



كلية فقيه للعلوم الطبية
Fakeeh College for Medical Sciences
تأسست 2003 - 1424هـ
Established: 2003 - 1424H

First “Scientific Research Plan”

“BAHUTH One”

Fakeeh College for Medical Sciences

2017-2020

A Message from the Dean

Now is a pivotal time for scientific research at Fakeeh College of Medical Science (FCMS) to seize the opportunity to ensure integration between basic and clinical research translated into improvement in the delivery of healthcare. The talent, capabilities, and commitment of the faculty staff members at FCMS together with our students and residents and others with research opportunities, inherent as an integral part of the medical education and clinical training at both FCMS and DSFH: These will definitely create the right mix to advance FCMS into a progressive scientific research arena in the chosen areas of research excellence. Moreover, the research environment is evolving and changing very rapidly in higher educational institutes, and FCMS must deal with such rapid changes through this plan. The research funding challenges is ever-demanding, and competition for exceptional talent is fierce. In addition, clinical research is influenced massively by ever-changing new technologies to accelerate results, thus departing from the traditional approach to conducting research, in local and national higher medical education institutes. Accordingly, the pace of change and complexity of scientific knowledge require creativity in collaborative relationship and new funding resources between FCMS and its peers.

Within that context, the FCMS developed the first” **Scientific Research Plan**” (2017-2020) in alignment with the second “**Strategic Plan**” of FCMS and Vision 2030. This plan is expected to harness the commitment and expertise of faculty staff members to ensure the achievements of its **Four Research Directives and Goals**. The current research plan provides a focus on the identified research priorities at FCMS.

Core to the success of the current plan, is the investment in research infrastructure and recruitment of distinctive faculty staff members with research experience. Recognizing the dynamic nature of biomedical research and technology transfer, the current plan is developed to be flexible as a “living” plan to be able to meet the challenges of future changes in advanced biomedical research in KSA and beyond.

My sincere appreciation to every individual who contributed to the evolution of this plan and sincere gratitude and appreciation to the Chairman of Board of Trustees (BOT) of the FCMS, who has been instrumental in supporting the College in its research journey. The work has just started, and I am very confident that we at FCMS, will achieve the goals of this plan to lead in scientific discovery with a lasting positive impact on health and care delivery in our community and beyond. This document is an overview of the first “**Scientific Research Plan**” of FCMS and is considered a “living” framework to guide the success of the College in its endeavors in scientific research and beyond.

Professor Mohammed-Salleh M. Ardawi
PhD, DSc, MBA, MMed, FRC Path
The Dean

Table of Contents

| | | |
|---|---|-----------|
| i. | Message from the Dean | 2 |
| Section 1: Strategic plan overview | | 6 |
| 1. | Vision, Mission and Core Values of FCMS | 6 |
| 2. | Strategic Goals of FCMS | 7 |
| Section 2: Strategic Opportunity | | 8 |
| 2.1 | Philosophy | 8 |
| 2.2 | A Plan for the future | 8 |
| 2.3 | The plan for planning | 10 |
| 2.4 | NCAAA standards and quality assurance planning process | 13 |
| Section 3: Environmental Scan and Analysis | | 16 |
| 3.1 | Introduction | 16 |
| 3.2 | External environmental analysis | 16 |
| 3.2.1 | Demographics and youth engagement | 17 |
| 3.2.2 | Higher education | 18 |
| 3.2.3 | City of Jeddah | 18 |
| 3.2.4 | Health sector working | 19 |
| 3.3 | Internal environment analysis | 20 |
| 3.3.1 | FCMS is a Medical University College | 20 |
| 3.3.2 | Functional and professional levels of FCMS | 21 |
| 3.3.3 | Financial challenges | 21 |
| 3.3.4 | Recruitment and retention of academic faculty staff members | 22 |
| 3.3.5 | Lack of data to drive decision making | 22 |
| 3.3.6 | Student admission challenges | 23 |
| 3.3.7 | Institutional culture | 24 |
| 3.3.8 | Educational progress | 24 |
| 3.3.9 | Management and operating environment | 24 |
| 3.3.10 | Physical and technological resources | 25 |
| 3.4 | SWOT analysis summary | 25 |
| 3.5 | Benchmarking and best practices | 29 |
| 3.5.1 | Leadership and peers | 30 |
| 3.5.1.1 | Excellence in medical and health educational programs and recognition at Pennsylvania, Toronto, Manchester, King Saud (KSU) and King Abdulaziz University (KAU) | 30 |
| 3.5.1.2 | Recruitment of faculty staff members at King Saud University (KSU) for Health Sciences (KSU-HS) | 31 |
| 3.5.1.3 | Faculty staff development at King Abdulaziz University (KAU) | 31 |
| 3.5.1.4 | Student academic mentoring by the Royal College of Nursing (RCN) (UK) | 32 |
| 3.5.1.5 | The e-learning set-up at King Abdulaziz University (KAU) and King Saud University (KSU) | 32 |
| 3.5.1.6 | Quality assurance at Dammam University | 33 |
| 3.5.1.7 | Infrastructure development and expansion at Toronto, McGill and Michigan Universities | 33 |
| 3.5.1.8 | External research partnerships at Massachusetts Institute | 34 |

| | | |
|-----|---|----|
| | for Technology (MIT) | |
| | 3.5.1.9 Key performance indicators (KPIs) | 34 |
| 3.6 | Revision of mission, vision and core values of FCMS | 37 |
| 3.7 | Strategic directives and strategic goals | 42 |
| | 3.7.1 Strategic directive 1: Achieving excellence in teaching and learning | 43 |
| | 3.7.2 Strategic directive 2: Commitment to quality assurance and operational efficiency | 43 |
| | 3.7.3 Strategic directive 3: Commitment to community engagement and scientific research | 44 |
| | 3.7.4 Strategic directive 4: Financial sustainability and partnership | 44 |
| 3.8 | Implementation of the “Strategic Plan” and organizational responsibility | 48 |
| | 3.8.1 The implementation process | 49 |
| | 3.8.2 Performance measures and timelines | 50 |

| | | |
|------------|--|----|
| Figure 1: | Drivers of transformation at FCMS | 9 |
| Figure 2: | Planning time domains for the second “Strategic Plan” of FCMS | 10 |
| Figure 3: | Strategic Planning Process | 13 |
| Figure 4: | The overall stages of strategy development | 15 |
| Figure 5: | FCMS functional and professional relationships | 21 |
| Figure 6: | Total number of students graduated by FCMS until 2016 | 23 |
| Figure 7: | FCMS Model of the future | 37 |
| Figure 8: | Mission development and review process | 38 |
| Figure 9: | Factors considered in mission statement development and review | 39 |
| Figure10: | Vision development and review process | 40 |
| Figure11: | Framework used for developing strategic goals for FCMS Strategic Plan | 42 |
| Figure 12: | Four strategic directives inter-relation and integration | 45 |
| Figure 13: | Organization for strategic implementation and control | 49 |
| Figure 14: | The relationship between the vision, mission of FCMS, strategic directives, KPIs, achievements and the NCAAA | 51 |

| | | |
|-----------|--|----|
| Table 1 : | Scope of working group | 12 |
| Table 2a: | Total health human resources in various public health sectors in KSA | 19 |
| Table 3a: | Total health human resources in various private health sectors in KSA | 20 |
| Table 4 : | Most important priorities that were identified from environmental Scanning and SWOT analysis | 28 |
| Table 5 : | Set of KPI based on NCAAA standards | 35 |

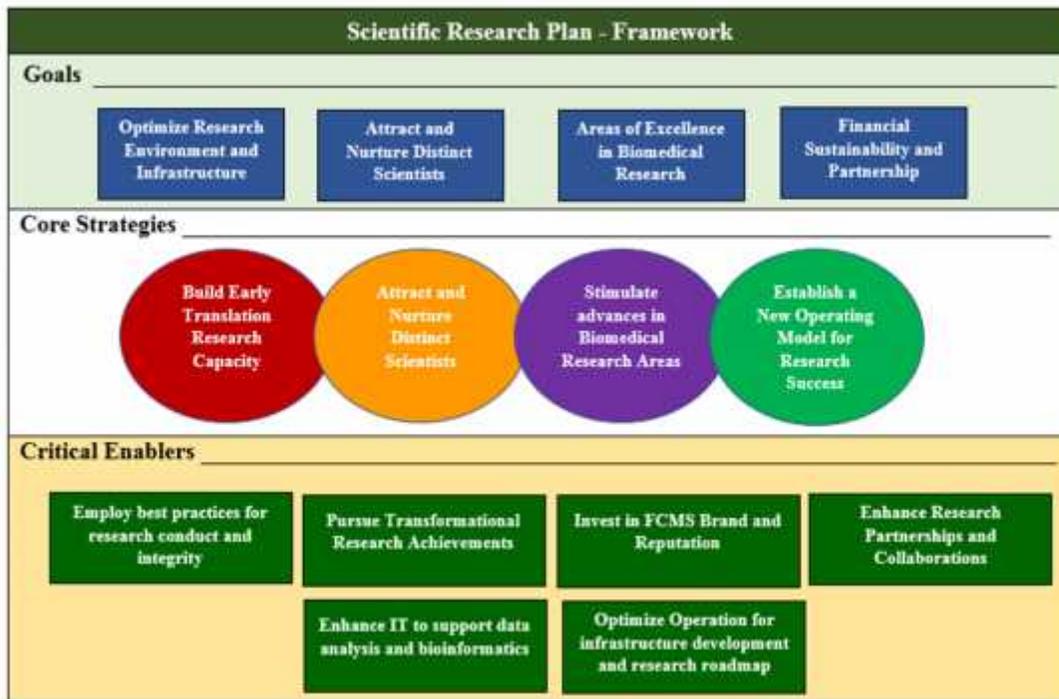
Section 1: Executive Summary

The academic programs offered by the Fakeeh College for Medical Sciences (FCMS)) are in alignment with the general philosophy and guidance of the Ministry of Education (MOE) that embraces the Developmental Plan of the Kingdom. Thus, the first **“Scientific Research Plan”** at FCMS, is to make major advances and successes in the development of various progressive initiatives to support scientific research excellence, and to help technology transfer and innovation to the local community and beyond. This is enhanced by providing more financial support, policy guidance and operational mechanisms in accordance with the mission of the College and in alignment with Vision 2030 of the Kingdom. This plan is a direct response to the various transformation drivers, the anticipated high expectations from higher education by the stakeholders as well as the accreditation agency in the Kingdom – namely the National Commission for Academic Accreditation & Assessment (NCAAA). Thus, the FCMS has embraced the approach focused on the planning process adopted at FCMS in alignment with the “Strategic Plan” of FCMS (2016-2020). Identification of the research initiatives and priorities, is followed by outlining the agreed upon research goals. Collectively, all the planning stages are translated into a series of strategies and required action steps with needed tasks, clear responsibilities, timelines and the use of appropriate Key Performance Indicators (KPIs).

The FCMS embraced **Four “Scientific Research Directives:**

- Scientific Research Directive 1:** Achieving excellence in research governance and infrastructure.
- Scientific Research Directive 2:** Commitment to attract and nurture outstanding scientists.
- Scientific Research Directive 3:** Commitment to excellence in biomedical and translational research.
- Scientific Research Directive 4:** Financial sustainability and partnership.

Accordingly, the first **“Scientific Research Plan”** articulated a set of **(4) “Research Goals”** to be met by the FCMS to realize the vision and mission of the College over the coming four years (2017-2020). A total of **16 strategies** were identified for the 4 research goals covering the building of scientific research directives, with 16 projects to be completed during this plan.



The research goals will enable the FCMS to fulfill the college principles of excellence, integrity, respect and inclusion, commitment to service and solving the local health priorities and beyond, and this will definitely bring a new synergy with our community in transforming biomedical research to help improve the delivery of healthcare.

Section 2: Research Plan Mission and Goals

2.1 FCMS Second ‘Strategic Plan’ (2016-2020) Vision, Mission and Core Values

- **The Vision**

“To be the leading medical and health sciences college in Saudi Arabia that foster innovation in achieving educational and training excellence.”

- **The Mission**

“To prepare qualified compassionate graduates in medical and health specialties according to national and international educational standards, contributing to scientific research and community services.”

- **The Core Values (based on our Islamic culture)**

- Professionalism
- Honesty and Transparency
- Quality focus
- Caring
- Student focus
- Academic integrity

2.2 FCMS First “Scientific Research Plan” (2017-2020) Mission Goals

- **The Mission**

“To offer discovery -led collaborative and interdisciplinary biomedical and clinical research to advance medical education and community health.

The first “Scientific Research Plan” covers “Four Research Goals” to achieve the vision and mission of the FCMS in the coming 4 years (2017-2020). Accordingly, the FCMS through its first “Scientific Research Plan” is committed to the following research goals:

**Research
Goal 1**

- **Commitment to optimize research environment and infrastructures.**

**Research
Goal 2**

- **Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members.**

**Research
Goal 3**

- **Establish key areas of excellence in biomedical research.**

**Research
Goal 4**

- **Establish the foundations for long-term financial sustainability of research programs within FCMS.**

3.1 Philosophy

In the Kingdom of Saudi Arabia (KSA), the Ministry of Education (MOE) is considered to be one of the pillars of progress and of the development plans of the Kingdom in alignment with Vision 2030. The MOE in KSA is the main responsible body that oversees and develops scientific research and technology innovation with the help of other players including King Abdulaziz City for Science and Technology (KACST) and various Saudi universities in the Kingdom including the FCMS. The Saudi system of higher education, the scientific research and technology innovation sector has had to face several challenges in the past few decades: the first challenge has come from the rapid pace of progress in the Saudi society; the dramatic changes in literacy, improved family income, modernization and changes in population demography and migration. These internal changes could not have occurred without the influence of external forces such as globalization, the emergence of a more open economy, industrialization and knowledge explosion. Although, these developments have influenced the changes in Saudi platform at the level of MOE, but the real pressures on its institutes, including the FCMS, and thus scientific research planning should come from the beneficiaries. Indeed, in recent years, the FCMS has made a lot of strives to improve on its scientific research facilities and infrastructure. Moreover, the FCMS has taken several initiatives through its second “Strategic Plan” (2016-2020), including that covering scientific research and postgraduate studies. Thus, the first “**Scientific Research Plan**” at FCMS, is to make major advances and successes in the development of various progressive initiatives to support scientific research excellence, and to help technology transfer and innovation to the local community and beyond. This is enhanced by providing more financial support, policy guidance and operational mechanisms in accordance with the mission of the College and in alignment with Vision 2030 of the Kingdom. However, there is a long way to go to achieve the needed goals in this area. Accordingly, the FCMS has put out a very ambitious scientific research plan in order to:

- Promote research environment to support innovation, academic-industry research collaboration and technology transfer;
- Strengthen FCMS research infrastructure, productivity and medical education;
- Address selected biomedical research priorities integrated with community healthcare needs;
- Implement best practices-structure, incentives, and requirements of successful research programs in collaboration with national and international research partners.

Accordingly, the future plan at FCMS will encourage the creation of various entities to enhance scientific research innovation, technology transfer and development of spin-off companies based on products or outcomes and outputs of such innovation activities in the College. Finally, it is important to understand the planning of the scientific research activities and processes and the approach used in finalizing the current plan, with a wide participation of all stakeholders in a culture of quality assurance and continuous performance improvement.

3.2 A Plan for the future

The driving factors for designing a **“Scientific Research Plan”** at the FCMS coalesced around six key drivers of research transformation: research access and infrastructure, use of digital technologies and bioinformatics, integration with healthcare industry, governmental regulations, local and national interaction, together with funding resources and risks [Figure 1]. From the inception of its scientific research planning process, the FCMS has selected the same approach adopted in the development of its **“Second Strategic Plan” “TATWEER ONE”** (2016-2020). All should be related to the growth and development of the FCMS. The first **“Scientific Research Plan”** of FCMS is also distinguished by its inspiration and ambition to inculcate a culture of research excellence and high performance improvement. Finally, mechanisms to monitor achievements of the **“Scientific Research Plan”** should be in place and implemented accordingly.



Figure 1: Drivers of research transformation at FCMS

By adopting this “**Scientific Research Plan**” (called BAHUTH One), it is hoped that FCMS will contribute to the research outcomes within the local community and beyond and to health professional development in Saudi Arabia, thus enhancing its role to achieve advanced biomedical research outcomes with positive effects that produce high impact on health and medical education and healthcare delivery too.

3.3 The plan for planning

In response to the accreditation requirement, the FCMS has started its comprehensive planning journey for its first “**Scientific Research Plan**” (BAHUTH One) to realize the future research development, progress and growth within the college in the incoming 4 years (2017-2020). It is clearly obvious that effective planning processes supported by stringent quality assurance system are both essential elements for achieving and sustaining accreditation in relation to scientific research. Accordingly, a culture of research thinking and planning within FCMS is considered one of the major goals of FCMS to be achieved

during this “**Scientific Research Plan**”. The latter, will impact positively on the research activities as well as on research environment and infrastructure within the college and its educational programs. To this end, the FCMS generated a continuous chain of actions and tasks at different planning time domains with milestones and deliverables recognized in the planning process [Figure 2].

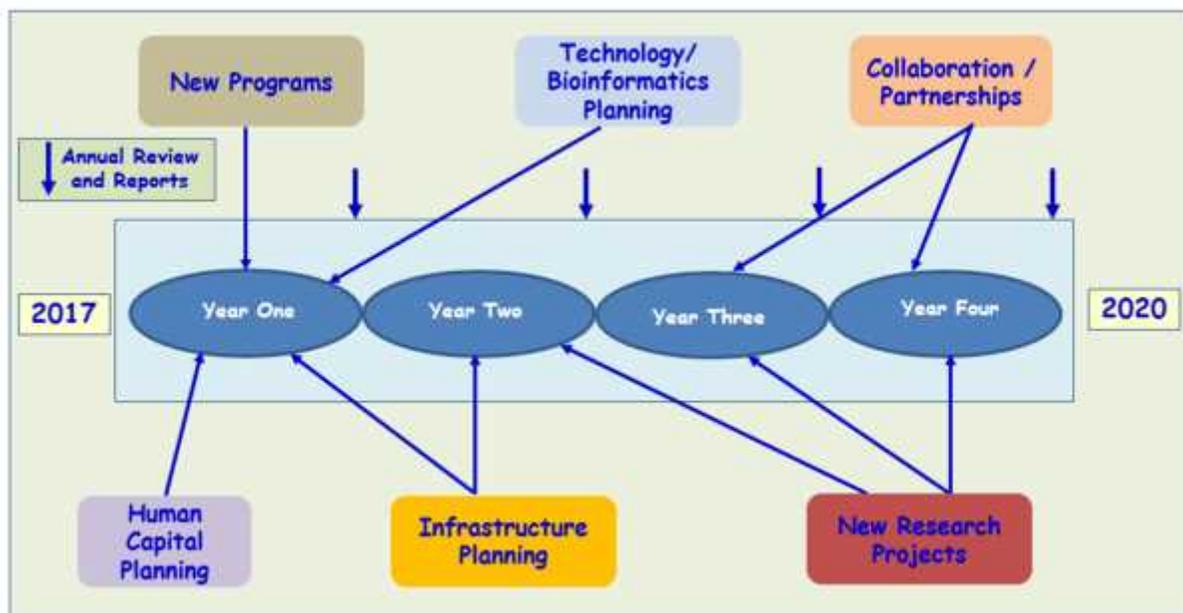


Figure 2: Planning time domains for the first “Scientific Research Plan” of FCMS

In starting the journey of strategic planning of the first “**Scientific Research Plan**” for FCMS (covering the coming four years, 2017-2020), achievements and challenges of the previous research activities (2010-2017) were reviewed and were taking into consideration as part of the preparatory information and data to support the formulation of the first “**Scientific Research Plan**”. One of the major priorities of this “**Scientific Research Plan**” is the institutional and programs accreditation of FCMS by the NCAAA and the positive research impact at the national level and beyond. Wide participation of stakeholders (including faculty staff members, staff, students, community, other institutes) in the journey of scientific research planning was ensured. A comprehensive self-study was generated by engaging all departments and units of the college. Such engagement generated recommendations to be considered for implementation. Moreover, the development of the current “**Scientific Research Plan**” is in alignment with

the second “Strategic Plan” of FCMS (2016-2020). Both the second “Strategic Plan” of FCMS as well as the “Scientific Research Plan” are not merely documents, but reflect processes of interaction, discussion, thinking, planning, action and monitoring. It is anticipated that the completion of the first “**Scientific Research Plan**” document will be a life one at the heart of the second “Strategic Plan” of the FCMS.

To develop and oversee the implementation of the first “Scientific Research Plan” for FCMS, covering the coming four years, the “Strategic Planning Steering Committee” (SPSC) that was formulated is to be responsible for these tasks. The membership of the SPSC is drawing members from various units and departments of the college. The SPSC sets the strategic directions for the college including those related to scientific research, and provides guidance, streamlining activities and framework for implementation of the “**Scientific Research Plan**”. The SPSC was chaired by the Dean of FCMS and adopted the following guiding principles in the planning process that will:

- Encourage contributions by wider audience participation from both internal and external stakeholders.
- Foster collaboration, team work and adaptive flexibility to decrease bureaucracy, work obstacles and conform with timelines.
- Promote academic excellence to build and sustain capacity across the various programs and academic activities within FCMS and beyond.
- Embody the highest degrees of integrity and transparency using an open-ended communication system.

Relevant internal and external stakeholders of FCMS were identified and contributed to the development of the first “**Scientific Research Plan**”. Internal stakeholders included leadership, board of trustees members, faculty staff members, administration staff members, students and other college employees. External stakeholders included the employers, alumni, members of the community and other affiliated institutes together with external academic consultants.

3.4 Scientific Research Directive and Research Goals

Following the careful analysis of the research environmental scan and research SWOT evaluation for FCMS, and in light of the second “Strategic Plan” of the college including its mission, vision and strategic goals, the SPSC yields four **Strategic Directives** for the first “**Scientific Research Plan**” for the FCMS:

Scientific Research Directive 1: Achieving excellence in research governance and infrastructure.

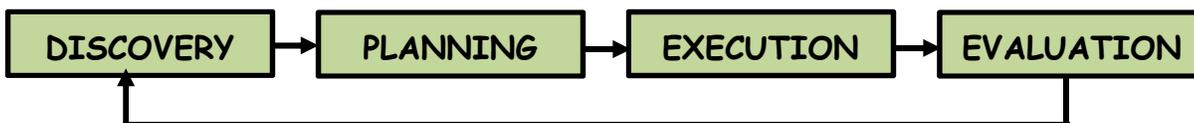
Scientific Research Directive 2: Commitment to attract and nurture outstanding scientists.

Scientific Research Directive 3: Commitment to excellence in biomedical and translational research.

Scientific Research Directive 4: Financial sustainability and partnership.

Accordingly, the SPSC articulated a set of four (4) “Research Goals” to be met by the FCMS to achieve the vision and mission of the college in alignment with its second “Strategic Plan” by 2020. The process and framework followed is outlined in Figure 3.A. A total of 16 strategies were identified for the 4 research goals covering the building of scientific research directives, and a total of 16 projects were developed to achieve the research goals of this plan.

The planning process of the first “Scientific Research Plan” (2017 - 2020) is based on lean methodologies and encompasses the following phases.



The planning process incorporates the following stages, repeated in cycles, to take full advantage of the diverse insights and knowledge base of all stakeholders within the FCMS and beyond and it is in total alignment with the second “Strategic Plan” (2016-2020) of the FCMS.

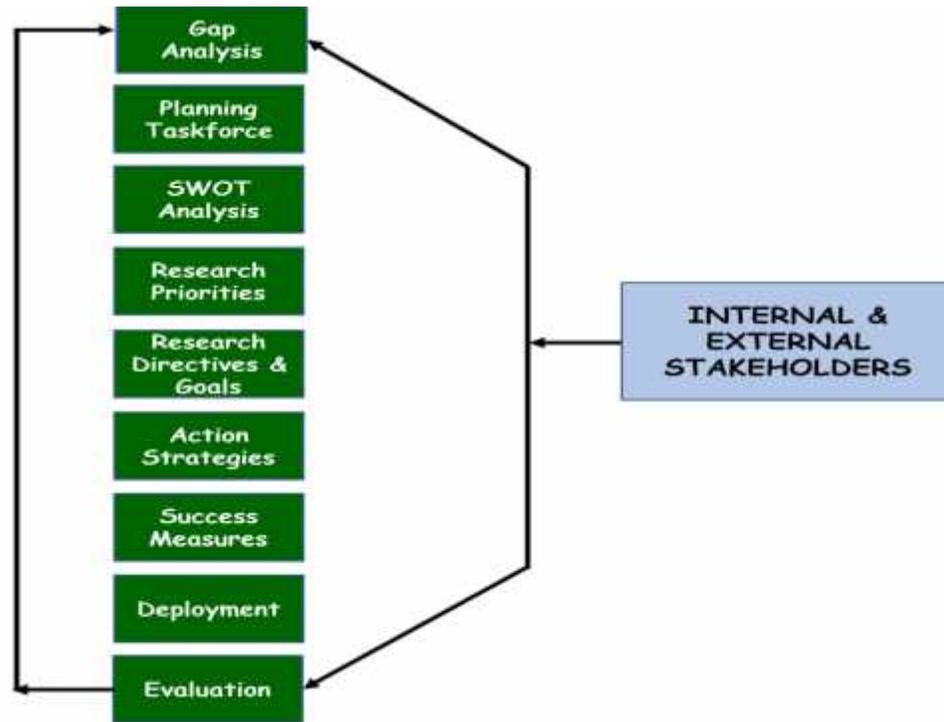


Figure 3: Framework used for developing research goals for FCMS “Scientific Research Plan”

3.4.1 Research directive 1: Achieving excellence in research governance and infrastructure.

For the research directive, “achieving excellence in research governance and infrastructure”, the FCMS will focus on enhancing the quality of the needed research environment and infrastructure supporting research activities and operational efficiency throughout its medical educational programs and beyond. In doing so, excellence and academic quality, must be recognized, and enforced at the levels within the scientific research activities. Applying the highest quality assurance standards and best practices and ensuring the full compliance with the NCAAA accreditation standards. But the excellence strived by the FCMS goes beyond these requirements, and aims for well organizational and administrative structure supporting research and performance improvement. This aspiration will distinguish the FCMS from its peers in the Kingdom and beyond. In alignment with its second “Strategic Plan” , the current research plan directives will ensure access of both academic staff members and students to state-of-the-art research facilities. Finally, the leadership of the college will invest into the provision of all needed infrastructure to be ready for the conduct

advanced biomedical research including access to clinical facilities and other research institutes.

3.4.2 Research directive 2: Commitment to attract and nurture outstanding scientists'

This research directive focuses on adopting the very best management practices and operational efficiency. This will be reflected on providing the research environment to ensure the availability of the best research opportunities to all academic staff and students within the college. This directive involves a sustained effort to provide the infrastructure needed to accommodate technologically advanced research facilities with greater space and resources in a rapidly evolving learning environment. This also entails the recruitment of highly qualified and distinct faculty staff members with appropriate research skills, experience and resources using the state-of-the-art facilities and technology. Concurrently, a comprehensive quality assurance and continuous performance improvement system will be enforced throughout the environment of the college and its operational and administrative management to ensure the appropriate nurturing and retention of such distinct research scientists.

3.4.3 Research directive 3: Commitment to excellence in biomedical and translational research

This strategic directive will be a distinctive feature of the college among its peers in the Kingdom and beyond. It will show a continuous commitment to advanced biomedical research covering areas in genomics, biobanking, chronic health translational research and clinical trials. Such research activities will be in alignment with the identified learning outcomes of the various medical education programs delivered by the FCMS. In addition, it is hoped that the network of clinical research activities established by FCMS will contribute positively to the improvement of healthcare delivery in the community and beyond. This research directive will also focus its research programs and service activities on meeting the many needs of the Makkah region and beyond. The goal is to become recognized as one of the leading university colleges in health and medical sciences engaged in scientific research. Indeed, this will have a positive impact on the economy of the region and the portfolio of the FCMS. Research activities will not only focus on the challenges of the Makkah region, but also will address those of the Kingdom at large in the area related to

health care delivery and medical education.

3.4.4 Research directive 4: Financial sustainability and partnership

This research directive ensures that the FCMS management and leadership study the developmental and remodeling needs against projected financial resources in order to support the implementation of research activities and its futuristic research plans and expansions and generating a sustainable financial operating business model. Accordingly, viable financial strategies should be considered to ensure availability of needed research financial support and resources. In addition, the FCMS will make alliances and partnerships with other private and public higher education institutes and health industry to support its research programs and contribution to the improvement of healthcare delivery and research output.

It is anticipated that during the implementation of the “Scientific Research Plan” in an academic environment, research goals will overlap: this will indeed result in multiple effects addressing two or three goals simultaneously. Accordingly, it is envisaged to use an integrated approach combining the four research directives into a series of linked research goals with needed strategies and projects. Figure 4 illustrates how the four research directives are interrelated and integrated.



Figure 4: Four research directives inter-relation and integration

The following section describes the 4 “Research Goals” and the “Research Objectives” (or strategies) to be implemented to achieve the mission and “Scientific Research Plan” of the FCMS in the coming four years (2017-2020) in alignment with the second “Strategic Plan” of FCMS.

Research Directive 1: Achieving Excellence in research governance and infrastructure

| |
|---|
| Research Goal One: Commitment to optimize research environment and infrastructure |
| <p>1.1: Enhance the research organizational structure within FCMS.</p> <p>1.2: Enhance the infrastructure to scientific research.</p> <p>1.3: Commit to best practices and processes to promote a culture of scientific research within FCMS.</p> <p>1.4: Establish “Medical Research Center “(MRC).</p> <p>1.5: Foster cooperative partnerships in applied biomedical research with local and national business organizations.</p> |
| NCAA Goals: 10.1.1, 10.1.2, 10.1.3, 10.1.8, 10.1.7, 10.1.10, 10.3.1, 10.3.2, 10.4.1, 10.4.2 |
| FCMS Strategic Plan Goals: 1, 2, 4, 5 |

Research Directive 2: Commitment to Attract and nurture outstanding scientists

| |
|---|
| Research Goal Two: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members |
| <p>2.1: Recruit and retain research distinctive faculty staff members.</p> <p>2.2: Promote a research culture that nurture outcomes with impact.</p> <p>2.3: Integrate emerging technologies in research data mining and analysis.</p> <p>2.4: Introduce a postdoctoral research fellowship program within FCMS.</p> <p>2.5: Start and implement postgraduate programs within FCMS.</p> |
| NCAA Goals: 10.2.1, 10.2.2, 10.2.3, 10.2.4, 10.2.5, 10.2.7 |
| FCMS Strategic Plan Goals: 1, 2, 3, 4, 5 |

Research Directive 3: Commitment to Excellence in biomedical and translational Research capacity

Research Goal Three: Establish key areas of excellence in biomedical research

- 3.1: Establish research groups using multidisciplinary approaches of scientific research.
- 3.2: Develop health research system model aligned with the various medical education programs within FCMS.
- 3.3: Align biomedical research with clinical practice to enable translational continuum.

NCAA Goals: 10.4.1, 10.4.3, 10.4.4, 10.4.5

FCMS Strategic Plan Goals: 1, 2, 3, 4, 5, 6

Research Directive 4: Financial Sustainability and Partnership

Research Goal Four: Establish the foundations for long-term financial sustainability of research programs within FCMS.

- 4.1: Promote best practices in financial planning for research within FCMS.
- 4.2: Develop portfolio management approach for clinical research within FCMS and other partners.
- 4.3: Strengthen collaborative research partnerships for effective impact on the local community and beyond.

NCAA Goals: 10.1.5, 10.1.6, 10.3.2, 10.3.3, 10.3.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5

FCMS Strategic Plan Goals: 3, 4, 5, 6, 7, 8

3.5 Implementation of the first “Scientific Research Plan” and organizational responsibility

The main responsibility of the implementation of the “**Scientific Research Plan**” lies with the leadership and top management as well as the heads of departments and units within the College. The SPSC will be instrumental in following up and monitoring the implementation of the first “**Scientific Research Plan**” for the FCMS during the coming four years. The Board of Trustees (BOT) as well as the “College

Council” will also be involved in the review process of the plan. The Council membership will include: the Dean, Vice Deans, Head of departments, three senior faculty staff members and student representatives. The “College Council” is supported by the Quality and Accreditation Unit (QAU) and the SPSC. The SPSC will be responsible for the operational side of the first “**Scientific Research Plan**” implementation in collaboration with various champion of each project, whereas the QAU will monitor, and follow up the various projects as per timelines and deliverables. Figure 5 shows the organizational chart for strategy implementation.

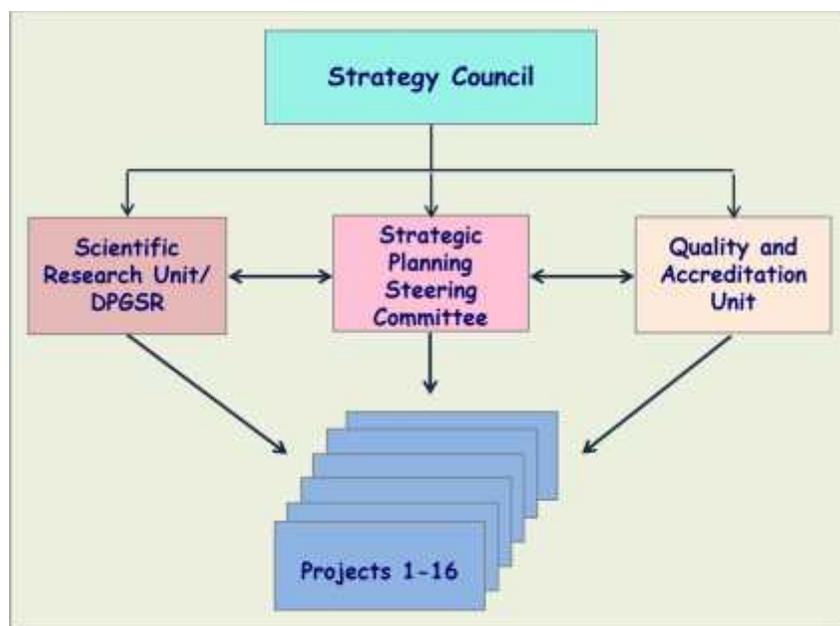


Figure 5: Organization for Scientific Research implementation and control

3.5.1 The implementation process

It is emphasized that the implementation of the “**Scientific Research Plan**” will be in total alignment with the second “Strategic Plan” of FCMS (2016-2020). The following are the major steps in the “**Scientific Research Plan**” implementation process:

1. Each project team (chaired by a champion) as part of the project teams of the first “**Scientific Research Plan**” will develop a set of tasks with their implementation timeline according to the

prioritization outlined in the “**Scientific Research Plan**” and he/she is responsible for obtaining the required resources and support from the leadership of the FCMS.

2. The Champion of each project will provide an annual report on the progress of the implementation of the project to the “College Council.”
3. The Champion of each project will provide a “Progress Report” on the progress of the implementation in June every year to the “College Council”: the reports should cover the current status of progress attained in each project, any challenges and/or achievements.
4. The QAU will organize a management review in July of every year for the “College Council” to examine the progress achieved during the implementation of the “**Scientific Research Plan**” with recommendations or corrective actions to deal with any risk management issues, challenges and delays. A management review process evaluating achievements of each project during its implementation taking into consideration deliverables, KPIs and targets.
5. Each project will receive a management review report from the QAU by July of each year. Each project will update and streamline its plan as needed according to the feedback from the management review and continue implementation of the project as planned.

3.5.2 Performance measures and timelines

The first “**Scientific Research Plan**” included a list of KPIs to achieve the four “Research Goals” of the plan. These are referred to as the institutional KPIs of the FCMS. In addition, each project has developed its own KPIs to cover all research objectives of relevance to that particular project. Such KPIs will be monitored against specific target timelines by the QAU to show the achievements toward reaching the research goals of the College using “Teamwork” electronic monitoring system. Any deviations from targets will be identified and reviewed with needed corrective measures accordingly. The various identified research KPIs at the level of the College are given in the balance scored card for each project, the list of KPIs specific for that particular project will be reported and reviewed accordingly.

The research KPIs should be aligned with the four “Scientific Research Directives” identified as part of the Scientific Research Plan preparation above. All projects developed to achieve the four “Research Goals” of the college should directly support and align with its vision and mission. Implementing such projects will definitely move the FCMS toward its strategic directives related to research and achieving its mission that will be monitored by the appropriate KPIs. The relationship between the vision, scientific research directives, strategies, milestones, KPIs and NCAA requirements are described in Figure 6.

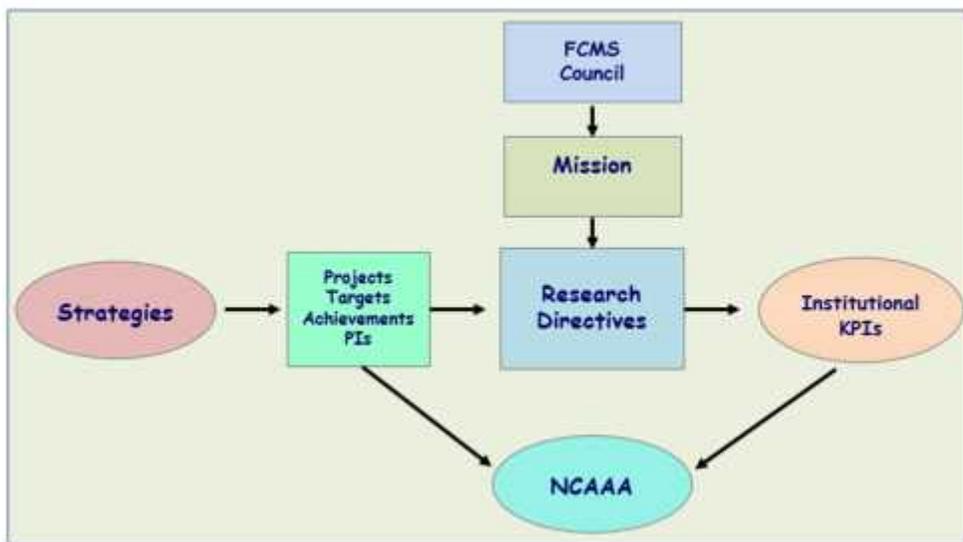


Figure 6: The relationship between the mission of FCMS, scientific research directives, KPIs, achievements and the NCAA

3.6 The Communication plan

The communication plan covers all the communications related to the first “**Scientific Research Plan**” and its implementation. This plan is created as part of the overall communication setup within FCMS. It covers reports from different stakeholders covering general orientation, progress of the “**Scientific Research Plan**”, project status, project risks, project timelines, and project resources as per the outline of the Plan. The feedback mechanism include but not limited to the following: surveys, feedback forms, telephone surveys, and independent audits.

3.6.1 Communications objectives

- To ensure that all staff of the FCMS are aware of the “**Scientific Research Plan**” progress and implementation.
- To obtain support from all FCMS staff and other stakeholders to enhance the implementation of plan of the “**Scientific Research Plan**”.
- To receive feedback and input from the teams responsible for the implementation of the “**Scientific Research Plan**”.
- To support, monitor, and ensure the successful implementation of the “**Scientific Research Plan**”.

3.6.2 General communication guidelines

- All messages will be sent to appropriate targeted staff and other stakeholders.
- Messages will be disseminated using appropriate channel of communication.
- Communication is carried out proactively to all targeted staff and other stakeholders.
- Communication will be informative to provide appropriate information.
- Official press releases will be disseminated after approval by the Dean of the College in collaboration with the Chair of BOT.
- The “**Scientific Research Plan**” projects will be reviewed every 6 months through FCMS wide meetings.
- Project team is expected to provide feedback and to act on information requested.

3.6.3 Targeted communities

- Chair and members of BOT of College.
- Dean, Vice Deans and other senior management of the College.
- Champions of the “**Scientific Research Plan**” projects.

- Head of academic departments.
- Head of all units within the College as needed.
- Faculty staff members and other staff.
- Students and alumni.
- The local community and other stakeholders.

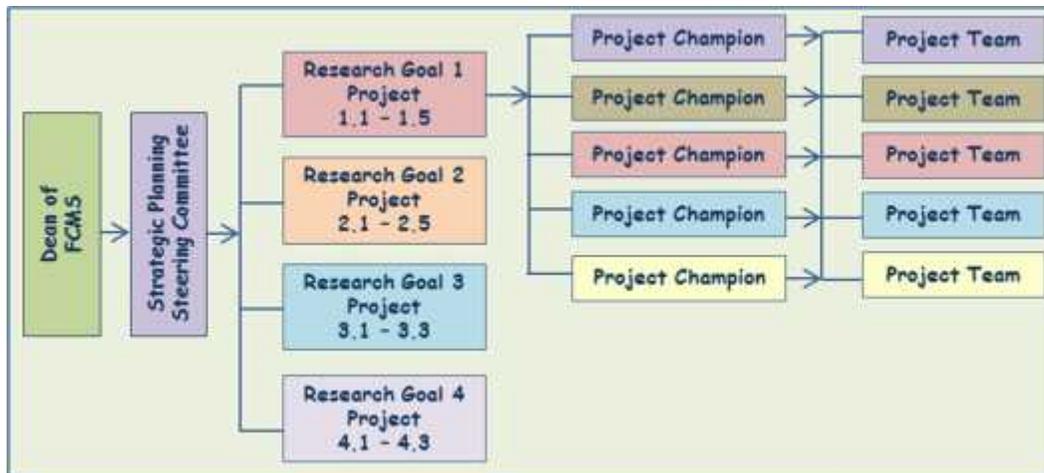


Figure 7: Communication plan

3.7 The risk management plan

Within the framework of the first “**Scientific Research Plan**” developed for FCMS, it is anticipated that several factors may influence the progress of implementation of the various projects, thus, deviating the plan from its timeline to achieve its goals and objectives. Problems may start with the failure to attain the objectives of developmental projects and consequently affect the extent of achievement and outcomes. In addition, failures of projects may propagate and then influence the achievement of goals themselves.

Previous experience identify a list of possible factors to start the process of failures. The planning process itself may have inherited causes of failure within. Even when the planning processes are appropriate, several factors can be addressed to bring the “**Scientific Research Plan**” at halt. This may

negatively impact on the progression of the plan itself and/or due to the lack of inadequate resources both financial or human, to meet the requirements for achieving full implementation of the plan.

The Table below identifies the various risks within FCMS that could influence or affect the progress and achievement of the first “**Scientific Research Plan**”. Such risks were identify through brainstorming sessions and workshops during the preparation of the plan.

| Risk Areas | | |
|--|---|--|
| Major risk areas | Risks | Annual metrics |
| 1. Research opportunities: reduce availability of governmental research funding and grants. | <ul style="list-style-type: none"> Sustainability of research programs and projects within the college. Reduction in the number supported research programs and projects. | <ul style="list-style-type: none"> Increase the percentage of private funding support for newly approved research projects by 50% Diversify financial resources to support research programs and projects. |
| 2. Faculty staff resources: 2.1 Recruitment of Distinctive faculty staff members. 2.2 Low rate of satisfaction level of faculty staff members. | <ul style="list-style-type: none"> Difficulties to attract highly qualified prominent faculty staff members to the private sector with distinct research achievements. Attrition of highly competent faculty staff members and other staff to other governmental higher education institutes. Unsatisfied faculty staff members and other staff on the current payroll of the College. | <ul style="list-style-type: none"> Recruitment of highly renowned faculty staff member to FCMS at the level of Professors (at least 10% within each department of faculty staff members). Improvement on the existing salary scale and benefits of faculty staff members and other staff. Job satisfaction surveys conducted and analyzed on a regular basis. |
| 3. Lack of advanced technology used for advanced research. | <ul style="list-style-type: none"> Lack of use of available funds for establishing advanced technology and bioinformatics facilities. Lack of the use of available advanced technology by current staff and students in research. | <ul style="list-style-type: none"> 100% support to ensure availability of advanced technology and bioinformatics facilities. 100% of staff and students to use needed advanced technology for research purposes. |
| 4. Scientific research: creating a research culture within FCMS | <ul style="list-style-type: none"> Less time is available for faculty staff members to conduct research due to teaching load. No available research facilities and/or funding. | <ul style="list-style-type: none"> 100% participation of faculty staff members in high quality research activities. Allocation of an annual budget for scientific research for faculty staff members. |
| 5. Mandatory research publication for faculty staff members | <ul style="list-style-type: none"> Number of research publications by faculty staff members, thus, affecting research output. Number of involvement of students in research activities in collaboration with faculty staff members. | <ul style="list-style-type: none"> A minimum of 1 publications in peer-reviewed journals per year for each faculty staff members. A minimum of 1 publication with students per year for each faculty staff members. |
| 6. Research Partnership with distinguished national and international peer high | <ul style="list-style-type: none"> Inability to transfer and translate this practices from national and/or | <ul style="list-style-type: none"> Proper selections of research partners from national and/or |

| | | |
|-----------------------------|--|---|
| <p>education institutes</p> | <p>international partners to FCMS due to social and/or other factors.</p> <ul style="list-style-type: none"> • Governmental regulations that may delay research collaboration and partnership agreements. | <p>international peer high education institutes.</p> <ul style="list-style-type: none"> • Manual of research best practices to be developed together with KPIs with proper benchmarking. |
|-----------------------------|--|---|



كلية فقيه للعلوم الطبية
Fakeeh College for Medical Sciences
Established: 2003 - 1424هـ

First Scientific Research Plan (2017 – 2020)

Research Directive One: Achieving excellence in research governance and infrastructure

Research Goal One: Commitment to optimize research environment and infrastructures

Research Objective 1.1: Enhance the research organizational structure within FCMS-Champion: DPGSR

| Overview | | PIs |
|-----------------------------------|-------------------------------|---|
| Duration | 4 years | <ol style="list-style-type: none"> 1. 100% Establishment of “Directorship of ‘Scientific Research and Postgraduate Studies’”. 2. 100% Establishment of ‘Scientific Research Unit’. 3. 100% Completion of college-wide ‘Scientific Research Plan’. 4. Establishment of 4 biomedical research groups. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DPGSR, VDAA, VDCA, HODs, Dean | |

Project Calendar

| Projects Input Metrics | Evidence | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 1.1.1 Establish Directorship of ‘Scientific Research and Postgraduate Studies’ | Document | → | | | |
| 1.1.2 Establish Scientific Research Unit. | Document | → | | | |
| 1.1.3 Develop a college-wide scientific research plan. | Document | → | | | |
| 1.1.4 Diversify financial support for scholarly and scientific research programs. | Document | | → | → | → |
| 1.1.5 Enhance research skills for student and staff. | Document | | → | → | → |
| 1.1.6 Establish scientific research policies and procedures within FCMS. | Document | | → | → | → |
| 1.1.7 Develop research groups including faculty staff members and students. | Document | | → | → | → |

Research Directive One: Achieving excellence in research governance and infrastructure

| | | |
|---|-----------------------|--|
| Research Goal One: Commitment to optimize research environment and infrastructure. | | |
| Research Objective 1.2: Enhance the infrastructure to scientific research - Champion: Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | 1. 100% Establishment of research laboratories. 2. 100% Establishment of office facilities for staff members and post-doctoral candidates. 3. 100% Completion of “Research supplies and equipment. 4. 100% Establishment of biorepository to store specimens and tissues samples. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DPGSR, DAF, PMO, Dean | |
| | | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|-------------------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 1.2.1 Establish two multipurpose research laboratories. | Laboratory | → | | | |
| 1.2.2 Establish two specialized biomedical research laboratories. | Laboratory | → | | | |
| 1.2.3 Establish offices for research offices, technologists, and postdoctoral candidates. | Office | → | | | |
| 1.2.4 Allocated annual budget for basic equipment and research supplies. | Document | → | | | |
| 1.2.5 Identify areas for research educational activities. | Classroom | | → | → | → |
| 1.2.6 Establish support services for research areas at Building 5. | Specialized areas | → | | | |
| 1.2.7 Establish biorepository to store specimens and tissues samples collected for research including freezer and retrieval system. | Stores | | | → | → |

Research Directive One: Achieving excellence in research governance and infrastructure

| Research Goal One: Commitment to optimize research environment and infrastructures | | |
|--|-------------------------------|---|
| Research Objective 1.3: Commit to best practices and processes to promote a culture of scientific research within FCMS - Champion: DPGSR | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 5 research projects (students/year). 100% implementation of graduation research project. One research day/year organized. 20% per year of faculty staff members participation in conferences/symposia. 100% completion of research monitoring scheme. 100% completion of research performance as part of annual evaluation or promotion. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DPGSR, VDAA, VDCA, HODs, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 1.3.1 Increase and enhance research opportunities for undergraduate students. | Document | | → | → | → |
| 1.3.2 Integrate Research Projects during the last year of each program. | Document | → | → | | |
| 1.3.3 Organizing annual research day for both staff and students. | Event | | → | → | → |
| 1.3.4 Participation in scientific research meetings and symposia by academic staff. | Document | | → | → | → |
| 1.3.5 Participation in scientific research meetings and symposia by students . | Document | | → | → | → |
| 1.3.6 Establish a research monitoring scheme. | Document | | → | → | → |
| 1.3.7 Include research performance as a criteria in academic staff evaluation and promotion requirements. | Document | → | | | |

Research Directive One: Achieving excellence in research governance and infrastructure

| Research Goal One: Commitment to optimize research environment and infrastructures | | |
|--|-------------------------|--|
| Research Objective 1.4: Establish 'Medical Research Center'(MRC) -Champion: Director of Postgraduate Studies & Scientific Research (DPGSR) | | |
| Overview | | PIs |
| Duration | 3 Years | 1. 100% Establishment of 'Medical Research Center'. 2. 100% Allocation of budget from "Medical Research center" 3. 100% Completion of research handbook. 4. Completion of research plans for undergraduate and postgraduate students. 5. 100% Establishment of a five-year plan for "MRC". |
| Starting date | Jan, 2018 | |
| Responsibility for implementation | DPGSR, VDCA, HODs, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|--|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 1.4.1 Establish the mission, organizational structure for "Medical Research Center" (MRC). | Document | | → | | |
| 1.4.2 Identify the facilities and resources. | Document | | → | | |
| 1.4.3 Propose budget projections and analysis. | Document | | → | | |
| 1.4.4 Establish provisions for partnership international collaboration in research. | Document | | | → | |
| 1.4.5 Prepare Research handbook | Document | | | → | |
| 1.4.6 Develop plans for graduate and undergraduate student's involvement in research activities. | Document | | | → | |
| 1.4.7 Establish a five-year plan for "MRC". | Document | | | → | |

Research Directive One: Achieving excellence in research governance and infrastructure

| | | |
|--|--------------------------------------|---|
| Research Goal One: Commitment to optimize research environment and infrastructures | | |
| Research Objective 1.5: Foster cooperative partnerships in applied biomedical research with local and national business organizations – Champion: Dean of FCMS | | |
| Overview | | KPIs |
| Duration | Ongoing | 1. 2 Research grants/year awarded to college. 2. Research papers/faculty staff per year. 3. Partnership with institution in biomedical research. 4. One workshop per year on research related activities. 5. 100% launching of Youth Development Program. |
| Starting date | January 2017 | |
| Responsibility for implementation | Dean, VDAA, VDCA, VDDQM, HODs, DPGSR | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 1.5.1 Identify sources for research funding and application for research grants. | Document | | | | → |
| 1.5.2 Enhance high impact research output. | Document | | | | → |
| 1.5.3 Identify local and international institutions with biomedical research partners. | Document | | | | → |
| 1.5.4 Organize workshops on: <ul style="list-style-type: none"> • Writing research projects • Patent registration • Ethics on scientific research • Research project management | Document | | | | → |
| 1.5.5 Development and launching of “Youth Development Program”. | Document | | | | → |

Research Directive Two: Commitment to attract and nurture outstanding scientists

| | | |
|--|------------------------|--|
| Research Goal Two: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members. | | |
| Research Objective 2.1: Recruit and retain research distinctive faculty staff members – Champion: Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 1. Proportion of faculty staff members actively engaged in scientific research activities. 2. 100% establishment of “Mentorship Program”. 3. Number of faculty staff members “Research Recognition” award during the year. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DPGSR, HODs, DAF, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|--|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 2.1.1 Identify the priority recruitments of distinctive faculty staff investigators. | Staff | | | | → |
| 2.1.2 Introduce a recruitment and development opportunities program to establish a cader of biomedical scientists with FCMS. | Document | | | | → |
| 2.1.3 Establish a mentorship program for distinctive early – career scientists working at FCMS. | Document | | | → | |
| 2.1.4 Establish distinctive research achievement award to promote recognition. | Document | | | | → |

Research Directive Two: Commitment to attract and nurture outstanding scientists

| | | |
|--|-------------------------------|---|
| Research Goal Two: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members. | | |
| Research Objective 2.2: Promote a research culture that nurture outcomes with impact – Champion: DPGSR | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 1. Establishment of Research Handbook that specifies all related policies, procedures and guidelines. 2. 100% Establishment of “Research of the Year Award”. 3. Two research promotion workshop per year. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DPGSR, HODs, VDAA, VDCA, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 2.2.1 Establish a research targeted orientation program for academic staff members. | Document | → | | | |
| 2.2.2 Develop the needed guidelines, policies and procedures to enhance research culture. | Document | → | → | | |
| 2.2.3 Conduct 2 research promotion workshops per year. | Workshop | → | → | → | → |
| 2.2.4 Conduct annual “Research Day”. | Event | → | → | → | → |
| 2.2.5 Conduct International Biomedical Research Conference at FCMS. | Event | | | → | → |
| 2.2.6 Establish “Researcher of the Year Award”. | Document | | | → | → |

Research Directive Two: Commitment to attract and nurture outstanding scientists

| | | |
|--|--------------------------|--|
| Research Goal Two: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members. | | |
| Research Objective 2.3: Integrate emerging technologies in research data mining and analysis – Champion: VDDQM | | |
| Overview | | PIs |
| Duration | Ongoing | 1. 100% Establishment of “Research Database” for data achieving and analysis systems. 2. 100% Recruitment of “Support staff members”. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DPGSR, HODs, VDDQM, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 2.3.1 Establish an “IT Unit” with data mining facilities. | Unit | → | | | |
| 2.3.2 Recruit support staff for bioinformatics and biostatistical analysis to support translational research. | Staff | → | → | | |
| 2.3.3 Establish “Data Archiving / Analysis System”. | System | | | → | → |
| 2.3.4 Conduct annual course on data mining / analysis in research. | Workshop | | | → | → |

Research Directive Two: Commitment to attract and nurture outstanding scientists

| | | |
|--|------------------------|--|
| Research Goal Two: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members. | | |
| Research Objective 2.4: Introduce a postdoctoral research fellowship program within FCMS – Champion: Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Establishment of policies and procedures for post doctoral program at FCMS. 100% Establishment of a 5-year plan for postdoctoral fellowship program. Number of post doctoral research fellows recruited per year. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | HODs, DPGSR, DAF, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 2.4.1 Develop policies & procedures for postdoctoral programs at FCMS. | Document | → | | | |
| 2.4.2 Recruit 1-2 postdoctoral research fellows per year. | Fellow | | | → | |
| 2.4.3 Establish a 5-year plan for postdoctoral research fellow recruitment. | Document | | | → | |

Research Directive Two: Commitment to attract and nurture outstanding scientists

| | | |
|--|-----------------------|---|
| Research Goal Two: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members. | | |
| Research Objective 2.5: Start and implement postgraduate programs within FCMS – Director of Nursing Program | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Establishment of MSc Program in “Critical Care Nursing”. 100% Establishment of MSc Program in “Oncology – Palliative Care Nursing”. 100% Establishment of MSc Program in “Women’s Health Nursing”. 100% Establishment of MSc Program in “Child Health Nursing”. 100% Establishment of policies, procedures and guidelines for post graduate program. |
| Starting date | Jan, 2018 | |
| Responsibility for implementation | HOD, DPGSR, MED, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 2.5.1 Establish an MSc Program in “Critical Care Nursing”. | Document | | → | | |
| 2.5.2 Establish an MSc Program in “Oncology – Palliative Care Nursing”. | Document | | → | | |
| 2.5.3 Establish an MSc Program in “Women’s Health Nursing”. | Document | | | | → |
| 2.5.4 Establish an MSc Program in “Child Health Nursing”. | Document | | | | → |
| 2.5.5 Establish needed guidelines for MSc Programs at FCMS. | Document | → | | | |

Research Directive Three: Commitment to excellence in biomedical and translational research capacity

| Research Goal Three: Establish key areas of excellence in biomedical research | | |
|--|-------------------|---|
| Research Objective 3.1: Establish research groups using multidisciplinary approaches of scientific research – Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Completion of gap analysis study on research priorities in KSA. 100% Establishment of policies & procedures for multidisciplinary research groups. 100% Formulation of 4 multidisciplinary research groups. Establishment of 2 national and 4 multidisciplinary research groups 2 international research collaboration. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | HODs, DPGSR, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|--|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 3.1.1 Conduct gap analysis study on research priorities in KSA. | Document | → | | | |
| 3.1.2 Develop policies & procedures for multidisciplinary research groups. | Document | | → | | |
| 3.1.3 Formulate 4 multidisciplinary research groups. | Document | | → | | |
| 3.1.4 Establish collaboration agreement with national / international research institutes. | Document | | | → | → |

Research Directive Three: Commitment to excellence in biomedical and translational research capacity

| Research Goal Three: Establish key areas of excellence in biomedical research | | |
|---|-------------------------------------|---|
| Research Objective 3.2: Develop health research system model aligned with the various medical education programs within FCMS – Champion: Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Establishment of Research Methodologies Course for staff members. 100% Establishment of research graduation project for all undergraduate programs. 100% Establishment of “Research Plan” for Nursing Program. 100% Establishment of a research monitoring mechanism within FCMS. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | MED, DPGSR, VDAA, VDDQM, HODs, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|--|-------------|-------------------------------|-------------|-------------|-------------|
| | | 2017 | 2018 | 2019 | 2020 |
| 3.2.1 Develop and implement Research Methodologies Course for staff. | Document | | → | → | → |
| 3.2.2 Conduct annual “Research Ethics Workshop”. | Workshop | | → | → | → |
| 3.2.3 Introduce research graduation project in all undergraduate programs at FCMS. | Document | | → | → | → |
| 3.2.4 Establish Researcher Network in areas of Excellence at FCMS. | Document | | | | → |
| 3.2.5 Establish “Research Plan” for Nursing Program. | Document | → | | | |
| 3.2.6 Establish a “Research Plan” for MLS Program. | Document | → | | | |

Research Directive Three: Commitment to excellence in biomedical and translational research capacity

| Research Goal Three: Establish key areas of excellence in biomedical research | | |
|--|-------------------------|---|
| Research Objective 3.3: Align biomedical research with clinical practice to enable translational continuum – Champion: Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Establishment of “Clinical Trials” operational model. 100% Establishment of biobanking and genomics resources platform within FCMS. 100% Establishment of drug discovery and “Good Laboratory Practice (GLP)” support. |
| Starting date | Jan, 2018 | |
| Responsibility for implementation | HODs, DPGSR, VDCA, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|--|----------------|-------------------------------|-------------|-------------|-------------|
| | | 2017 | 2018 | 2019 | 2020 |
| 3.3.1 Establish “Clinical Trials” operational model. | Document | | | | → |
| 3.3.2 Establish biobanking and genomics resources platforms within FCMS. | Biobank System | | | | → |
| 3.3.3 Establish drug discovery and Good Laboratory Practice (GLP) support. | Laboratory | | | → | → |
| 3.3.4 Identify community research priorities. | Document | | → | → | → |

Research Directive Four: Financial Sustainability and Partnership

| | | |
|---|------------------------|--|
| Research Goal Four: Establish the foundations for long-term financial sustainability of research programs within FCMS. | | |
| Research Objective 4.1: Promote best practices in financial planning for research within FCMS – Champion: DAF | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Establishment of research financial model within FCMS. 100% Establishment of research annual budget. Number of external financial research support achieved during the coming period. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | DAF, HODs, DPGSR, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 4.1.1 Establish research financial model to build long-term sustainability. | Document | | → | | |
| 4.1.2 Establish an annual research budget. | Document | → | | | |
| 4.1.3 Strengthen oversight of research activities. | Document | → | | | |
| 4.1.4 Establish needed policies and procedures for research planning and financing. | Document | → | | | |
| 4.1.5 Apply for external financial research support (grants). | Document | | | → | |

Research Directive Four: Financial Sustainability and Partnership

| | | |
|--|--------------------------------|--|
| Research Goal Four: Establish the foundations for long-term financial sustainability of research programs within FCMS. | | |
| Research Objective 4.2: Develop portfolio management approach for clinical research within FCMS and other partners – Champion: VDCA | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 100% Establishment of new “Clinical Research Management”. 100% Establishment of KPIs for monitoring investment return in research technology companies. Number of partnership agreement with healthcare. |
| Starting date | Jan, 2018 | |
| Responsibility for implementation | HODs, DPGSR, VDDQM, VDCA, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 4.2.1 Build new “Clinical Research Management System” to enable portfolio management. | Document | | | → | → |
| 4.2.2 Develop KPIs for monitoring investment returns in research. | Document | | | → | → |
| 4.2.3 Expand current research network to include healthcare delivery partners. | Document | | | → | → |
| 4.2.4 Forge strategic partnerships with leading health care technology companies. | Document | | | | → |
| 4.2.5 Improve interface with clinical partners to enhance joint clinical research in areas of excellence. | Document | | | → | → |

Research Directive Four: Financial Sustainability and Partnership

| Research Goal Four: Establish the foundations for long-term financial sustainability of research programs within FCMS. | | |
|---|-----------------------------------|--|
| Research Objective 4.3: Strengthen collaborative research partnerships for effective impact on the local community and beyond – Champion: Dean of FCMS | | |
| Overview | | PIs |
| Duration | Ongoing | <ol style="list-style-type: none"> 1. Number of joint research projects with other biomedical institutes during the coming period. 2. Number of partnerships with international research organization. 3. 100% Establishment of “PhD” Program in Nursing & MLS Program. 4. 100% Establishment of international research student program. 5. 100% Establishment of joint research group in research information technology, informatics to translate clinical and administrative data into innovative research output in healthcare. |
| Starting date | Jan, 2017 | |
| Responsibility for implementation | HODs, MED, VDAA, DAF, DPGSR, Dean | |

Project Calendar

| Projects Input Metrics | Unit | Start and Ending dates | | | |
|---|----------|------------------------|------|------|------|
| | | 2017 | 2018 | 2019 | 2020 |
| 4.3.1 Establish joint research groups with other biomedical institutes, | Document | | | → | |
| 4.3.2 Establish partnerships with international research organizations. | Document | | | → | |
| 4.3.3 Establish clinical research network with various medical education institutes. | Document | | | | → |
| 4.3.4 Fund joint research projects with other organization. | Document | | | → | |
| 4.3.5 Establish a “PhD” Postgraduate program in Nursing / MLS Program. | Document | | | | → |
| 4.3.6 Establish Adjunct visiting Professor Program. | Document | | | | → |
| 4.3.7 Establish International Research Student Program. | Document | | | | → |
| 4.3.8 Establish joint research group in research information technology, informatics to translate clinical and administrative data into innovative research output in healthcare. | Document | | | | → |



كلية فقيه للعلوم الطبية
Fakeeh College for Medical Sciences
Established: 2003 - 1424هـ

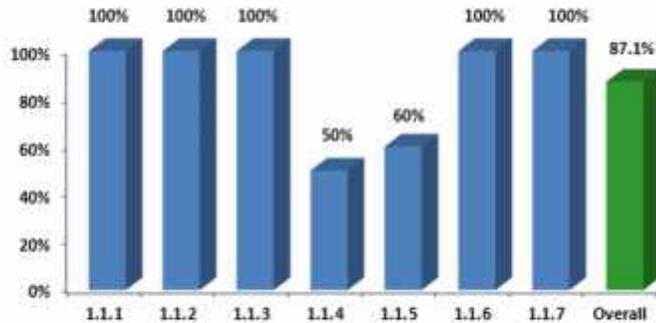
First
“Scientific Research Plan”
“BAHUTH One”

Fakeeh College for Medical Sciences
2017-2020
Annual Achievement Report

**Research Goal 1: Commitment to optimize
research environment and infrastructures**

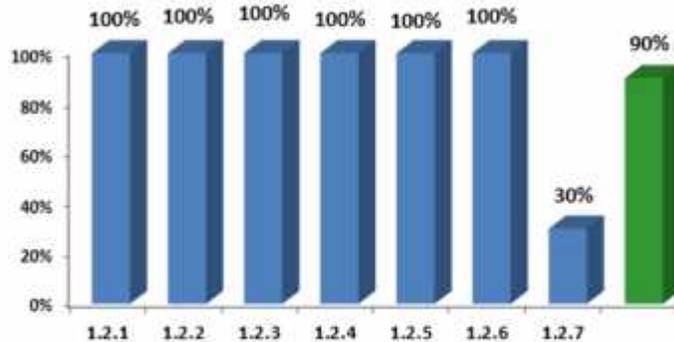
Project 1.1: Enhance the research organizational structure within FCMS.

| Project Input Metrics |
|---|
| 1.1.1 Establish Directorship of 'Scientific Research and Postgraduate Studies'. |
| 1.1.2 Establish Scientific Research Unit. |
| 1.1.3 Develop a college-wide scientific research plan. |
| 1.1.4 Diversify financial support for scholarly and scientific research programs. |
| 1.1.5 Enhance research skills for student and staff. |
| 1.1.6 Establish scientific research policies and procedures within FCMS. |
| 1.1.7 Develop research groups including faculty staff members and students. |



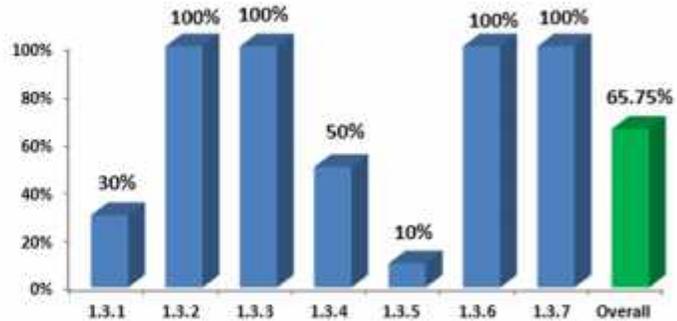
Project 1.2: Enhance the infrastructure to scientific research

| Project Input Metrics |
|---|
| 1.2.1 Establish two multipurpose research laboratories. |
| 1.2.2 Establish two specialized biomedical research laboratories. |
| 1.2.3 Establish offices for research offices, technologists, and postdoctoral candidates. |
| 1.2.4 Allocated annual budget for basic equipment and research supplies. |
| 1.2.5 Identify areas for research educational activities. |
| 1.2.6 Establish support services for research areas at Building 5. |
| 1.2.7 Establish biorepository to store specimens and tissues samples collected for research including freezer and retrieval system. |



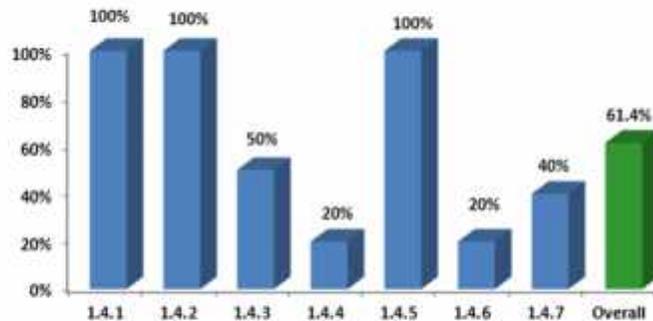
Project 1.3: Commit to best practices and processes to promote a culture of scientific research within FCMS.

| Project Input Metrics |
|---|
| 1.3.1 Increase and enhance research opportunities for undergraduate students. |
| 1.3.2 Integrate Research Projects during the last year of each undergraduate program. |
| 1.3.3 Organizing annual research day for both staff and students. |
| 1.3.4 Participation in scientific research meetings and symposia by academic staff. |
| 1.3.5 Participation in scientific research meetings and symposia by students. |
| 1.3.6 Establish a research monitoring scheme. |
| 1.3.1 Increase and enhance research opportunities for undergraduate students. |



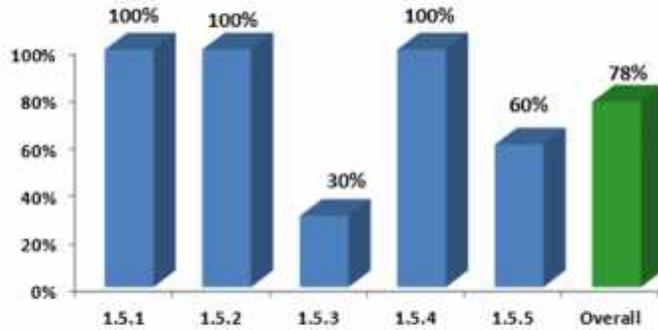
Project 1.4: Establish 'Medical Research Center' (MRC).

| Project Input Metrics |
|--|
| 1.4.1 Establish the mission, organizational structure for "Medical Research Center" (MRC). |
| 1.4.2 Identify the facilities and resources. |
| 1.4.3 Propose budget projections and analysis. |
| 1.4.4 Establish provisions for partnership international collaboration in research. |
| 1.4.5 Prepare Research handbook. |
| 1.4.6 Develop plans for graduate and undergraduate student's involvement in research activities. |
| 1.4.7 Establish a five-year plan for "MRC". |

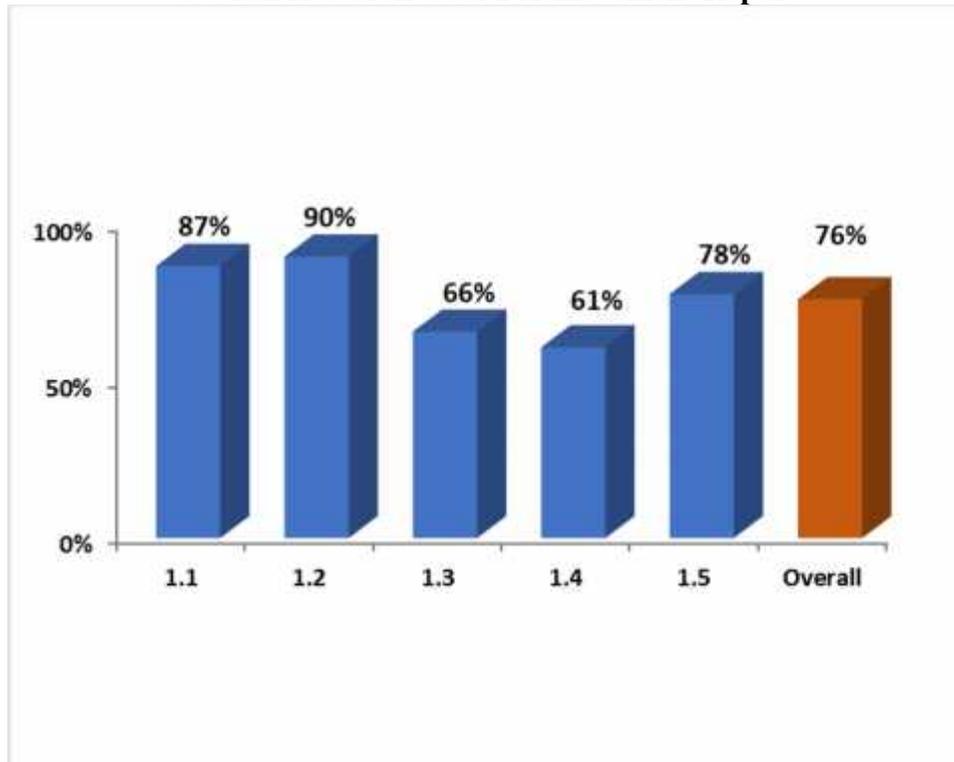


Project 1.5: Foster cooperative partnerships in applied biomedical research with local and national business organizations.

| Project Input Metrics |
|---|
| 1.5.1 Identify sources for research funding and application for research grants. |
| 1.5.2 Enhance high impact research output. |
| 1.5.3 Identify local and international institutions with biomedical research partners. |
| 1.5.4 Organize workshops on: <ul style="list-style-type: none"> • Writing research projects • Patent registration • Ethics on scientific research • Research project management |
| 1.5.5 Development and launching of "Youth Development Program". |
| 1.5.1 Identify sources for research funding and application for research grants. |
| 1.5.2 Enhance high impact research output. |



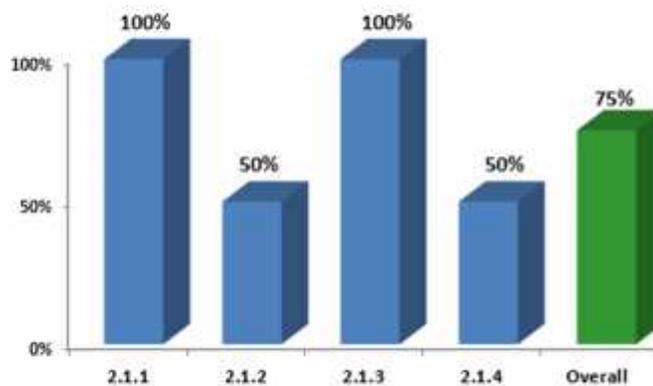
Overall Research Goal 1 Achievement Report



Research Goal 2: Conduct advanced research transforming knowledge into clinical practice by recruiting distinguished academic and clinical staff members.

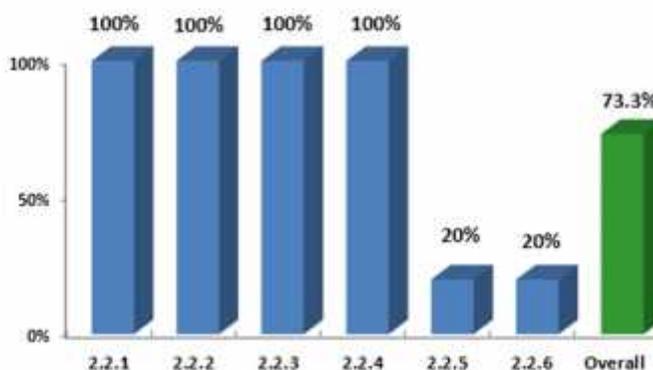
Project 2.1: Recruit and retain research distinctive faculty staff members.

| Project Input Metrics |
|---|
| 2.1.1 Identify the priority recruitments of distinctive faculty staff investigators. |
| 2.1.2 Introduce a recruitment and development opportunities program to establish a <u>cader</u> of biomedical scientists with FCMS. |
| 2.1.3 Establish a mentorship program for distinctive early - career scientists working at FCMS. |
| 2.1.4 Establish distinctive research achievement award to promote recognition. |
| 2.1.1 Identify the priority recruitments of distinctive faculty staff investigators. |
| 2.1.2 Introduce a recruitment and development opportunities program to establish a <u>cader</u> of biomedical scientists with FCMS. |
| 2.1.3 Establish a mentorship program for distinctive early - career scientists working at FCMS. |



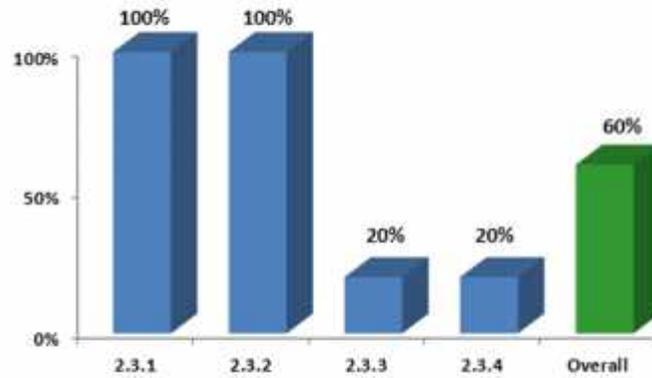
Project 2.2: Promote a research culture that nurture outcomes with impact.

| Project Input Metrics |
|---|
| 2.2.1 Establish a research targeted orientation program for academic staff members. |
| 2.2.2 Develop the needed guidelines, policies and procedures to enhance research culture. |
| 2.2.3 Conduct 2 research promotion workshops per year. |
| 2.2.4 Conduct annual "Research Day". |
| 2.2.5 Conduct International Biomedical Research Conference at FCMS. |
| 2.2.6 Establish "Researcher of the Year Award". |
| 2.2.1 Establish a research targeted orientation program for academic staff members. |



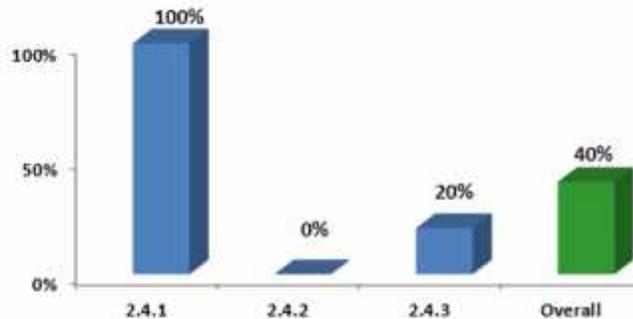
Project 2.3: Integrate emerging technologies in research data mining and analysis.

| Project Input Metrics |
|---|
| 2.3.1 Establish an "IT Unit" with data mining facilities. |
| 2.3.2 Recruit support staff for bioinformatics and biostatistical analysis to support translational research. |
| 2.3.3 Establish "Data Archiving / Analysis System". |
| 2.3.4 Conduct annual course on data mining / analysis in research. |
| 2.3.1 Establish an "IT Unit" with data mining facilities. |
| 2.3.2 Recruit support staff for bioinformatics and biostatistical analysis to support translational research. |
| 2.3.3 Establish "Data Archiving / Analysis System". |



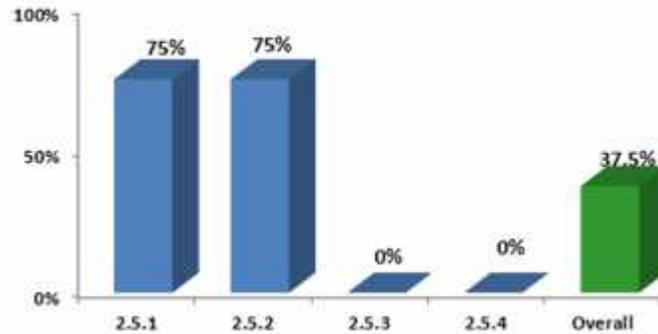
Project 2.4: Introduce a postdoctoral research program within FCMS.

| Project Input Metrics |
|---|
| 2.4.1 Develop policies & procedures for postdoctoral programs at FCMS. |
| 2.4.2 Recruit 1-2 postdoctoral research fellows per year. |
| 2.4.3 Establish a 5-year plan for postdoctoral research fellow recruitment. |
| 2.4.1 Develop policies & procedures for postdoctoral programs at FCMS. |
| 2.4.2 Recruit 1-2 postdoctoral research fellows per year. |
| 2.4.3 Establish a 5-year plan for postdoctoral research fellow recruitment. |
| 2.4.1 Develop policies & procedures for postdoctoral programs at FCMS. |

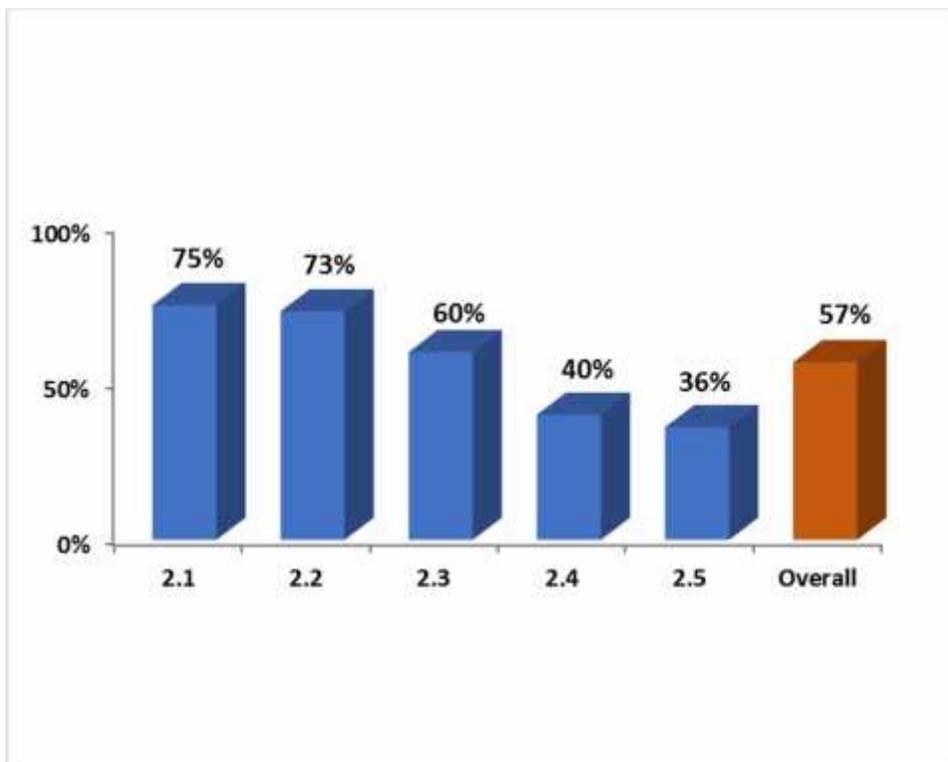


Project 2.5: Start and implement postgraduate programs within FCMS.

| Project Input Metrics |
|---|
| 2.5.1 Establish an MSc Program in Critical Care Nursing. |
| 2.5.2 Establish an MSc Program in Oncology - Palliative Care Nursing. |
| 2.5.3 Establish an MSc Program in Women's Health Nursing. |
| 2.5.4 Establish an MSc Program in Child Health Nursing. |
| 2.5.1 Establish an MSc Program in Critical Care Nursing. |
| 2.5.2 Establish an MSc Program in Oncology - Palliative Care Nursing. |
| 2.5.3 Establish an MSc Program in Women's Health Nursing. |



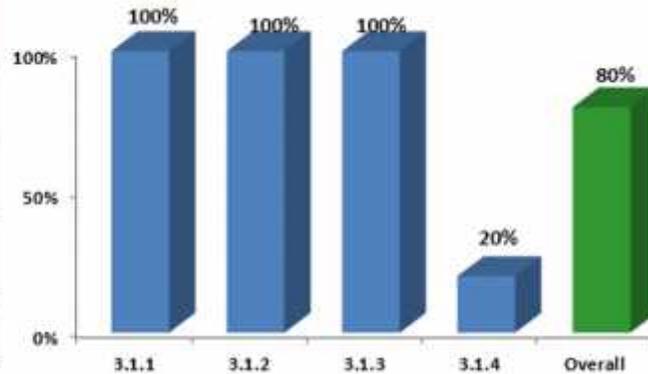
Overall Research Goal 2 Achievement Report



**Research Goal 3: Establish key areas of
excellence in biomedical research**

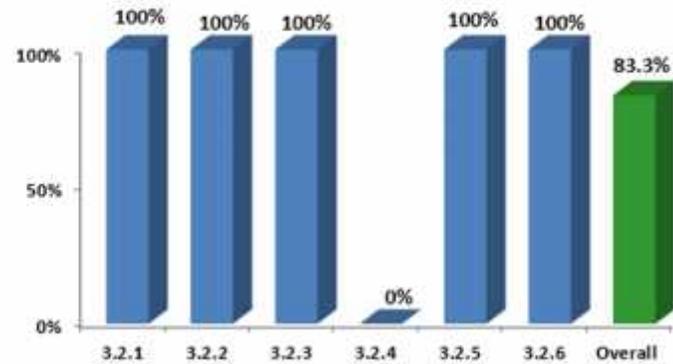
Project 3.1: Establish research groups using multidisciplinary approaches of scientific research.

| Project Input Metrics |
|--|
| 3.1.1 Conduct gap analysis study on research priorities in KSA. |
| 3.1.2 Develop policies & procedures for multidisciplinary research groups. |
| 3.1.3 Formulate 4 multidisciplinary research groups. |
| 3.1.4 Establish collaboration agreement with national / international research institutes. |

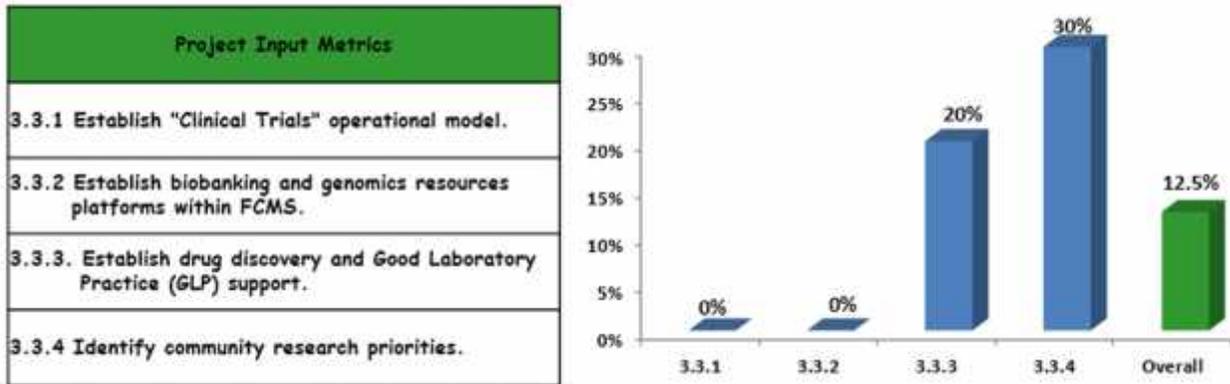


Project 3.2: Develop health research system model aligned with the various medical education programs within FCMS.

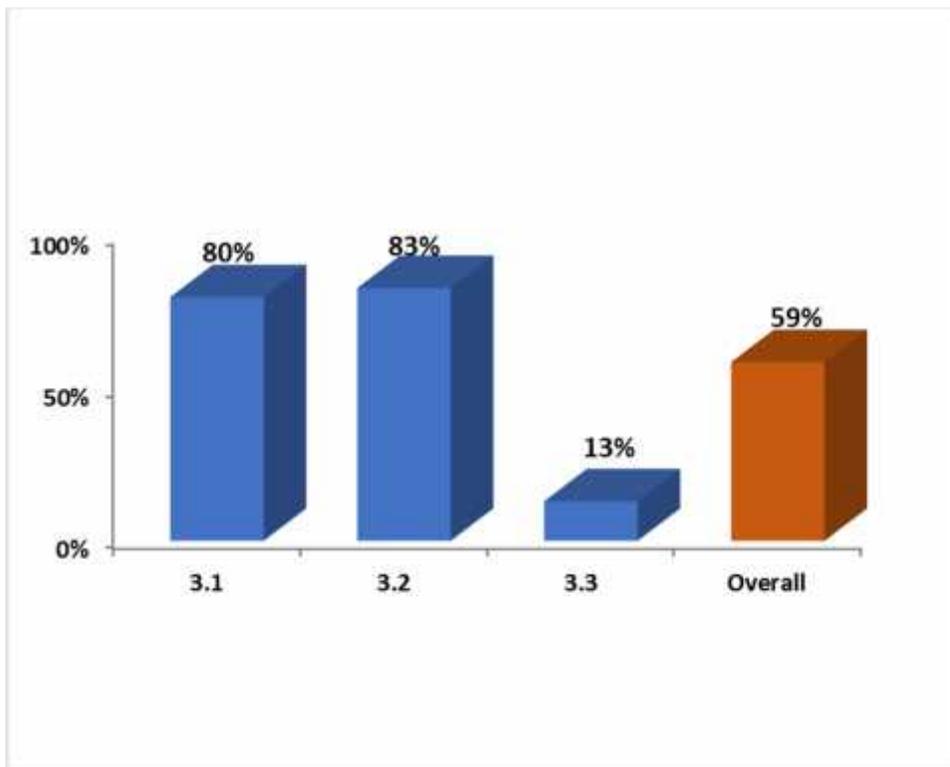
| Project Input Metrics |
|--|
| 3.2.1 Develop and implement Research Methodologies Course for staff. |
| 3.2.2 Conduct annual "Research Ethics Workshop". |
| 3.2.3 Introduce research graduation project in all undergraduate programs at FCMS. |
| 3.2.4 Establish Researcher Network in areas of Excellence at FCMS. |
| 3.2.5 Establish "Research Plan" for Nursing Program. |
| 3.2.6 Establish a "Research Plan" for MLS Program. |
| 3.2.1 Develop and implement Research Methodologies Course for staff. |



Project 3.3: Align biomedical research with clinical practice to enable translational continuum.



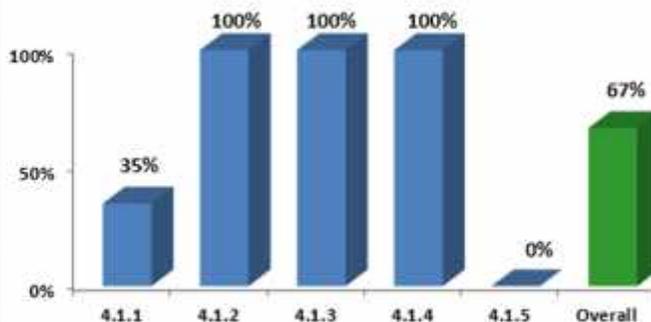
Overall Research Goal 3 Achievement Report



Research Goal 4: Promote best practices in financial planning for research within FCMS.

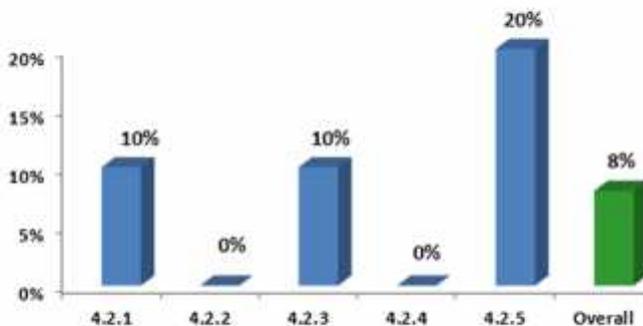
Project 4.1: Promote best practices in financial planning for research within FCMS.

| Project Input Metrics |
|---|
| 4.1.1 Establish research financial model to build long-term sustainability. |
| 4.1.2 Establish an annual research budget. |
| 4.1.3 Strengthen oversight of research activities. |
| 4.1.4 Establish needed policies and procedures for research planning and financing. |
| 4.1.5 Apply for external financial research support (grants). |
| 4.1.1 Establish research financial model to build long-term sustainability. |
| 4.1.2 Establish an annual research budget. |



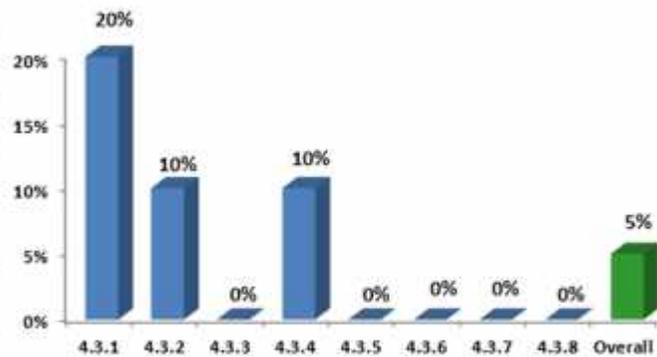
Project 4.2: Develop portfolio management approach for clinical research within FCMS and other partners.

| Project Input Metrics |
|---|
| 4.2.1 Build new "Clinical Research Management System" to enable portfolio management. |
| 4.2.2 Develop KPIs for monitoring investment returns in research. |
| 4.2.3 Expand current research network to include healthcare delivery partners. |
| 4.2.4 Forge strategic partnerships with leading health care technology companies. |
| 4.2.5 Improve interface with clinical partners to enhance joint clinical research in areas of excellence. |
| 4.2.1 Build new "Clinical Research Management System" to enable portfolio management. |
| 4.2.2 Develop KPIs for monitoring investment returns in research. |

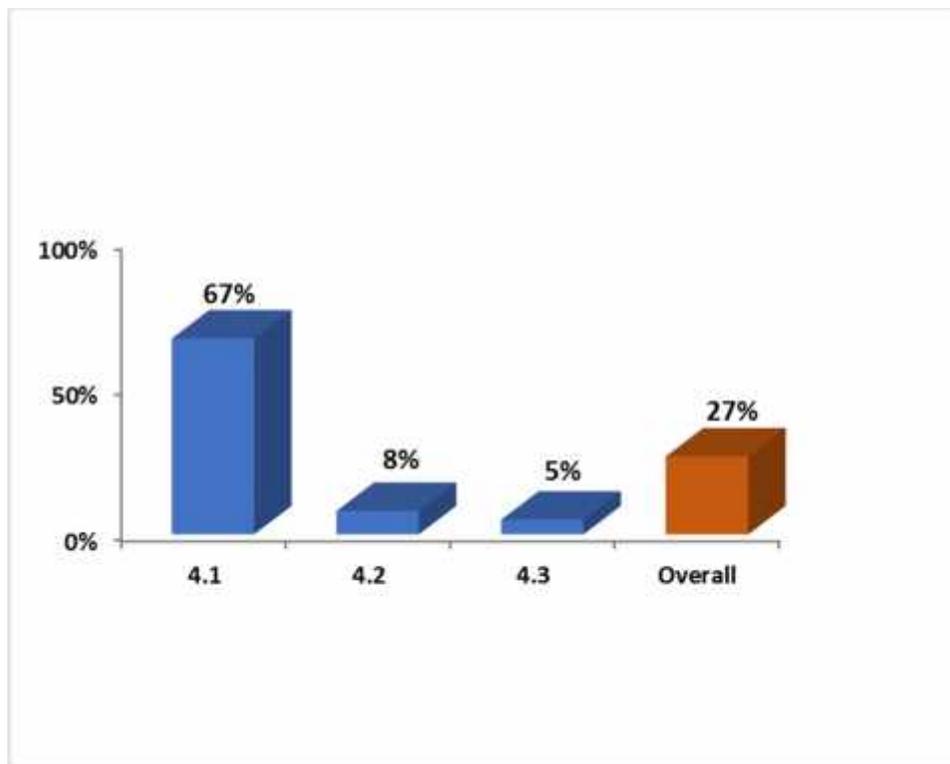


Project 4.3: Strengthen collaborative research partnerships for effective impact on the local community and beyond.

| Project Input Metrics |
|---|
| 4.3.1 Establish joint research groups with other biomedical institutes. |
| 4.3.2 Establish partnerships with international research organizations. |
| 4.3.3 Establish clinical research network with various medical education institutes. |
| 4.3.4 Fund joint research projects with other organization. |
| 4.3.5 Establish a "PhD" Postgraduate program in Nursing / MLS Program. |
| 4.3.6 Establish Adjunct visiting Professor Program. |
| 4.3.7 Establish International Research Student Program. |
| 4.3.8 Establish joint research group in research information technology, informatics to translate clinical and administrative data into innovative research output in healthcare. |



Overall Research Goal 4 Achievement Report



Overall Research Goals

| Research Goals |
|-----------------|
| Research Goal 1 |
| Research Goal 2 |
| Research Goal 3 |
| Research Goal 4 |

