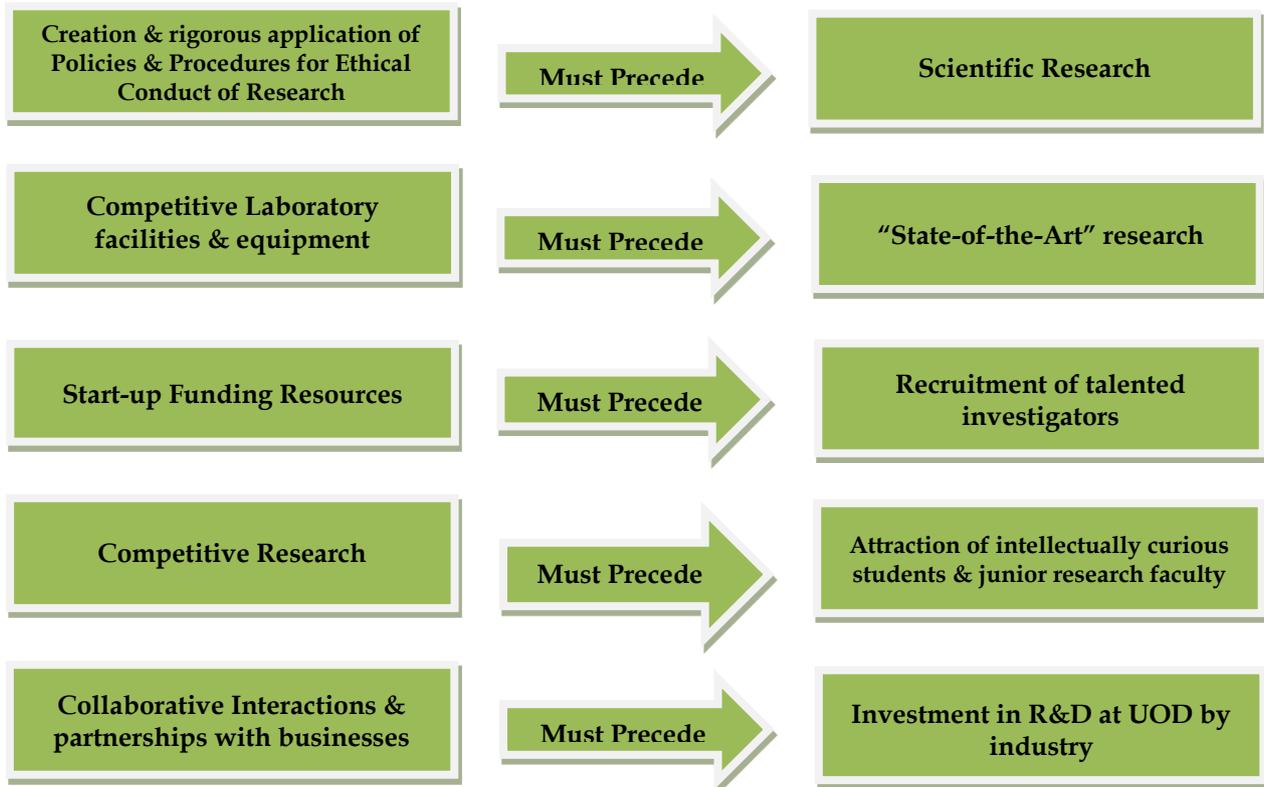


Fig. 11: Implementation Guidelines

This graphic depiction (Figure 11) of “Implementation Guidelines” does not imply that many tasks to achieve the respective objectives of the Research Strategic Plan cannot be undertaken simultaneously. Indeed, many of our stated objectives must be undertaken simultaneously and interactively with the wider University’s strategic plan’s implementation. It does emphasize, however, that one cannot “skip” ahead and not achieve preliminary steps on which subsequent objectives are dependent. To this end, many of the foundational steps of organizational structure, oversight, policies and procedures, on which the broader research mission is dependent, have now been achieved and are summarized in Appendix 1.

1.a. Immediate Research Mission-Wide Strategic Priorities

The following are immediate research mission-wide strategic priorities:

- Create Policies & Procedures for the process of approval and funding of Research in UOD
- Establish benchmarks to define scholarly Research in UOD
- Identify external sources and seek additional funding for research;
- Acquire “Institute” designation for the Center of Research and Medical Consultations
- Launch three support units in the Office of Patent and Technology Transfer, including assistance with
 - Intellectual property registration;
 - Feasibility studies; and,

- Marketing units in order to facilitate translation of Research and scholarly activities into applications within the academic or professional field concerned
- Begin processes to ultimately create a Biotechnology Business Park where government and private institutions invest in scientific research.

1.b. Development of Outcome oriented Performance based metrics [Key Performance Indicators (KPI's)]

We have developed a set of fourteen (14) outcome oriented KPI's that will continuously track our progress toward achievement of our Research Strategic Goal (Chapter 1, Table 3). Although early in our maturation, the trend lines for many of our KPIs are significantly improved over the past 5 years. We plan to monitor our widening areas of activities and add additional outcome oriented KPIs as we add new objectives and initiatives to enhance the success of our research mission.

2. Preparing for Continuous Planning

First, our approach to continuous planning is to create a culture and mind frame of constantly testing and refining our performance and methods used to accomplish our objectives and tasks. Secondly, we will create an entrepreneurial environment in which we capture the intellects of all engaged parties to seize new opportunities or modify our approach to stated objectives in order to enhance our travel toward our overall strategic goal. To these ends, we will constantly monitor our achievements and hold an annual retreat with

representatives from all stakeholders (administrative leadership, research faculty, student representatives, business and public sector leaders) to:

- Review our progress in each of our stated objectives over the preceding year;
- Hold discussions to identify potential enhancements to progress in achieving our stated objectives; and,
- Create refinements and additions to our long-range Strategic Plan that are identified through this formal review format.

Through these methods, we anticipate a continuous refinement of our planning efforts to maintain a vibrant and contemporary Strategic Plan that guides our ongoing accomplishments.

GANTT CHARTS OF RESEARCH STRATEGIC PLAN: 2015 – 2025

[Appendix – 8]

OBJECTIVE 1: *Utilize the Center for Research and Medical Consultations (CRMC) as the location for the development of additional multidisciplinary Centers of Research Excellence (CORE)s*

Aim: **To develop additional CORE's as a site to spawn the new institutional culture of intellectual curiosity and discovery**

Comment: Due to delays in funding, the construction of the CRCS had interval delays and was only completed and equipped in 2013, taking ~ 15 years. Over the past 18 months, it already has created two operational Core laboratories.

OVERVIEW

METRICS

Duration	Ongoing	a) Approved business plan b) % of total budget extramurally funded
Cost	TBD	c) % of total faculty effort in CORE extramurally funded (goal: >70%
Starting Date	TBD	by year 3)
Responsibility for Implementation	V.P. for Postgraduate Studies & Scientific Research, DSR Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start-end dates
1	Identify program to become CORE	3 months	TBD (2015/16)
2	Create & approve business plan	3 months	TBD (2015/16)
3	Recruit & approve/staff	6 months	TBD (2015/16)
4	Outfit laboratory & Office space	6 months	TBD (2015/16)

OBJECTIVE 2: *Develop Centers of Clinical Excellence (COCE) linked to the CORE to enhance health education, research and care delivery for the Eastern Province*

Aim: Select and develop another clinical area geared to excellence in clinical and clinical research mission & tied to the first CORE

Comment: Proposals for two COCE's have now been developed and await approval by KACST.

OVERVIEW

METRICS

Duration	18 months	a) Institutional policy for standards Required for recognition as COCE
Cost	TBD	b) Compliance with criteria
Starting Date	TBD	
Responsibility for Implementation	DSR Dean, Research Advisory Council & Dean, College of Medicine	

Project Calendar

S. No	Tasks	Duration	Start-end dates
1	Gain approval of first COCE	6 months	Started August 2014 End- TBD
2	Critique & update processes for development of COCE	3 months	TBD
3	Develop candidate list & select program	3 months	TBD
4	Develop business plan	4 months	TBD
5	Recruit/appoint faculty & Staff	6 months	TBD

OBJECTIVE 3: *Prepare a research faculty recruitment plan and recruit additional multidisciplinary cohorts of experienced, funded investigators in selected research areas to provide leadership, direction, and credibility for the research enterprise*

Aim: To develop internal examples of high standards of multidisciplinary ethical research excellence within the research enterprise

Comment: It is vital to have a cohesive marketing and recruitment plan to attract the intellectual talent on which growth & success of the research mission is based.

OVERVIEW

METRICS

Duration	18 months/cohort	a) Number of basic laboratory research faculty FTE's
Cost	TBD	b) Number of Clinical research faculty FTE's
Starting Date	TBD	c) Number of applied research studies Faculty FTE's
Responsibility for Implementation	DSR Dean & CRMC Director	d) Extramural funding of research/faculty FTE's in CORE's
		e) Publications in refereed journals

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Identify “benchmark” levels of capital, start-up & ongoing intramural funding in areas selected to become CORE’s	6 months	January 2015 to June 2015
2	Develop & approve business plan for recruitment of scientists for planned CORE	4 months	June 2015 to October 2015
3	Recruit senior leaders of next CORE	8 months	November 2015 to June 2016

OBJECTIVE 4: *Establish Junior Research positions in the COREs for postgraduate applicants and other trainees*

Aim: Attract promising young researchers to UOD for further post-graduate experience to expand the talent contributing to achievements in the CORE's

Comment: These “Junior Research” positions will function much like “Post-Doctoral Fellow” positions in other “western” universities. Through attracting such young researches to such positions, UOD will have an excellent method to selectively grow its permanent cadre of excellent senior research faculty.

OVERVIEW

METRICS

Duration	2014 & Ongoing	a) Volume and quality of applicants
Cost	TBD	b) Distribution of applicants among colleges
Starting Date	Ongoing	c) Number of applicants by degree program
Responsibility for Implementation	DSR Dean & CRMC Director	d) Total awarded positions/year
		e) Awards tracked by CORE

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Maintain campaign to market positions	Ongoing	Start date: 2014 to all universities in KSA & ongoing
2	Bi-annually reappoint committee	Ongoing	Start date: 2014 membership for applicant approval & ongoing
3	Create and implement annual assessment committee and implement annual performance review process for junior research faculty	3 months	Start date: Nov 2014 & ongoing

OBJECTIVE 5: *Expand research opportunities for increased student & faculty participation in research*

Aim: To advance environment of intellectual curiosity in all UD students & faculty and provide talented students with expanded experiences in scientific research

Comment: The presence of these research opportunities for all students and faculty will become a strong attractant for others to choose a “lifetime of intellectual curiosity” in scientific fields of discovery.

OVERVIEW

Duration	Ongoing
Cost	TBD
Starting Date	2014
Responsibility for Implementation	DSR Dean, CRMC Director & College Deans

METRICS

- a) # of students annually sponsored by CRMC
- b) Annual list of Colleges represented by student research awardees
- c) Track future career and graduate & post graduate education of awardees

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Maintain marketing campaign for positions from all science based UOD colleges	6 months	Start date: 2014 & ongoing
2	Bi-annually appoint selection committee for applicant positions	2 months	Start date: November 2014 & ongoing
3	Create and implement annual assessment committee and implement annual performance review process & program for recognition of excellence	3 months	Start date: Nov 2014 & ongoing

OBJECTIVE 6: *Create a reward system that includes incentives for extramurally funded research and promotion criteria that recognize collaborative investigations*

Aim: To appropriately recognize and reward highly productive investigators

Comment: Creating annual mechanisms to publicly recognize and provide rewards for excellence in research (beyond promotion alone) will enhance recruitment and retention of highly productive research scientists.

OVERVIEW

Duration	Ongoing
Cost	100,00SR
Starting Date	January 2014
Responsibility for Implementation	DSR Dean & CRMC Director

METRICS

- a) Extramural research funding by Principal investigator
- b) % research funding obtained through Extramural sources
- c) Total % of Research FTE faculty salary that is extramurally funded listed by individual, depart. & college
- d) Number of collaborating investigators funded on each extramurally funded grant listed by principal investigator for each funded grant

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Develop non-financial reward system to recognize high levels of extramural funding of research & collaborative multi-investigator grants	3 months	2014 & ongoing
2	Develop financial reward system, consistent with KSA & UOD guidelines, for high levels of extramural funding & collaborative multi-investigator	3 months	2014 & ongoing

OBJECTIVE 7: *Create a research program in Public Health Sciences (PHS), housed in CRMC that builds its own research program and supports the COREs (with plans for post-graduate degree programs in the future)*

Aim: To develop and mature a research resource that will partner with UOD scientists, area business, government and civic leaders to identify and address public health issues in the local region, the Eastern Province, KSA and the gulf region.

Comment: Although originally proposed to be the “launching site” to develop a College of Public Health, this initiative will expand and enhance the vision of Public Health Sciences at UOD from “Instructional” alone to include an “investigative” environment.

OVERVIEW

Duration	21 months
Cost	5 million SR
Starting Date	Jan 2015
Responsibility for Implementation	DSR Dean, CRMC Director & Dean, College of Public Health

METRICS

- a) Scientific surveys annually performed by PHS
- b) Public Health research projects Initiated annually
- c) Annual extramural funding of Public Health Sciences research projects

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Identify regional business and government needs for population based data	6 months	January 2014 to April 2015
2	Match CRMC and regional needs to appropriate public health scientist sector (e.g. survey experts, epidemiologists, biostatisticians, population scientists, etc).	3 months	April 2015 to July 2015
3	Develop recruitment and associated business plans for initial public health sciences CORE in CRMC	4 months	March 2015 to August 2015
4	Recruit leader of public health sciences program in CRMC	8 months	July 2015 to January 2016

OBJECTIVE 8: *Expand Patent & technology transfer Office (commercialization) that provides both reputational and financial returns on UOD's investment in intellectual property-generating research, and, contributes to priorities for economic development and diversification in KSA and the Region.*

Aim: **To develop, nurture and mature a reputation of discovery and technology transfer that produces benefits to humankind and financial returns on research investments**

Comment: Although early in its maturation, discovery and technology transfer is the essence of research. This office will help develop and facilitate UOD's environmental evolution from research alone to "research → discovery → application for benefit of humankind

OVERVIEW

METRICS

Duration	Ongoing	a) Adoption of Patent & Intellectual Property (IP) Licensing Policy
Cost	TBD	b) Adoption of Policies for Conflict of Interest and Conflict of Commitment
Starting Date	2014 & ongoing	c) Continuous tracking of patent Applications & awards, licensing agreements of IP and revenue accruing from IP licensing agreements
Responsibility for Implementation	DSR Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Maintain and bi-annually review & update Patent Policy regarding Intellectual Properties (IP)	Ongoing	Ongoing
2	Develop & maintain state-of-the-art software to track patent applications, awards and licensing agreements of IP	Ongoing	Ongoing
3	Launch three support units in the Patent and Technology Transfer office: a) intellectual property registration; b) feasibility studies; and, c) marketing units to facilitate IP translation into applications	6 months	January 2015 to June 2015

OBJECTIVE 9: *Formulate and implement robust policies and programs to consistently ensure high ethical standards in the conduct of research at UOD*

Aim: To become a leader within the GCC in the development, practice, and teaching of high ethical standards in the field of medical and research ethics.

Comment: This may be the most critical foundational element of the research mission at UOD and offers the opportunity to advance the entire environment of ethical conduct well beyond research and medicine.

OVERVIEW

METRICS

Duration	9 months & ongoing	a) Policies of Ethical Conduct of Research
Cost	200,000 SR	b) Tracking of Faculty seminars and programs provided on Medical and Research ethics
Starting Date		c) Tracking of Student courses on Medical Ethics
Responsibility for Implementation	DSR Dean, CRMC Director & College Deans	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Perform bi-annual review and updates to improve institutional policies ensuring ethical conduct of research	Continuous	Start date: 2013 & ongoing
2	Develop and implement robust faculty programs & seminars to continuously ensure ethical conduct of research	3 months & continuous	Start date: December 2015 & ongoing
3	Develop and implement a course on medical and research Ethics for all Health Profession Colleges	4 months & continuous	Start date: March 2014 for implementation in student curriculum fall of 2015 End date: Ongoing

OBJECTIVE 10: *Develop and market a scientific publishing initiative in the CRMC*

Aim: To provide a KSA site for scientific publications serving UOD, the Eastern Province, the GCC & KSA to further advance the UOD's role in higher education and export of new knowledge to humankind

Comment: The CRMC is a unique asset for UOD and has unlimited opportunity to evolve both the academic and research missions of UOD. It also can play an important role in transforming the Eastern Province. This initiative to develop a "Publishing Center" is but one example of this opportunity.

OVERVIEW

METRICS

Duration	24 months & ongoing	a) Number & origin of scientific Manuscripts (articles, monographs & Books) reviewed annually
Cost	TBD	b) Number & origin of scientific articles, monographs & books published annually
Starting Date	Jan 2015	
Responsibility for Implementation	V.P. for Postgraduate Studies & Scientific Research DSR Dean, Library Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Develop a business plan for the creation and marketing of the “Publishing House” within the CRMC	6 months	November 2014 to June 2015
2	Determine and pursue approval from required regulatory agencies	10 months	November 2014 to September 2015
3	Recruit and appoint leadership and staff to administer the programs the “Publishing Center”	8 months	October 2015 to April 2016
4	Develop and implement a marketing plan to advance success of the “Publishing Center”	4 months	June 2016 & Ongoing

OBJECTIVE 11: *Create Center of Entrepreneurialism (CE) within CRMC*

Aim: To enhance an environment of entrepreneurialism within UOD

Comment: This initiative will enhance the environment and output from an atmosphere of intellectual curiosity with UOD

OVERVIEW

Duration	12 months
Cost	TBD
Starting Date	January 2015
Responsibility for Implementation	DSR Dean & CRMC Director

METRICS

- a) Establishment of definition of Entrepreneurialism
- b) Annual applications for CE's
- c) Annual creation of CE's
- d) Annual output of respective CE's

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Develop guidelines for creation of CE's	3 months	January 2015 to March 2015
2	Appoint Committee for approval & oversight of CE's	3 months	January 2015 to March 2015
3	Establish business Plan for CE's	4 months	March 2015 to July 2016
4	Create marketing plan to attract CE applications	3 months	August 2015 to October 2015

OBJECTIVE 12: *Create and obtain KACST approval for a Biotechnology Innovation Center (BTIC)*

Aim: To spawn a culture of technological innovation within the University's CRMC

Comment: This initiative takes advantage of the Ministry of Economy and Planning's support for innovation within universities' environment

OVERVIEW

METRICS

Duration	1 year	a) Annual applications for Innovation grants
Cost	TBD	b) Annual commercial application of Innovation grant recipients
Starting Date	January 2015	c) Award of external agency's Support (e.g. KACST)
Responsibility for Implementation	DSR Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Develop guidelines for BTIC proposals	3 months	January 2015 to March 2015
2	Create oversight committee for approval of BTIC proposals	3 months	January 2015 to March 2015
3	Develop funding mechanism for internal support of approved BTIC proposals	3 months	March 2015 to June 2015
4	Submit application for external funding support of 1 st BTIC	3 months	July 2015 to October 2015

OBJECTIVE 13: *Create a biotechnology Incubator to launch bio-medical technology related “start-up” businesses in the “Medical Sciences City”*

Aim: To stimulate the launching of biotechnology related businesses from internal UOD intellectual property and external entrepreneurial talent

Comment: This initiative will provide the nucleus to subsequently attract external biotechnology businesses to the future Biotechnology Business Park

OVERVIEW

METRICS

Duration	2 years	a) Track success of incubated “start-ups”
Cost	TBD	
Starting Date	June 2015	
Responsibility for Implementation	DSR Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Develop business plan for creation of Incubator	4 months	June 2015 to October 2015
2	Establish appointment criteria for occupancy of incubator	3 months	July 2015 to October 2015
3	Acquire funding to establish initial incubator	6 months	October 2015 to April 2016
4	Construct space for incubator	9 months	April 2016 to January 2017
5	Develop marketing Plan for incubator	3 months	August 2016 to November 2017

Objective 14: *Generate knowledge related to the complex nature of our world by engaging in research in the humanities to address dynamic changes and rapid developments*

Aim: Develop research projects that generate new knowledge in issues related to the humanities

Comment: This Objective expands the horizons of research at UOD and opens broad opportunities for expansion of “intellectual curiosity” throughout the Humanities Cluster of Colleges at UOD

OVERVIEW

Duration	12 months & continuous
Cost	500,000 SR
Starting Date	November 2014
Responsibility for Implementation	DSR Dean, CRMC Director & humanities college Deans

METRICS

- a) Identify areas of importance to society
- b) Track projects that offer solutions to society’s problems
- c) Monitor & track research in identified areas

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Identify research projects that have links to societal development	3 months	November 2014 to February 2015
2	Develop robust research projects	4 months	March 2015 to July 2015
3	Conduct research projects	12 months & ongoing	August 2015 & ongoing

Objective 15: Designate Health Related Campus as the “Medical Sciences City”

Aim: To market the bio-medical related scientific assets of UOD & enhance attraction of related businesses to ultimately partner in creating the Biotechnology Business Park

Comment: This initiative is a natural by-product of the geographic clustering of the CRMC and all health related facilities and will function as the incubator initiative to advance the development of a new biotechnology based economic development sector for the Eastern Province.

The envisioned “UOD Medical & Sciences City” will consist of the UOD Hospital, Neuro-Sciences Center, Rehabilitation Center, Dental Hospital and the existing research center (CRMC), as well as, the newly established PTTO. These components of this integrated health sciences “City” will form a strongly attractive environment for private sector investments & partnerships from prominent sources including ARAMCO, SABIC and other leading private companies and become the nucleus from which a future Biotechnology Business Park will be founded.

OVERVIEW

METRICS

Duration	2 years & continuous	a) Completion of new Campus Health related Facilities
Cost	TBD	
Start Date:	2014	
Responsibility for Implementation	DSR Dean & CRMC Directo	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Approval for naming health related campus facilities the “UOD Medical Sciences City”	4 months	November 2014 to February 2015
2	Create & implement marketing plan for the “UOD Medical Science City”	6 months & ongoing	April 2015 & ongoing

OBJECTIVE 16: *Develop plans for and initiate the creation of a Biotechnology Business Park*

Aim: To enhance the economic diversification and growth of the bio-technology business sector of the Eastern Province

Comment: UOD has a unique opportunity through the development of its new campus, the growth of its research mission and the clustering of its health related facilities into the “Medical Sciences City” to play a lead role in diversification of the Eastern Province’s economy. The end result of those preliminary steps provide the obtainable vision of creating this Biotechnology Business Park in which such businesses can be birthed by UOD and attracted from other locations even beyond the KSA and GCC.

OVERVIEW

Duration	4 years & ongoing
Cost	TBD
Starting Date:	January 2015
Responsibility for Implementation	V.P. for Postgraduate Studies & Scientific Research DSR Dean & CRMC Director

METRICS

- a) Approval of Business Plan
- b) Business partners engaged in planning process
- c) Annual numbers of proposals for recruitment of businesses to Park
- d) Annual numbers of recruited businesses to Park

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Identification of business partners to engage in development of business	4 months	January 2016 to ongoing
2	Creation of business plan for development of the Park	1 year	June 2016 to July 2017
3	Initiate construction & development of the Park infrastructure	2 years	August 2017 to July 2019
4	Recruitment of businesses to the Park	ongoing	May 2019 & ongoing

OBJECTIVE 17: *Enhance Bridge between UOD's research mission and stake-holders within the community and business leadership*

Aim: *To create a close partnership with leadership within the community and regional business leaders*

Comment: Creation of close ties to the community and its leaders is critical to their support for and investment in UOD and the success of the initiative to ignite a vibrant biotechnology sector in the regional economy

OVERVIEW

METRICS

Duration	9 months	a) Membership of External Advisory Council for Research & Biotechnology Development
Cost	-0-	
Starting Date	November 2014	
Responsibility for Implementation	V.P. for Postgraduate Studies & Scientific Research, DSR Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Survey business leaders for insight into mechanisms	4 months	November 2015 to March 2016
2	Develop charter for External Advisory Council for Research	3 months	November 2015 to February 2016
3	Appoint External Advisory Council for Research & Biotechnology Development	2 months	March 2016 to May 2016

OBJECTIVE 18: *Develop a General Clinical Research Center (GCRC) in association with the UOD King Fahd Hospital and Clinics*

Aim: To provide an external agency approved clinical site and associated functions to conduct meaningful clinical research requiring clinical care delivery.

Comment: Meaningful clinical research on patients frequently requires specialized equipment and specialized training for nurses and other allied health care providers. Such clinical care must be provided in a facility approved for such clinical research.

OVERVIEW

METRICS

Duration	3 years	a) Compliance with guidelines for conduct of clinical care as a component of clinical research
Cost	TBD	
Starting Date	July 2016	
Responsibility for Implementation	DSR Dean & UOD Hospital Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Develop business Plan for GCRC	6 months	June 2015 to January 2016
2	Construction, equipping and staffing of GCRC	24 months	February 2016 to January 2018
3	Apply for agency approval of GCRC	6 months	January 2017 to January 2018

OBJECTIVE 19: *Obtain International Accreditation for Research Standards for respective units of UOD where research is conducted, including the university hospital*

Aim: To assure that all aspects of research (clinical and laboratory) at UOD is conducted in units, including the UOD Hospital, that are in compliance with the applicable recognized international accrediting agency's standards for conduct of research

Comment: With growth of UOD research, it is imperative that all aspects of the research enterprise, including its facilities used for research, be accredited to international standards.

OVERVIEW

METRICS

Duration	18 months & ongoing	a) Accreditation by applicable accrediting Agency b) Monitoring appropriate KPI's
Cost	TBD	
Starting Date	November 2014	
Responsibility for Implementation	DSR Dean, CRMC Director & Hospital Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Determine applicable agencies & standards	2 months	November 2014 to January 2015
2	Perform internal monitoring to determine baseline compliance status	4 months	February 2015 to June 2015
3	Invite national & international accreditation by applicable agencies	12 months	July 2015 & ongoing

OBJECTIVE 20: *Establish UOD wide criteria and approval process for awarding designation of “Research Center” and “Research Institute”*

Aim: To create standardized criteria for titled designations of research programs throughout UOD

Comment: At present, there are no standards on which research or other scholarly programs are titled “Center” or “Institute”. Most international research intensive universities have standardized criteria on which such designations are based. The UOD research mission aspires to benchmark its internal processes and recognitions of research programs against such international universities.

OVERVIEW

METRICS

Duration	6 months	a) Approval of UOD wide criteria & approval process for awarding of “Research Center” & “Research Institute” UOD wide designation
Cost	Minimal	
Starting Date:	January, 2015	
Responsibility for Implementation	V.P. for Postgraduate Studies & Scientific Research, DSR Dean	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Survey nomenclature designations at other KSA, GCC and selected international collaborating universities	3 months	January 2015 to March 2015
2	Develop draft UOD criteria for designation of Research “Center & Research “Institute”	1 month	March 2015 to April 2015
3	Establish application and awarding process for designation of UOD	2 months	March 2015 to April 2015
4	Acquire Scientific Council & Rector Approval of Criteria & approval process for awarding designation of “Research Center” & “Research Institute”	2 months	May 2015 to June 2015

OBJECTIVE 21: *Develop internal and external benchmarks against which selected outcomes of monitoring key performance indicators can be compared to gauge success in conduct of the research mission*

Aim: **To monitor our success in pursuit of excellence in achievement of our performance goals for the research mission**

Comment: To date, we have followed and reported the results of our KPI's and monitored year-to year results. We will develop appropriate internal and external benchmarks to which these results can be monitored. Internal benchmarks will be adjusted annually based on prior year results in comparison to stated external benchmarks

OVERVIEW

METRICS

Duration	6 months	a) Successful development of approved internal and external benchmarks
Cost	Negligible	
Starting Date	January, 2015	
Responsibility for Implementation	DSR Dean	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Survey other chosen sites to obtain external benchmarks	3 months	January 2015 to March 2015
2	Convene Scientific Council to approve external benchmarks	1 month	March 2015 to April 2015
3	Convene Scientific Council to create and approve internal benchmarks	2 months	May 2015 to June 2015

OBJECTIVE 22: *Create External International Advisory Council to the Vice President of Higher Education and Scientific Studies*

Aim: To gain insight and recommendations from a group of noted international leaders for enhancements to the conduct of the research mission.

Comment: With the significant enhanced focus on innovation, entrepreneurialism and initiation of a biotechnology sector to the regional economy, the insights gained from such an external advisory board will provide valuable input to improve the conduct of the expanded goals and objectives of the research mission

OVERVIEW

METRICS

Duration	8 months	a) Successful launch of the Advisory Board
Cost	Undetermined	
Starting Date	February 2015	
Responsibility for Implementation	V.P. for Postgraduate Studies & Scientific Research	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Create Charter documents for Advisory Board	1 month	January 2015 to February 2015
2	Approval of documents to form Advisory Board	1 month	February 2015 to March 2015
3	Recruit membership to Advisory Board	6 months	February 2015 to August 2015

OBJECTIVE 23: *Create and implement a standardized scoring system to rank quality and determine funding of internally supported research projects*

Aim: To insure impartiality and quality ranked funding of internally supported research grants.

Comment: Recognition of the relative quality of internally generated research proposals, and sharing of the score and critique of research projects with respective applicants will help improve subsequent work by the applicant and drive increased quality of research proposals.

OVERVIEW

METRICS

Duration	3 months	a) Approval and implementation of the standardized scoring system
Cost	-0-	
Starting Date	January 2105	
Responsibility for Implementation	DSR Dean & CRMC Director	

Project Calendar

S. No	Tasks	Duration	Start - End Dates
1	Survey external sources for benchmark scoring systems	2 months	January 2015 to February 2015
2	Develop draft scoring system	1 month	February 2015 to February 2015
3	Gain institutional approval and application of system	1 month	March 2015 to Ongoing

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