



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21



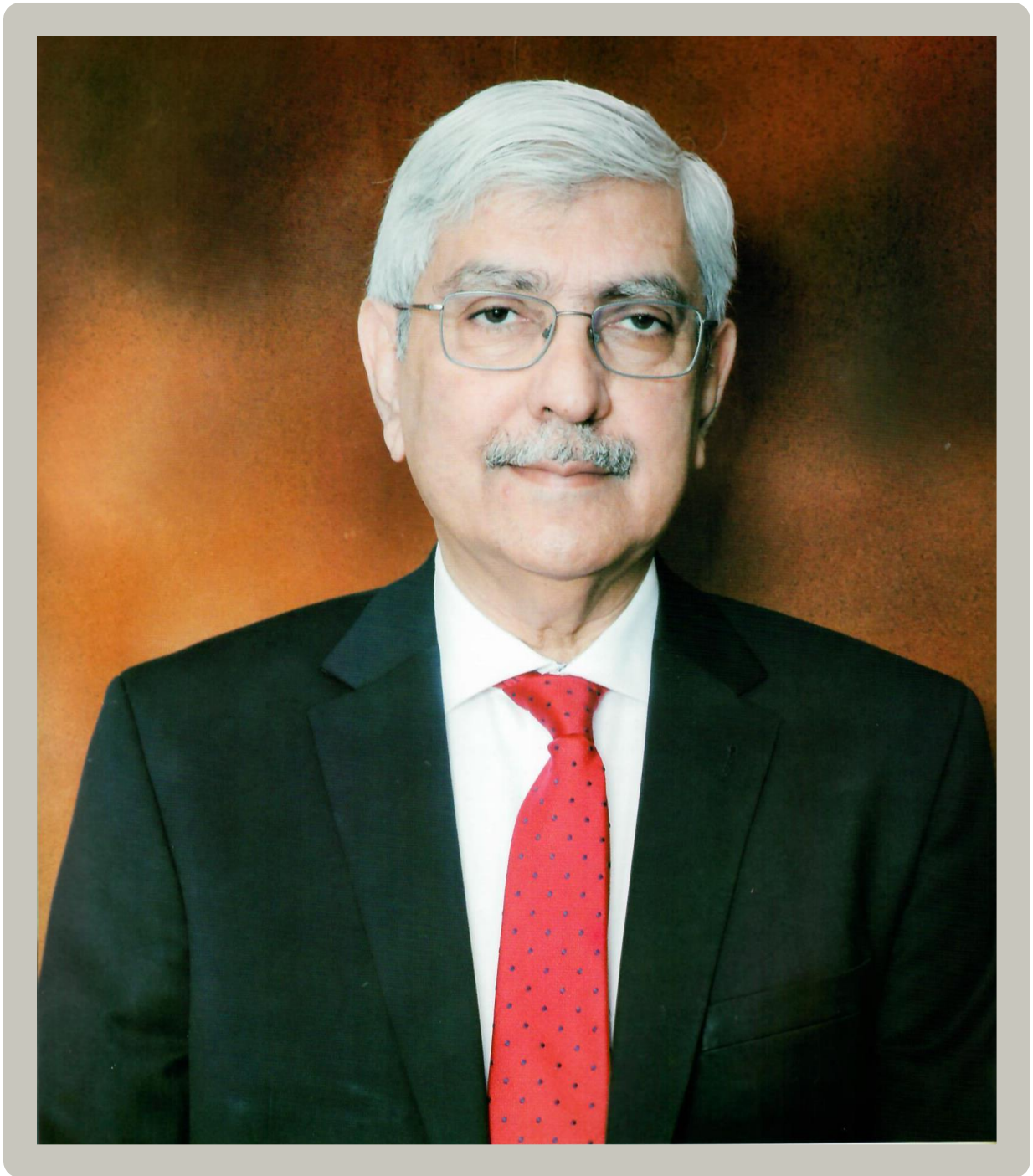
| <b>TABLE OF CONTENTS</b>  |           |
|---|-----------|
| <b>Executive Summary</b> .....  | <b>7</b>  |
| <b>Vision and Mission of DUHS</b> .....                                 | <b>8</b>  |
| <b>Diversity Statement</b> .....  | <b>9</b>  |
| <b>Colleges, Schools and Institutes of DUHS</b> .....                   | <b>10</b> |
| <b>Brief Profiles of Institutes, Colleges and Schools of DUHS</b> ..... | <b>13</b> |
| <b>Chapter 1: Academic Activities</b> .....                             | <b>20</b> |
| 1.1 Undergraduate and Postgraduate Programs .....                       | 21        |
| 1.2 MS/MPhil and Ph.D. programs.....                                    | 23        |
| 1.3 Academic achievements .....   | 24        |
| 1.4 Foreign Academic Linkages .....                                     | 26        |
| 1.5 Honors and Awards .....   | 26        |
| 1.6 Institutional Linkages .....  | 27        |
| <b>Chapter 2: Research and Development</b> .....                        | <b>30</b> |
| 2.1 R&D- An Overview .....  | 31        |
| 2.2 Research Projects .....   | 34        |
| 2.2.1 Completed .....   | 34        |
| 2.2.2 Newly Launched .....  | 34        |
| 2.3 Publications .....  | 35        |
| 2.4 Conferences, Seminars & Workshops .....                             | 35        |
| 2.5 Research Journals .....   | 35        |
| 2.6 Research Collaboration .....  | 36        |
| 2.6.1 Indigenous .....  | 36        |
| 2.6.2 Foreign Research Partners .....                                   | 36        |
| 2.6.3 National Linkages .....   | 37        |
| 2.6.4 Funding grants for R&D .....                                      | 37        |
| 2.6.5 Vice Chancellor's Seed Funding Initiative .....                   | 38        |
| 2.7 Operation Office Research, Innovation & Commercialization .....     | 39        |
| 2.7.1 All Pakistan DUHS-DICE Health Innovation Exhibition .....         | 40        |
| 2.7.2 Commercialization Activities of DUHS .....                        | 41        |
| <b>Chapter 3: Quality Assurance</b> .....                               | <b>42</b> |
| 3.1 Impact of Quality Assurance in the University .....                 | 43        |

|  |           |
|--|-----------|
| 3.2 Quality Enhancement Cell at DUHS .....                             | 43        |
| 3.3 Membership of Quality Associations/ Networks .....                 | 46        |
| 3.4 Accreditation of Programs form Relevant Councils .....             | 47        |
| 3.5 Seminars, Workshops Training at QEC .....                          | 48        |
| <b>Chapter 4: Faculty Development .....</b>                            | <b>51</b> |
| 4.1 Professional Development Center (PDC) DUHS .....                   | 52        |
| 4.2 Faculty Development Programs (MS/PHD local + Foreign) .....        | 53        |
| 4.3 Returned Scholars .....  | 53        |
| 4.4 Present Scholars .....   | 53        |
| 4.5 Pre-Service and in-Service Professional development programs ..... | 56        |
| 4.6 Online Teaching and Faculty Readiness .....                        | 57        |
| <b>Chapter 5: Access .....</b>   | <b>58</b> |
| 5.1 Basic Enrolment .....  | 59        |
| 5.2 Equity .....   | 59        |
| 5.3 Gender-wise Detail .....   | 59        |
| 5.4 Employability .....  | 60        |
| 5.5 Faculty-student ratio .....  | 61        |
| <b>Chapter 6: Universities Building Economies .....</b>                | <b>62</b> |
| 6.1 University-Industry Linkage .....                                  | 63        |
| 6.2 New Initiatives .....  | 63        |
| 6.3 Patents/ Trademarks .....  | 65        |
| 6.4 Internship and Placement Office .....                              | 65        |
| 6.5 Student Counseling and Career Guidance .....                       | 67        |
| <b>Chapter 7: Strengthening Physical Infrastructure .....</b>          | <b>70</b> |
| 7.1 Development project (Laboratories, Libraries, etc.) .....          | 71        |
| 7.2 Research Equipment .....   | 73        |
| 7.3 Ongoing Construction projects .....                                | 74        |
| <b>Chapter 8: Strengthening Technological Infrastructure .....</b>     | <b>75</b> |
| 8.1 Digital Library .....  | 76        |
| 8.2 PERN (Pakistan Education & Research Network) .....                 | 76        |
| 8.3 Video Conferencing .....   | 77        |
| 8.4 Campus Management Solution .....                                   | 77        |

|   |            |
|---|------------|
| 8.5 Web Portal of DUHS .....  | 78         |
| 8.6 Online Admission System .....   | 78         |
| 8.7 Cloud Services for Academics .....  | 78         |
| 8.8 DOW Connect .....   | 79         |
| 8.9 Microsoft Dynamics .....  | 80         |
| <b>Chapter 9: Universities Building Communities .....</b>   | <b>81</b>  |
| 9.1 University-Community Interaction .....  | 82         |
| 9.2 University's Role in Building Community .....   | 83         |
| 9.3 Alumni Affairs: Outstanding Achievements etc. ....  | 83         |
| <b>Chapter 10: Sports .....</b>   | <b>85</b>  |
| 10.1 Inter-departmental sports .....  | 86         |
| <b>Chapter 11: Universities Building Leadership .....</b>   | <b>87</b>  |
| 11.1 Faculty Leadership (Awards and representation in Govt. policy making committees, memberships on Various Councils etc.) .....                 | 88         |
| 11.2 Student Leadership (Co-curricular Activities: University Dramas exhibitions, expos, competitions, debate at national and international. .... | 91         |
| <b>Chapter 12: Finance .....</b>  | <b>92</b>  |
| 12.1 Approved Budget .....  | 94         |
| 12.2 Financial Year at a Glance .....   | 95         |
| 12.3 Audit Report .....   | 96         |
| 12.4 Recurring Budget .....   | 98         |
| 12.5 Self-Generated Income .....  | 101        |
| 12.6 Student Financial Aid .....  | 102        |
| <b>Chapter 13: University Governance .....</b>  | <b>104</b> |
| 13.1 Syndicate Meetings .....   | 105        |
| 13.2 Academic Council Meetings .....  | 105        |
| 13.3 Board of Advanced Studies & Research Meetings .....  | 105        |
| <b>Chapter 14: Office of Resource Generation/Development .....</b>  | <b>106</b> |
| 14.1 Initiatives and Implementation .....   | 107        |
| 14.2 Future Plans .....   | 107        |



|   |            |
|---|------------|
| <b>Chapter 15: Health Centre/Medical Facilities</b> ..... | <b>108</b> |
| 15.1 Medical Facilities available .....                   | 109        |
| 15.2 Health Insurance Benefits for DUHS Employees .....   | 114        |
| 15.3 Counseling for Stress Reduction .....                | 117        |
| <b>Chapter 16: University Sustainability Report</b> ..... | <b>118</b> |
| 16.1 Good Health & Well Being - SDG 03 .....              | 119        |
| 16.2 Quality Education – SDG 04 .....                     | 129        |
| 16.3 Gender Equality – SDG 05 .....                       | 139        |
| 16.4 Water and Sanitation SDG-06 .....                    | 141        |
| 16.5 Partnership for the goals – SDG 17 .....             | 147        |



**Prof. Mohammed Saeed Quraishy**

**VICE CHANCELLOR, DOW UNIVERSITY OF HEALTH SCIENCES**

## Executive Summary (2020-2021)

*Founded in December 2003, the Dow University of Health Sciences (DUHS) has been developing a tradition of excellence in education, research and community service. DUHS has approximately 7322 enrolled students and residents from 49 academic institutes, colleges, and research core and administrative entities. The University currently has more than 4000 employees, including approximately 921 faculty members as of 2020-2021.*

*The Dow University of Health Sciences (DUHS) offers a multitude of undergraduate and postgraduate programs that cater to the needs of the medical and allied healthcare sciences. At the global level, the research creates a demarcation between the curricula of undergraduate and postgraduate level studies, and DUHS also emphasizes integrating research as a part of the regular curriculum, in addition to community service. The research, when taught to students at the undergraduate and postgraduate levels, develops their habit of learning and acquiring information through primary data sources and to be an active seeker of information and participate in knowledge dissemination, as per the Mission of the University. During 2019, the University initiated collaborations with international universities, global associations, other talented professionals and scholars to enhance the quality of research activities and ultimately, the demand for our graduates worldwide.*

*In 2019-2020, the focus of the University was on acquiring accreditation from relevant professional councils for all of its existing and newly launched programs, with a strategic aim to enhance employee & staff development and heighten growth of academic and research activities, in order to make an impact in research and other scholarly activities in the world of medicine and the biomedical sciences by the year 2024.*

*The year 2020-2021 was a dynamic year and the first half of it was dedicated to sustaining the university's primary mode of in-class teaching and learning to online teaching, due to Covid19 circumstances. In this duration, there was an increased investment in resources allowing the University to teach in hybrid mode, both online and in classroom teaching, as per policy of the local and federal governments, and the HEC, Pakistan. It is of great pride that Dow University of Health Sciences, Karachi was able to adopt policies, SOPs, establish an Online Academic Council, an interim committee, and operationalized a learning management system, the Dow Online Education System (DOES) for all students and faculty use.*

*Further, faculty readiness was also a key factor in ensuring successful transition onto online teaching delivery, as faculty were encouraged to take an online introductory course(s) that would successfully teach them varied methods of delivery so as to engage the students in online learning. Furthermore, the University was able to establish a robust evaluation system that was able to eventually assess and evaluate all programs that were transitioned online and the number of students that were evaluated were half as many that were registered during COVID. This ensured the completion of the teaching period during the pandemic, and also prepared the University to be able to offer courses in Hybrid mode, with blended learning opportunities available for the students going forward.*

***Vision of Dow University of Health Sciences***

**“To Be a Pre-Eminent Academic Institution Committed to  
Changing and Saving Lives”**

***Mission Statement of Dow University of Health Sciences***

**“Providing Outstanding Patient Centered Education, Training  
and Clinical Care Informed by Cutting Edge Research and  
Innovation Generating and Disseminating New Knowledge”**

## ***Diversity Statement***

We demonstrate equal employment opportunity without any discrimination to gender and encourage a participative work culture of equality and professionalism in all the endeavors at DUHS, these aspects which include recruitment and hiring, learning & development, performance enhancement and other opportunities.

### **Non-Discrimination against Women**

The scope of non-discrimination with regard to gender on admission of students is covered in The DOW University of Health Science Act 2004 which states in Clause No. 5.1 Under Section University Open to All that, “The University shall be open to all persons of either sex of whatever religion, race, creed, color who are academically qualified for admissions to the courses of study offered by the university and no such persona shall be denied to the privilege on the ground of only sex, religion, creed, race, class, color”.

### **Non-discrimination for Transgender**

Section 3(3) of Transgender Persons (Protection of Rights) Act, 2018 states, “every transgender person, being the citizen of Pakistan, who has attained the age of eighteen years shall have the right to let himself or herself registered according to self-perceived gender identity.” Accordingly, DUHS encourages all gender identities to apply for employment as well as admissions to the courses of study offered by the University and no such persona shall be denied to the privilege on this ground.

# Colleges, Institutes & Schools of DUHS

| Name of Institute/Colleges & Schools of DUHS |  |
|--|--|
| 1  | <b>Dow Medical College (DMC)</b>   |
| 2  | <b>Dow Dental College (DDC)</b>  |
| 3  | <b>Dow International Dental College (DIDC)</b>   |
| 4  | <b>Dow International Medical College (DIMC)</b>  |
| 5  | <b>Dr. Ishrat-ul-Ebad Institute of Oral Health Sciences (DIKIOHS)</b>  |
| 6  | <b>Dow College of Pharmacy (DCOP)</b>  |
| 7  | <b>Dow Institute of Physical Medicine &amp; Rehabilitation (DIPM&amp;R)</b>  |
| 8  | <b>Dow Institute of Health Professionals Education (DIHPE)</b>   |
| 9  | <b>Dow Institute of Radiology (DIR)</b>  |
| 10   | <b>Dow Institute of Nursing &amp; Midwifery (DIONM)</b>  |
| 11   | <b>Institute of Business and Health Management (IBHM)</b>  |
| 12   | <b>Dow Institute of Medical Technology (DIMIT)</b>   |
| 13   | <b>School of Public Health (SPH)</b>   |
| 14   | <b>Dow College of Bio-Technology (DCOB)</b>  |
| 15   | <b>School of Post Graduate Studies (SPGS)</b> <ul style="list-style-type: none"> <li>a. <i>Institute of Clinical Sciences</i></li> <li>b. <i>Institute of Biomedical Sciences</i></li> <li>c. <i>Institute of Health Sciences</i></li> </ul>   |
| 16   | <b>School of Dental Care Professionals</b>   |
| 17   | <b>Institute of Basic Medical Sciences (IBMS)</b>  |
| 18   | <b>National Institute of Diabetes &amp; Endocrinology (NIDE)</b>   |
| Clinical Departments of DUHS                 |  |
| 1.   | <b>Dow University Hospital</b> <ul style="list-style-type: none"> <li>a. <i>Dow Institute of Cardiology</i></li> <li>b. <i>National Institute of Liver &amp; GI Diseases (NILGID)</i></li> <li>c. <i>Clinical Hematology and Bone Marrow Transplantation</i></li> <li>d. <i>National Institute of Diabetes &amp; Endocrinology (NIDE)</i></li> <li>e. <i>National Institute of Solid Organ &amp; Tissue Transplant (NISOTT)</i></li> </ul> |
| 2.   | <b>Dow Institute of Radiology</b>  |
| 3.   | <b>Dow Diagnostic, Research and Reference Laboratory (DDRRL)</b>   |
| 4.   | <b>OJHA Institute of Chest Diseases (OICD)</b>   |



|  |  |
|--|--|
| 5.   | <b>Institute of Physical Medicine and Rehabilitation (IPM&amp;R)</b>   |
| 6.   | <b>Dr. Ishrat UI Ebad Khan Location (near LNH), National Stadium Road</b>  |
| 7.   | <b>Dr. Ishrat UI Ebad Khan Institute of Blood Diseases (DIKIBD)</b>  |
| 8.   | <b>DHA City Medical Center</b>   |
| <b>Other Non-Academic, Research Core and Administrative Entities</b> |  |
| 1.   | <b>Day Care Centers</b>  |
| 2.   | <b>Reading Libraries</b>   |
| 3.   | <b>Finance Directorate</b><br><i>a. Financial Aid Office</i>   |
| 4.   | <b>Office of Registrar</b><br><i>a. Establishment</i><br><i>b. Legal Section</i><br><i>c. Transport Section</i>                        |
| 5.   | <b>Clinical Trials Unit (CTU)</b>  |
| 6.   | <b>Internal Audit Directorate</b>  |
| 7.   | <b>Advanced Animal Laboratory</b>  |
| 8.   | <b>Examination Department</b>  |
| 9.   | <b>Question Bank (Q Bank)</b>  |
| 10.  | <b>Admissions Department</b>   |
| 11.  | <b>Student Facilitation Centers</b>  |
| 12.  | <b>Quality Enhancement Cell (QEC)</b>  |
| 13.  | <b>Directorate of Human Resources</b><br><i>a. Payroll section</i><br><i>b. Health Insurance Section</i><br><i>c. Contract section</i> |
| 14.  | <b>Professional Development Center (PDC)</b>   |
| 15.  | <b>Planning and Development Directorate</b>  |
| 16.  | <b>Dow Premium Health Water- Riva Water</b>  |
| 17.  | <b>Office of Student Counseling and Advising</b>   |
| 18.  | <b>Office of Alumni Affairs and Resource Mobilization</b>  |
| 19.  | <b>Office of Research Innovation &amp; Commercialization (ORIC)</b>  |
| 20.  | <b>Office of Strategic Development and Implementation (OSDI)</b>   |
| 21.  | <b>Office of Graduate Placement and Student Exchange Program</b>   |

|     |   |
|-----|---|
| 22. | <b>Directorate of Information &amp; Communication Technology (ICT)</b><br><i>a. Campus Management Solution (CMS)</i><br><i>b. Dow Vocational Technical Training Centre (DVTTC)</i><br><i>c. Digital Libraries (Multiple Departmental Libraries) of DUHS</i> |
| 23. | <b>Institute of Biological, Biochemical and Pharmaceutical Sciences</b>   |
| 24. | <b>Procurement Directorate (Office of Procurement and Supply Chain)</b>   |
| 25. | <b>Dow Research Institute of Bio-Technology &amp; Bio-Medical Sciences (DRIBBS)</b>   |

# Brief Profiles of Institutes, Colleges & Schools

## i. Dow Medical College (DMC)

*Dow Medical College (DMC) is one of the oldest medical colleges in Sindh. Established in 1945, it has a rich history and has been involved in the teaching and training of medical students since the establishment of the college. For more than 60 years, the college has approximately seventeen thousand alumni, who are serving with distinction globally. It is attached to Dr. Ruth Pfau Civil Hospital Karachi, Pakistan's largest teaching hospital with departments of all major specialties, and more than 2000 bed occupancy.*

*The five years course has been divided into 10 semesters. A new system of integrated teaching consisting of applied knowledge has been introduced, in which the students are taught basic subjects in the usual manner, which is later on followed by clinically oriented teaching sessions to explain the clinical application of the basic knowledge spiral after spiral, with enhanced integration of concepts.*

## ii. Dow International Medical College (DIMC)

*Dow International Medical College was established in 2007 in order to facilitate children of overseas Pakistanis as they face various difficulties in entering into the medical profession abroad. It is a PMC recognized medical college that has been recognized internationally, and included in the INTERNATIONAL MEDICAL EDUCATION DIRECTORY (IMED), with approval from the Educational Commission for Foreign Medical Graduates. The laboratories of the college are fully equipped with the latest equipment, including power labs, lecture halls, tutorial rooms and other basic facilities. A state of the art gymnasium and sports and recreational complex also hosts extra-curricular activities for the students. Separate hostels for boys and girls are available, along within the same campus with a regularly monitored security system. Clinical training for the MBBS program of DIMC is provided in the 650-bedded Dow University Hospital, located within the vicinity of the same campus.*

## iii. Dow College of Pharmacy (DCOP)

*Dow College of Pharmacy (DCOP) was established in 2007, and it is recognized and accredited by the Pharmacy Council of Pakistan. Dow College of Pharmacy provides pharmacy education to its students, offering graduate and post-graduate degree programs in the field of pharmacy:*

- I. Pharm D (Morning and Evening) - A five years Program for a degree of Doctor of Pharmacy.*
- II. Master of Philosophy in all disciplines, as approved by the Pakistan Pharmacy Council.*
- III. Ph.D. Pharmacology*

*Dow College of pharmacy is a leading institute in training of allied healthcare professionals who are able to conduct innovative research, provide quality pharmaceutical care and consultancies, along with being at the forefront in formulating pharmaceutical products.*

*The college is well equipped with audiovisual enabled lecture halls, fully equipped laboratories for Pharmaceutics, Pharmacology, Pharmaceutical Chemistry, Pharmacognosy, Industrial*

Pharmacy, Quality Assurance, Instrumentation, Anatomy, Physiology and Pathology, Microbiology.

#### **iv. Dow International Dental College (DIDC)**

*Dow International Dental College (DIDC) was initially established at OJHA Campus. Later it was relocated to Chanesar Goth (Defence Campus) to meet the shortage of Dental Surgeons in Pakistan as well as abroad. DIDC offers admissions mainly to overseas students, however due to the acute deficiency of Dental Surgeons; the option for admission is also given to local students.*

*The Pakistan Medical Commission (PMC) recognized this college in 2011 for Students in Dentistry Program (BDS). This college is fully equipped with most modern facilities including Digital library, Museum, Lecture halls, Tutorial Rooms and Laboratories.*

#### **v. Dow Dental College (DDC)**

*Dow Dental College (DDC) was established in November 2012 at Dow Medical College (DMC). The College's new building was inaugurated in April 2018 and is under consideration for recognition and registration with PMDC for BDS (4 year) program.*

*DDC is working to prepare competent and professional dentists in the existing oral health care educational and patient management system in Pakistan and outside the country with a focus to serve community and research and to develop academic excellence and to deliver the utmost quality of scientifically proven preventive, educational and therapeutic services to the community.*

*This college and its dental hospital are fully equipped with most modern equipment in the laboratories along with simulators to teach clinical procedures at preclinical & clinical level. It has highly qualified and experienced faculty who carry out all dental procedures ranging from simple diagnostic procedures to extractions and implant placements.*

#### **vi. Dow Institute of Nursing & Midwifery (DION&M)**

*Institute of Nursing was established in June, 2006 with the help of Higher Education Commission (HEC) Pakistan. It is envisioned to promote nursing education in Pakistan, preparing the leaders in nursing and producing a sufficient number of highly skilled and trained nursing professionals who can meet the challenges of modern preventive and curative healthcare.*

*The Institute of Nursing has a state-of-art building and all the modern facilities of teaching and learning. Both undergraduate and post-graduate programs are offered at the Institute of Nursing. For nearly 15 years, the Institute has helped prepare qualified professional nurses to work as highly skilled nursing staff, competent teachers and leaders in public and private health care sectors.*

*The Institute of Nursing represents a strong and extraordinary community of excellent students, well trained faculty, dedicated staff, and supportive alumni.*

All programs, which are offered at the Institute of Nursing are accredited by the Pakistan Nursing Council (PNC) and Higher Education Commission (HEC), Pakistan.

#### **vii. Dr. Ishrat-ul-Ibad Khan Institute of Oral Health Sciences (DIKIOHS)**

*Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) is offering the following programs:*

- *Bachelor in Dental Surgery (BDS)*
- *Bachelor in Dental Care Professionals (DCP)*
- *Masters in Dental Surgery (MDS)*
- *Masters in Sciences (MSc)*

*The Dental College for imparting under-graduate dental education leading to the degree of Bachelor of Dental Surgery (BDS), fulfilling the requirements of the Pakistan Medical Commission (PMC). Training in all Basic and Clinical Dental sciences, and Community Dental Health is provided under the Semester System. Currently there are departments of Oral & Maxillofacial Surgery, Prosthodontics, Oral Pathology & Oral Microbiology, Oral Medicine, Periodontology, Oral Biology and Tooth Morphology, Sciences of Dental Materials, and Community Dentistry. The attached Dental Hospital with 125 dental chairs has Nine Out-patient Departments, namely Oral Diagnosis, Oral Surgery, Oral Medicine, Oral Radiology, Periodontology, Prosthodontics, Crown & Bridge, Orthodontics and Operative Dentistry, Procedures including extraction of teeth, filling, root canal, capping and emergency oral treatment is offered.*

*The clinical work at the hospital is augmented by best practices, good sterilization protocols and required gadgetry. All its departments are provided with material and equipment, which are further provided to patients at minimum cost. At the post Graduate Training and Research Centre of DIKIOHS, fellowship (FCPS) Part II training is underway at the Departments of Orthodontics, Prosthodontics, and Oral Surgery, after being recognized by College of Physicians & Surgeon (CPSP).*

#### **viii. Institute of Business and Health Management (IBHM)**

*Institute of Business and Health Management is a constituent part of Dow University of Health Sciences and was established in 2007 to offer programs in Healthcare Management. The institute was established with the aim of creating an environment that facilitates learning and innovation, to bridge the gap between academia and the healthcare industry, and to provide quality management graduates to contribute to the healthcare workforce. In order to meet objectives of providing quality health managers, IBHM is offering programs at the undergraduate level, with a Bachelors of Business Administration- BBA, along with a Masters of Business Administration - MBA (Regular) & Executive Masters of Business Administration- (EMBA).*

#### **ix. Institute of Medical Technology (IMT)**

*Medical Technologists are recognized globally as important and essential members of the health care team, not only for routine medical and surgical care but also for emergency medicine, critical care and management of disaster victims. The Institute of Medical Technology of Dow University was established for Human resource development in these key areas, with a four years' degree program in the following specialties:*

- Clinical Pathology
- Critical Care Technology
- Operation Theatre Technology
- Ophthalmology
- Perfusion Sciences

*It has eight semesters over four years and comprises a core course where training is imparted in Basic Computer Skills, English proficiency, Behavioral Sciences, Research Methodology and Fundamentals of Basic Medical Sciences. The Institute has its own state of the art Skills Laboratory and a 26 station Digital library with Internet and PERN connectivity. Practical classes are held in well-equipped Science laboratories.*

*Additional training programs at Institute of Medical Technology include:*

- Adult Echocardiography / vascular technician course
- Cardiac technologist training program
- Electrocardiography training program
- Technician courses for ultrasound, radiography, CT scan and MRI

#### **x. Dow Institute of Physical Medicine and Rehabilitation (IPM&R)**

*Institute of Physical Medicine and Rehabilitation was established in August 2007 and since then, it has been shifted to the Ojha Campus in order make a difference in the lives of people with disabilities through multidisciplinary Rehabilitative care to restore fullest possible, physical, mental, social and economic independence. It is one of the only civilian facilities in Pakistan providing such multi-disciplinary rehabilitative care.*

*IPM&R is committed to provide comprehensive multidisciplinary rehabilitation services and evidence-based practice to help the patients return to an active and healthy lifestyle. IPM&R is dedicated to being an internationally significant rehabilitation institute in the promotion, development and dissemination of research and education in the science of Rehabilitation through its activities and partnerships with internal and external communities.*

#### **xi. Department of Post Graduate Studies (DPGS)**

*Postgraduate education in Dow University of Health Sciences is conducted under the overall supervision of the Department of Post Graduate Studies. The University bodies such as the Board of Advanced Studies and Research, Institutional (ethical) Review Board and Scientific Committee facilitates monitoring both the research activity and the overall programs.*

*Dow University conducts 35 Ph.D., Masters, Fellowship, Diploma and Certificate programs. Each year around 150 FCPS students complete training at Dow University of Health Sciences. Till date, more than 150 candidates have passed M.Phil. MDS, MSBE, MS diabetes, MS Physiotherapy and obtained MBAs from Dow University of Health Sciences.*

#### **xii. Institute of Bio- Medical Sciences (IBMS)**

*Institute of Basic Medical Sciences (IBMS) has been established for M.Phil. and PhD courses in Basic Sciences i.e. Anatomy, Physiology, Biochemistry, Pathology, Microbiology and Pharmacology to develop human resources. It is a part of the medical research city at OJHA*



*Campus. The building has spacious air-conditioned lecture halls and seminar rooms having necessary audiovisual multimedia facilities.*

*The contemporary techniques involved in basic sciences research activities are conducted in the labs of different departments, which are well equipped with modern equipment for a variety of anatomical, physiological, biochemical, hematological, pathological, pharmacological, immunological and molecular biological experiments for specific research. The curriculum has been designed with a multidisciplinary approach, focusing at molecular and cellular level. In addition, core and supportive courses provide competencies in research Biostatistics, critical analysis, and interpersonal communication. This institute is helping in bridging the deficiency gap of Basic Medical Sciences research in Pakistan.*

### **xiii. School of Public Health (SPH)**

*Public Health is an important component of health services that is often ignored in the developing world and highly emphasized in the developed world. Keeping in view the needs of the Pakistani population, the DUHS took this initiative to establish the first public health school in a public sector university of Sindh Province.*

*Dow University of Health Sciences established the School of Public Health (SPH) at OJHA campus in 2012. The aim of this school is to improve the health of our population by addressing the major health issues. The programs at SPH include Master of Public Health, Master of Sciences (Biostatistics and Epidemiology), and Master of Sciences in Public Health. The Pakistan Medical Commission (PMC) has approved all of these programs.*

*The faculty and students of SPH are also conducting community based research and health activities. The SPH has various sections to focus separately such as epidemiology division (examining communicable and non-communicable diseases in Pakistani population), nutrition division (studying the role of nutrition in disease development and prognosis) and economic and policy group (examining the impact of economic indicators on health of Pakistani population and health policy).*

### **xiv. National Institute of Diabetes and Endocrinology (NIDE)**

*It was established in 2006. It provides consultation and counseling of patients suffering from Diabetes and other Endocrine diseases. This institute is offering a two-year Master's program in Diabetes & Endocrinology. This institute is also conducting public awareness programs regularly as the prevalence of diabetes and endocrine diseases are on the rise in Pakistan, in particular Sindh. This institute also has facilities for management and treatment of eye complications of diabetes through its Eye Care Center, which offers the patients:*

- *Complete Eye Examinations*
- *Screening for Diabetic Retinopathy*
- *Fundus Fluorescein Angiography*
- *Laser photocoagulation*

*More than 5000 patients have been registered. A comprehensive facility for diabetic diet consultation, foot care, early diagnosis and treatment-based facilities for other endocrine diseases, especially thyroid diseases, growth disorders and obesity, is also offered to the patients.*

## xv. Dow Institute of Radiology

*The Dow Radiology Complex was established in 2008 to have the highest quality medical imaging, research opportunities, and Radiology educational experiences. Besides providing economic benefits to the patients, the department of Imaging Services is committed to be at the forefront of new developments and clinical applications in the rapidly changing field of medical imaging.*

*Services include the provision of all modern diagnostic facilities such as*

- *X-ray*
- *Ultrasound Grayscale and color Doppler machines*
- *Fluoroscopy*
- *Dexa Scan*
- *Echocardiography*
- *Mammography and breast interventions*
- *CT Scan 128 and 16 slicers*
- *MRI open magnets and 1.5 magnets*
- *VIR vascular and interventional radiology.*
- *OPG*

*Considering the growing demands of patients, a City Campus on Stadium Road has been established, named as 'Dow LEJ Campus' and it provides facilities of CT & MRI also, 24 hours a day. Malir Chest Clinic, Nazimabad Chest Clinic and DHA City Centre were also established to facilitate the society. Highly qualified and experienced faculty, staff, and technologists perform all the teachings and services at Dow Institute of Radiology.*

## xvi. Dow Institute of Health Professionals Education (DIHPE)

*The Dow Institute of Health Professionals Education (DIHPE) is the first health professional education Institute of the country. The basic idea behind its establishment is to restructure, organize and optimize the existing professional education activities of the region.*

*The foundation of Dow Institute of Medical Education is based on the four pillars of Medical Education: Teaching & Learning, Principles of Assessment, Curriculum Development & Innovation and Research. Additionally, we oversee the conduct of various types of Continuing Professional Development short courses ranging from one-day to five-day courses, and even upto six months Certificate course (CHPE) that is compulsory for the all the faculty members of Dow University of Health Sciences (DUHS).The Institute is offering Masters in Health Professions Education Program (MHPE) since 2009.This Program is the first MHPE program of the country. The graduates are currently serving on key posts in the renowned universities of the country as well as in different parts of the world.*

*The Dow Institute of Health Professional Education (DIHPE) is acting as a nucleus for DUHS in teaching, scholarship, development and evaluation of educational programs through service provision, research and innovation. The scope of its activities includes postgraduate education, continuing professional development and continuing medical education.*

## **xvii. Dow College of Biotechnology (DCOB)**

*The Dow College of Biotechnology is located in the graceful building of Dow International Medical College, OJHA Campus. Currently, a four-year BS Biotechnology program is offered through Dow College of Biotechnology. The College has an excellent teaching faculty, consisting of foreign and nationally qualified PhD students. scientists, who are extensively involved in research activities and hence are well aware of the recent developments in the field of sciences.*

*Teaching methodology at Dow College of biotechnology is a well-planned blend of theory and practical skills learned in laboratories; therefore, this program is for students who have a passion for becoming scientists. For those students, Dow College of Biotechnology can provide an excellent platform. The college offers the students diverse experiences and expertise, consisting of a quality educational environment that emphasizes learning through integration of theory with practical laboratory and field studies. Our program offers the students the opportunity to work on research projects that provide valuable insight and impact people's lives.*

## **xviii. Dow School of Biomedical Engineering and Technology (DSBMET)**

*The Dow School of Biomedical Engineering and Technology is a driving force in creating engineering knowledge and novel biomedical technology that improve human care through the advancement of clinical care and biomedical sciences.*

*We work closely with medical researchers to identify important problems that impact human health and solve them using our technical expertise. We engage motivated and talented students in the classroom, laboratory and clinic, imparting to them the spirit of our mission as we prepare them for future careers as effective, knowledgeable, and ethical leaders in corporate, professional, and academic communities.*

*We seek to prepare our students for skilled and ethical service to their communities by creating a free and open learning environment that fosters their intellectual growth, advance the frontiers of scientific inquiry and contribute with distinction to the international community for scholarship and service.*

## **xix. School of Dental Care Professional (SDCP)**

*School of Dental Care Professionals of Dow University aims to produce Dental Technologists, Hygienists and other Dental Auxiliaries to meet the demands of new and more sophisticated Dental Care system in Pakistan, in addition to providing a trained workforce to an ever-increasing need for qualified Para-medical staff. Currently, 9 Dental Surgeons. Nine Batches of School of Dental Care Professionals have graduated since 2007.*



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 1

# Academic Activities

## 1.1 UNDERGRADUATE & POSTGRADUATE PROGRAMS

### UNDERGRADUATE PROGRAMS:

1. Bachelor of Medicine & Bachelor of Surgery (MBBS)
2. Doctor of Physiotherapy (DPT)
3. Doctor of Pharmacy (Pharm-D)
4. Bachelor in Dental Surgery (BDS)
5. BS Optometry
6. Bachelor of Science in Radiologic Technology (BSRT)
7. Post RN BS Nursing (Post RN BSM)
8. Post RN BS Midwifery (Post RN BSM)
9. BS Biotechnology
10. BS Nursing (BSN)
11. BS Nutritional Sciences
12. BS Medical Technology (BSMT)
13. Bachelors of Business Administration (BBA)
14. BS in Dental Care Professional (DCP) Dental Hygiene
15. BS in Dental Care Professional (DCP) Dental Technology

### Postgraduate Programs:

1. Masters In Dental Surgery (MDS-Basic & Clinical)  
A 4-Years Program in the following Specialties of **Basic Sciences**
  - I. Dental Materials
  - II. Oral Pathology
  - III. Community Dentistry
  - IV. Oral BiologyA 4-Years Program in the following Specialties of **Clinical Sciences**
  - I. Operative Dentistry
  - II. Oral Surgery
  - III. Prosthodontics
  - IV. Orthodontics
2. Masters In Sciences Dental Surgery (MSc. DS -Basic & Clinical)  
A 2 year program in the following specialties of **Basic Sciences**
  - I. Community Dentistry
  - II. Dental Materials
  - III. Oral Biology
  - IV. Oral PathologyA 2-year program in the following specialties of **Clinical Sciences**
  - I. Prosthodontics
  - II. Periodontics
  - III. Oral Medicine
  - IV. Oral & maxillofacial Surgery

3. Masters In Biostatistics And Epidemiology (MSBE)
4. Masters in Health Professionals Education (MHPE)
5. Masters in Advanced Physiotherapy (MSAPT)
6. Masters In Nursing (MSN)
7. Masters in Public Health (MPH)
8. Masters of Business Administration (MBA)
9. Master of Science in Public Health (MSPH)

#### 10. Clinical Diploma Programs

- I. Diploma in Anesthesiology (DA)
- II. Diploma in Ophthalmology (DO)
- III. Diploma in Psychiatric Medicine (DPM)
- IV. Diploma in Laryngo Otorhinology (DLO)
- V. Diploma in Family Medicine (DFM)
- VI. Diploma in Medical Jurisprudence (DMJ)
- VII. Diploma in Cardiology (Dip-Card)
- VIII. Diploma in Critical Care Medicine (DCCM)
- IX. Diploma in Child Health (DCH)
- X. Diploma in Dermatology (D-DERM)
- XI. Diploma in Radiology (DMRD)
- XII. Diploma in Tuberculosis & Chest Diseases (DTCD)

## 11. FCPS-II

Fellowship training (4-Years Program), Degree awarded by CPSP

| Fellowship Training Programs |                 |                                      |
|------------------------------|-----------------|--------------------------------------|
| ENT                          | Medicine        | Radiology                            |
| Peds                         | Psychiatry      | Orthodontics                         |
| Gynae                        | Orthopedic      | Anesthesiology                       |
| Surgery                      | Pulmonology     | Ophthalmology                        |
| Oral Surgery                 | Dermatology     | Operative Dentistry                  |
| Neurology                    | Prosthodontics  | Community Medicine                   |
| Cardiology                   | Cardiac Surgery | Physical Medicine and Rehabilitation |

## 12. MS/MD- Masters of Surgery & Doctor of Medicine Program

**Doctor of Medicine Program Specialties** (4-5 years programs)

| Doctor of Medicine Program Specialties |                    |
|--|--------------------|
| Family Medicine                        | Anesthesiology     |
| Neurology                              | Cardiology         |
| Psychiatry                             | Emergency Medicine |



|             |                        |
|-------------|------------------------|
| Radiology   | Critical Care Medicine |
| Dermatology | Pulmonology            |

### ***Master of Surgery Program Specialties***

| Master of Surgery Program Specialties |                 |                     |                 |              |
|---------------------------------------|-----------------|---------------------|-----------------|--------------|
| ENT                                   | Plastic Surgery | Orthopedics Surgery | Cardiac Surgery | Neurosurgery |

## **1.2 MS/M.Phil. and Ph.D. Programs**

M. Phil in Basic Sciences offered in the following specialties:

|               |  |                     |
|---------------|--|---------------------|
| Anatomy       | Bio-Technology   | Hematology          |
| Physiology    | Histopathology   | Molecular Pathology |
| Bio-Chemistry | Medical Genetics   | Pharmacology        |
| Microbiology  | M. Phil in Pharmaceutical Sciences, in the specialty of Pharmacology |                     |

- **Ph.D. program (sub-specialty wise)** with current active enrollment in:

|              |                |                      |
|--------------|----------------|----------------------|
| Anatomy      | Pharmacology   | Chemical Pathology   |
| Physiology   | Public Health  | Community Dentistry  |
| Oral Biology | Histopathology | Gynae & Obs          |
| Oral Surgery | Oral Pathology | Medical Microbiology |

- **Ph.D. programs advertised (HEC approved & Accreditation Council approved programs) in 2020-2021**

| Ph.D. programs advertised in the Academic Session 2020 |               |
|--|---------------|
| Biotechnology  | Genetics      |
| Microbiology   | Biochemistry  |
| Pharmacology   | Public Health |

### 1.3 Academic Achievements- Graduated Students

- In the year 2020 - 2021, **1516** students have passed out from various undergraduate and postgraduate programs.

#### Total Passed out Students in Undergraduate Courses

| S.No                                      | Course Title             | No. of Students |
|---|--------------------------|-----------------|
| 1.  | MBBS                     | 470             |
| 2.  | BDS                      | 209             |
| 3.  | Pham-D                   | 121             |
| 4.  | DPT                      | 133             |
| 5.  | BS OT                    | 21              |
| 6.  | BS P&O                   | 14              |
| 7.  | BS MT                    | 110             |
| 8.  | BS DCP                   | 23              |
| 9.  | BS Nursing               | 23              |
| 10.                                       | Post RN Nursing          | 24              |
| 11.                                       | BBA                      | 46              |
| 12.                                       | BS Radiologic Technology | 34              |
| 13.                                       | BS Nutrition             | 68              |
| 14.                                       | BS Biotechnology         | 93              |
| <b>Total Undergraduate Candidates (A)</b> |                          | <b>1,389</b>    |

#### Total Passed out Students in Postgraduate Courses

| S.No | Course Title | No. of Students |
|------|--------------|-----------------|
| 1.   | MS APT       | 01              |
| 2.   | MPH          | 02              |
| 3.   | MPhil        | 23              |
| 4.   | MS BE        | 04              |
| 5.   | MSc. D&E     | 10              |
| 6.   | MS Nursing   | 19              |
| 7.   | MS PH        | 04              |
| 8.   | MDS          | 11              |
| 9.   | MSc. DS      | 10              |
| 10.  | MBA          | 08              |

|  |       |            |
|--|-------|------------|
| 11.                                      | EMBA  | 09         |
| 12.                                      | MHPE  | 08         |
| 13.                                      | Ph.D. | 01         |
| <b>Total Postgraduate Candidates (B)</b> |       | <b>110</b> |

#### Total Passed out Students in Diploma Courses

| S.No                          | Course Title                    | No. of Students |
|-------------------------------|---------------------------------|-----------------|
| 1.                            | Medical Jurisprudence           | 01              |
| 2.                            | Dermatology                     | 04              |
| 3.                            | Medical Radiology               | 07              |
| 4.                            | Echocardiography                | 03              |
| 5.                            | Tuberculosis and Chest Diseases | 02              |
| <b>Sub. Total Diploma (C)</b> |                                 | <b>17</b>       |

|                            |                              |   |
|----------------------------|------------------------------|---|
| 1.                         | Sub. Total Undergraduate (A) | 1,389   |
| 2.                         | Sub. Total Postgraduate (B)  | 110   |
| 3.                         | Sub. Total Diploma (C)       | 17  |
| <b>Grand total (A+B+C)</b> |                              | <b>1,516</b><br><b>Total Graduated Students</b> |

### Exchange Student Opportunities: Global UGRAD Exchange Program in 2020

- Gulan Pari and Samra Maqbool, students of BS Nutrition program, School of Public Health were selected for the Global UGRAD Exchange Program. They went to Taxes, USA.

### Research Achievements

- 26 new research project grants were newly acquired in 2020-2021 with funding of greater than 72 Million Rupees from local, national and international research funding agencies
- The research in recognized and peer reviewed publications for the years 2020 and 2021 are 229.
- Ketogenic Diet is an effective and well-tolerated treatment option in young children with refractory epilepsy. With the funding support from Pakistan Society of Neurology and GETZ Pharmaceuticals, faculty of School of Public Health successfully received a grant to research titled "Effect of ketogenic diet on seizure control and biochemical profile among refractory epileptic Pakistani adolescents-A single arm clinical trial".

- Aliya Haider student of Master of Public Health successfully received research grant to conduct her research study titled “Oral hygiene and nutrition education to caregivers and teachers of autistic children during COVID-19”. Under the Vice Chancellors’ Seed Funding Initiative Dow University Of Health Sciences 2021.

## 1.4 Foreign Academic Linkages

For the year 2020-21, academic linkages were continued or established with the foreign medical boards/associations/universities, including the following:

|   |
|---|
| • Manchester University, United Kingdom   |
| • Stem Cell Medical University, California, USA                                     |
| • Vanderbilt University, USA  |
| • Reliance Medical Clinics, PLLC – Medical Student Exchange, USA                    |
| • Duke University Health System, Inc & University of New Mexico, UK                 |
| • DOGANA (Dow Graduate Association of North America)                                |
| • AMRCB for Accreditation Fee   |
| • University Sultan Zainal Abidin, Malaysia   |
| • University of Maryland Medical Centre (UMMC), USA                                 |
| • International Committee of the Red Cross (ICRC), Geneva, Switzerland              |
| • Florida International University - Herbert Wertheim College of Medicine (FIU-COM) |
| • The University of Huddersfield  |
| • Queen Mary University of London   |
| • The University of Manitoba  |
| • Chapman University, USA,  |

- Research collaboration was formed with Manchester University and University of Punjab on a prospective research study on digital informatics applied for Higher Education Commission grant NRPU in 2020. The Research proposal is under review process by HEC.

## 1.5 Honors and Awards

### Awarded and Completed Fellowship with International FAIMER Institute Philadelphia Pennsylvania, USA

1. Dr. Syed Jaffar Abbas Zaidi was awarded and has completed with distinction a fellowship with International Faimer Institute 2019 Philadelphia Pennsylvania, USA (Completed in March 2021)
2. Dr. Salman Ahmed of Dow college of Biotechnology has been awarded with “HEC Post-Doctoral Fellowships Programme (Phase III)-Batch I” (Ref: 3-1/PDFP/HEC/2020/1345/02) in November, 2020 at Department of Immunology and Pathology, University of Geneva, Switzerland for the duration of 09 months.

## The following research grants were provided to the faculty of Dow College of Biotechnology.

3. Evaluation of antirheumatic potential of ticagrelor in rheumatoid arthritis fibroblast like synoviocytes via modulation of NLRP3 inflammasome. (Sindh-HEC NO.DD/SHEC/1-14/2014, 2.6 million).
4. VCSFI Grant (2021-2023) on “Development of *Drosophila melanogaster*-based Assay System for Screening of Carcinogenic Compounds”.
5. HEC Grant (2021-2022) on “Aligning Genomic and Proteomic Profiles of Halophytes” Project # SRGP-2022.
6. VCSFI Grant (2021-2023) on “Error Rate and Coefficients Quantification Neurological Defects due to Consanguineous Mating in *Drosophila melanogaster* model”.
7. VCSFI Grant (2021-2023) on “Isolation, Purification and Characterization of Bioactive and Anti-cancerous Small Molecules from *Oxalis corniculata*”.
8. VCSFI Grant (2021-2023) on “Osteoinductive potential of selenium nanoparticles via regulation of oxidative stress in human umbilical cord derived-mesenchymal stem cells: A promising therapeutic approach in bone disorders”.
9. VCSFI Grant (2021-2023) on “*In-vitro* Propagation and Enhanced Cannabinoids Production of *Cannabis sativa* L (Industrial Hemp).
10. NRPU grant 2021 on “Development of Raloxifene-loaded self-nanoemulsifying drug delivery system (SNEDDS) with enhanced bioavailability potential: A therapeutic implication in osteoporosis” (Ref No. 20-15102/NRPU/R&D/HEC/2021 2021) (6.129 million Pkr).

## 1.6 Institutional Linkages

We are linked with the following organizations:

| 1.6 Institutional Linkages  |
|---|
| ● Martin Dow Limited  |
| ● Patel Hospital, Karachi   |
| ● Karachi Adventist Hospital  |
| ● Tabbha Heart Institute, Karachi   |
| ● Darul-Sehat Hospital, Karachi   |
| ● Aga Khan University, Karachi  |
| ● Institute of Business Administration (IBA, Karachi)                         |
| ● Chandka Medical College, Larkana  |
| ● Jinnah PostGraduate Medical Center, Karachi                                 |
| ● Ghulam Muhammad Mehr Medical College, Sukkur                                |
| ● Pakistan Standard Quality Control Authority (PSQCA)                         |
| ● Pakistan Council for Scientific And Industrial Research (PCSIR)             |
| ● Educational Commission for Foreign Medical Graduates (ECFMG)                |
| ● Executive Membership from Sindh Province In Scaling Up Nutrition Academia & |

|   |
|---|
| Research (SUNAR)  |
| <ul style="list-style-type: none"> <li>• Post-Graduation Diploma &amp; training programs of PIQC Institute of Quality</li> </ul>            |
| <ul style="list-style-type: none"> <li>• Foundation for the Advancement of International Medical Education and Research (FAIMER)</li> </ul> |
| <ul style="list-style-type: none"> <li>• Defense Science And Technology Organization (DESTO), Pakistan</li> </ul>                           |
| <ul style="list-style-type: none"> <li>• Toastmasters Club</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Institute Of Leadership Excellence (ILE)</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Rabia Moon Trust</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Memon Medical Center</li> </ul>  |
| <ul style="list-style-type: none"> <li>• MA Ayesha Rehabilitation Center</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Mamaji General Hospital</li> </ul>   |
| <ul style="list-style-type: none"> <li>• ACELP Institute of Child Development</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Civil Hospital Karachi</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Indus Hospital Karachi</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Alumeed Rehabilitation Center</li> </ul>   |
| <ul style="list-style-type: none"> <li>• University of Kohaat</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Indus Pharma</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Pakistan Pharmaceutical Manufacturing Association</li> </ul>                                       |
| <ul style="list-style-type: none"> <li>• Institute of Leadership</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Institute of Financial Markets of Pakistan</li> </ul>  |
| <ul style="list-style-type: none"> <li>• OBS Pharma</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Nova Care (Dwago Pharmacy)</li> </ul>  |

### Research Work Collaborations:

|  |
|--|
| <ul style="list-style-type: none"> <li>• Pakistan Chest Society</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Aga Khan University, Karachi</li> </ul>   |
| <ul style="list-style-type: none"> <li>• National TB Control Program</li> </ul>  |
| <ul style="list-style-type: none"> <li>• World Health Organization (WHO)</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Research collaboration between Dr. Aftab Ahmed, <b>Chapman University, USA</b>, and Dr. Humera Waheed, Prof. Dr. Mushtaq Hussain, Dow College of Biotechnology was established to facilitate research work, student and faculty exchange programs.</li> </ul>                 |
| <ul style="list-style-type: none"> <li>• Research collaboration between Prof. Dr. Jawed Fareed, <b>Loyola University, USA</b>, and Prof. Dr. Mushtaq Hussain, Principal, Dow College of Biotechnology, on “Covid-19 Vaccination Associated Modulation of Biomarkers in various Population” was established.</li> </ul> |



- Memorandum of Agreement between Dr. Hajar Fauzan Bin Ahmad, **Universiti Malaysia Pahang (UMP)**, and Prof. Dr. Mushtaq Hussain, Principal DCoB, DUHS has been established on “Genome Sequence Analysis of SARS-CoV-2 from Malaysian Population”.
- Research collaboration between Dr. Sergey Nikolaev, Gustave Roussy, **Cancer Campus, France** and Dr. Salman Ahmed, Dow College of Biotechnology was established to facilitate research work on “Germ Line Mutation Analysis in Pakistani Breast Cancer Patients”.



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

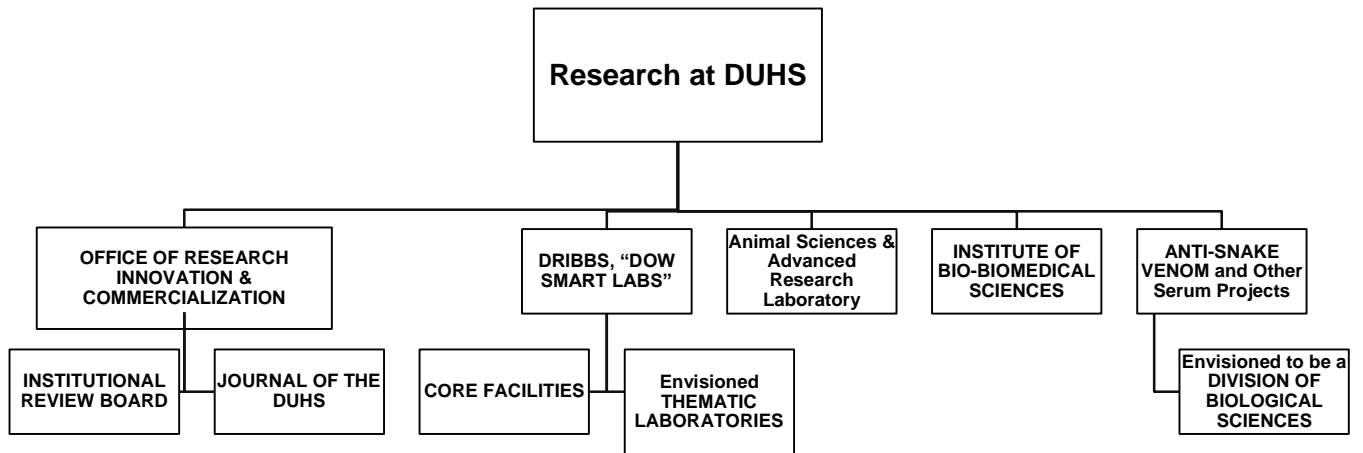
### 2020-21

## CHAPTER 2

# Research and Development

## 2.1 Research & Development – An Overview

### Re-organization of Research at DUHS as per Strategic Vision 2030



### Vision of ORIC

It is the Vision of ORIC, DUHS to promote and align various research projects at the University, which have a direct impact on the society today.

### Innovation

ORIC, DUHS promotes innovative research ideas at the University through workshops, brainstorming sessions and intellectual property discussions with all major stakeholders of the University.

The establishment of the Department of Research took place with the inception of Dow University of Health Sciences, with the aim of growing a quality research culture in the institute. The DUHS has research facilities and resources of international standards for students and faculty across all disciplines.

### Objectives

The objectives of R & D are:

- a) To facilitate integration of research culture in DUHS.
- b) To broaden research knowledge and develop research capacity across all institutes of the university.
- c) To encourage faculty and students to conduct research and publish related findings.
- d) To enhance graduate research activities across all institutes.
- e) To encourage faculty to disseminate teaching based on research knowledge.
- f) Commercialize research and development to subsidize research and academic activities in DUHS.

## I. Key Functions:

### Committees and Boards

#### A. Scientific Research Committee

*The Scientific Committee of the University is an advisory committee which was constituted in November, 2012 with the approval of Board of Advanced Studies and Research of DUHS to facilitate the preparation of research proposals for Master's students before the study is commenced. The committee guides the principal investigator and supervisor regarding any amendment or improvement that may be required before this study is submitted to the IRB. In this committee, research proposals of postgraduate students are scientifically reviewed and advised on the modifications to the students.*

#### B. Ph.D. Advisory Committee

*The PhD Advisory Committee of the University is an advisory committee which has been constituted to facilitate the preparation of research proposals for the PhD students before the study commences. The committee guides the principal investigator and supervisor regarding any amendment or improvement that may be required before this study is submitted to the IRB. The committee comprises of indigenous experts from different fields. In this committee, research synopses of doctoral students are scientifically reviewed and advised on the modifications to the students.*

#### C. Institutional Review Board (IRB)

*Department also administered and organized meetings of the Institutional Review Board of DUHS which consists of 14 members from different specialties such as medicine, law, religious scholar, ethics, social work etc. It reviews and approves research proposals conducted by DUHS. Besides, DUHS offers this service to those institutes who do not have their own IRB/ERB.*

#### D. Board of Advanced Studies and Research (BASR)

*All the official works related to this Board are administered and organized under the Research Department. The Board consists of 13 members under the Chairmanship of the Vice Chancellor.*

*The functions of this board are:*

|    |   |
|----|---|
| 1. | To advise authorities on all matters connected with the promotion of Advanced Studies and Research in university  |
| 2. | To propose regulations regarding the award of research degrees.   |
| 3. | To appoint supervisors for research students to determine the subject of their thesis.  |
| 4. | To recommend panels of names of paper setters and examiners for research examination after considering the proposals of Board of Studies in this behalf |
| 5. | To perform such other functions as may be prescribed by the statutes.   |
| 6. | Furthermore, the Board also gives final approval for the synopsis.  |

## **Capacity Building**

### **A. Workshops**

*The DUHS conducts various research-based workshops such as Hands-on workshops on SPSS, SAS, Excel, EndNote, Research Article writing, Study design etc., Faculty members and students are allowed to attend these workshops.*

### **B. Training Sessions**

*The DUHS conducts training sessions related to IT skills, development of research abilities and Data analysis.*

### **C. Research Publication Management**

*ORIC manages a database containing all the records of research publications completed by the faculty members and students of DUHS.*

### **D. Research Project Management**

*ORIC manages all the records of funded research projects newly completed by the faculty members and students of DUHS.*

### **E. Research Funding Administration**

*All external funded research projects are reviewed and approved prior to submission to funding bodies and the progress of the same are monitored thereafter.*

### **F. Collaboration**

*ORIC also provide platform for the researcher to work with collaboration of other institutes national/international level.*

## **The Journal of Dow University of Health Sciences (JDUHS)**

Dow University of Health Sciences publishes Journal named The Journal of Dow University of Health Sciences (JDUHS) is a double-blind peer reviewed open access biomedical journal, science2007 with the aim to disseminate the high-quality scientific research papers among the healthcare research community. The journal is published three times a year, in April, August, and December. The abbreviated name is "J Dow Univ Health Sci".

## **DUHS - DICE HEALTH INNOVATION EXHIBITION**

The Dow University of Health Sciences (DUHS) in collaboration with Distinguish Innovation Collaboration & Entrepreneurship (DICE) foundation (a USA based non-profit organization) organizes DUHS-DICE Health innovation Exhibition every year to promote health innovation culture in Pakistan. The idea behind the event is to motivate academia, industry, government, entrepreneurs, and expatriates to come to a common platform to showcase health innovations and technologies, share knowledge and further collaborate with each other for the rapid development of health innovative products, necessary for the economic development of the country.

## **II. Academic Research Activities**

**A. Undergraduate Students Research Activities:** *A research component was also incorporated in the MBBS curriculum of DUHS five years ago. Each clinical group works under a faculty member of DUHS.*

**B. Postgraduate Programs:** The Research Department is running a postgraduate level program, Master of Science in Biostatistics and Epidemiology (MSBE). The MSBE program

was started in October 2008. This is a two years program comprising four semesters with a research thesis work in second year of the program.

- C. Summer Short Courses:** Department has initiated three months summer short courses last year. The courses on Applied Biostatistics, Fundamental Epidemiology, Statistical software, ENDNote, helpful in health sciences research are taught from June to August.
- D. Training on Biostatistics and Research Methodology:** The department also facilitates training on specific topics of biostatistics and research methodology. Several workshops have been conducted by the faculty of Research Department on the same.
- E. Foreign Scholarship Program:** Foreign Scholarship program is funded by the Higher Education Commission (HEC) of Pakistan. Twenty scholars were sent for PhD programs at overseas universities. Fifteen scholars enrolled in United Kingdom's universities and one each in Australia, Canada, Sweden, Scotland and Germany. These scholars were selected after through screening by Graduate Assessment Test (GAT), subject and protocol writing tests and then followed by two interviews based on candidate's research interest and specialty. Eighteen scholars have successfully completed their PhD program and joined the DUHS back.
- F. Research and Bio-statistical Consultation:** The faculty of Research Department also provides research and bio-statistical consultation not only to faculty and students but also to pharmaceutical industries till now. The consultation is classified following three major parts H.
- G. Statistical Consultation:** Department consults all kinds of statistical works to different academic and research-based organizations including pharmaceutical industries. These services include, but are not limited to, sample size calculation, data entry, data analysis and formatted table & graph of the output of the analyses.
- H. Research Writing Consultation:** Department also provides consultation in writing analysis and result sections of the research project/report. Besides investigators who want to write by themselves, the department guides them on how to interpret the statistical results.
- I. Research Protocol Review Guidelines:** The faculty also assists research students and faculty about the processes of research work and writing including questionnaire formatting, structure of protocol, literature review and consent form.

## 2.2 Research Projects

### 2.2.1 Completed

|                                     |    |
|-------------------------------------|----|
| Total number Completed in 2020-2021 | 11 |
|-------------------------------------|----|

### 2.2.2 Newly launched projects (research)

|   |    |
|---|----|
| Total number of Newly Launched in 2020-2021 | 21 |
|---|----|



## 2.3 Publications & Authors Credited to DUHS

| Category     | 2020       | 2021      |
|--------------|------------|-----------|
| W            | 5          | 10        |
| X            | 64         | 33        |
| Y            | 79         | 37        |
| Z            | 1          | 0         |
| <b>TOTAL</b> | <b>149</b> | <b>80</b> |

## 2.4 Conferences, Seminars and Workshops

| Workshops/Training                          | Date                        | Focus Area             | Audience Type        |
|---|-----------------------------|------------------------|----------------------|
| Grant Writing Retreat - Workshop -Phase-III | 26 <sup>th</sup> June, 2021 | Research & Development | Faculty / Researcher |
| Grant Writing Retreat - Workshop -Phase-II  | 10 <sup>th</sup> June, 2021 | Research & Development | Faculty / Researcher |
| Grant Writing Retreat - Workshop -Phase-I   | 2 <sup>nd</sup> June, 2021  | Research & Development | Faculty / Researcher |
| Workshop - IBM - SPSS                       | March-April, 2021           | Research & Development | Faculty / Researcher |
| Workshop- Scientific Manuscript Writing     | March-April, 2021           | Research & Development | Faculty / Researcher |

## 2.5 Research Journal

### Journal of Dow University of Health Sciences (JDUHS):

The journal of the Dow University of Health Sciences (JDUHS) (Print ISSN: 1995-2198 and Online ISSN: 2410-2180) was established in 2007, with the aim to disseminate the high-quality scientific research papers among the healthcare research community. The journal is published three times a year, in April, August, and December. It is now in the Y category and scopus indexed as of 2021.

The Journal of the Dow University of Health Sciences (JDUHS) is a double-blind peer-reviewed open access health sciences journal, aims to provide valuable knowledge and understanding of health problems and their solutions to basic and clinical scientists, and allied health sciences researchers. The journal has a special emphasis on primary research conducted in the field of health sciences in low and middle-income countries and considers

original articles, review articles, short communications, case reports, commentary, and student articles on all aspects of health sciences.

The JDUHS is approved by Pakistan Medical and Dental Council (formerly PM&DC) & Higher Education Commission, Pakistan (HEC) and is abstracted/indexed by Index Medicus for the Eastern Mediterranean Region (IMEMR), PakMediNet, Google Scholar, EBSCO, International Committee of Medical Journal Editors (ICMJE), Crossref and Centre for Agriculture and Bioscience International (CABI). The abbreviated name is “J Dow Univ Health Sci”. The journal is available online and submission and processes of manuscript can be made while emailing to [jduhs@duhs.edu.pk](mailto:jduhs@duhs.edu.pk).

|   |           |                           |
|---|-----------|---------------------------|
| Volume - 15   | Issue - 2 | May-August - 2021         |
| Volume - 15   | Issue - 1 | January-April - 2021      |
| Volume - 14   | Issue - 3 | September-December - 2020 |
| Total Issues of Journals in the month of July 2020 to June 2021 |           | 03 Issues in 2020-2021    |

## 2.6 Research Collaborations

### 2.6.1 Indigenous Research Collaborations:

|  |
|--|
| Grand Challenge Fund- HEC                    |
| Medisure Laboratories Pakistan (PVT) Limited |
| Martin Dow                                   |

### 2.6.2 Foreign Research Partners-

1. Imperial College of London, UK
2. University of Huddersfield, UK
3. Food & Agricultural Organization, UN
4. University of Sultan Zainulabidin, Malaysia

### GRANT AWARDING BODIES FOR RESEARCH AND INNOVATION-

5. DICE Foundation
6. Sabin Vaccination
7. Islamic Bank Development Transform Fund
8. NIHR–Wellcome Partnership for Global Health Research Collaborative Award

## 2.6.3 National Linkages

|   |  |
|---|--|
| • Husaini Hematology and Oncology Trust (Husaini Blood Bank)                                      | • Medisure Laboratories Pakistan (Pvt) Limited   |
| • Biological Research Centre (BRC), Defence Science And Technology Organization (DESTO), Pakistan | • Pakistan Air force Hospital  |
| • SAMI Pharmaceuticals Pvt. (Ltd.)  | • Ministry of National Health Services, Regulation and Coordination, Drug Regulatory Authority of Pakistan |
| • Aga Khan University Hospital  | • Martin Dow   |
| • National Institute of Health, Islamabad   | • OXIFAM   |
| • Sindh Institute of Urology & Transplantation  | • Kohat University   |
| • Pakistan Pharmaceutical Manufacturing Association   | • PACCIFIC Pharma  |
| • Petroleum Oil Limited   | • Ripah Institute of Healthcare  |
| • SIEMENS Health Care Pvt Ltd   |  |

## 2.6.4 Funding Grants for R&D

### Funding Grants for R&D from HEC, 2020-2021

| S.No. | Name of Research Grant | Title of Research Proposal   | Amount Approved (Rs.) | Date of Approval |
|-------|------------------------|--|-----------------------|------------------|
| 1     | SRSP                   | Evaluation of Anti-Rheumatic Potential of ticagrelor in rheumatoid arthritis fibroblast like synoviocytes via modulation of NLRP-3 Inflammasome    | 2,600,000             | 9/3/2021         |
| 2     | RRG                    | IVIG production from convalescent plasma of COVID-19 survivors: a low risk, high efficiency passive immunization strategy against SARS-CoV-2       | 9,847,220             | 19/8/2020        |
| 3     | NRPU                   | Heterologous expression of streptokinase from beta hemolytic Streptococcal strain for pilot scale production of recombinant streptokinase          | 1,492,274             | 4/3/2019         |
| 4     | SRGP                   | Aligning Comparative Proteomic and Genomic Profile of Indigenous Halophytes  | 1,000,000             | 15/1/2021        |
| 5     | SRGP                   | Microalgae mediated Synthesis of Silver and Chromium nanoparticles, a new biotechnological approach for industrial effluent treatment              | 1,000,000             | 15/1/2021        |
| 6     | SRGP                   | Metabolics & Urine-Cells Micro RNA profiling for Prognostication of acute kidney allograft Rejection and Post-Transplantation Infection Management | 1,000,000             | 23/1/2021        |

## Funding Grants for R&D from Non-HEC, 2020-2021

| S.No. | Name of Research Grant   | Title of Research Proposal   | Amount Approved (Rs.) | Date of Approval |
|-------|--|--|-----------------------|------------------|
| 1     | DICE Foundation  | Shiress organic bath and body product line   | 200,000               | Nov, 2020        |
| 2     | Grand Challenge Fund (Medisure Laboratories Pakistan (PVT) Limited       | Development and assessment of multivariant SARS-COV-2 Mrna Vaccine   | 10 Millions           | 7/5/2021         |
| 3     | SABIN Small Grant  | Vaccine  |                       | 21/9/2020        |
| 4     | SAMI Pharmaceuticals Pvt Ltd.  | The Hybridoma Technology: A preferred Method for Monoclonal Antibody Production  | 15 Million            | 21/5/2021        |
| 5     | SAMI Pharmaceuticals Pvt. (Ltd.)   | Development and small-scale Manufacturing of Human Rabies Vaccine in a Serum-Free Medium Using Fixed Strain Cultivated in Vero Cells | 7.5 Million           | 16/10/2020       |
| 6     | NIHR–Wellcome Partnership for Global Health Research Collaborative Award | Treating hepatitis C in Pakistan. Strategies to avoid resistance to antiviral drugs'   | £2,791,488            | 9/12/2020        |
| 7     | Martin Dow   | Collaborative Research Project-Pilot Project   | 1,500,000             | 13/1/2021        |

### 2.6.5 Vice Chancellor's Seed Funding Initiative (VCSFI)

Established Annual Vice Chancellor's Seed Funding Initiative (**VCSFI**) for Intramural Funding of Competitive Grant Applications

| S # | Title of Research Proposal   | Amount Approved (Rs.) | Sponsoring Agency | Status   |
|-----|--|-----------------------|-------------------|----------|
| 1   | Role of 7-ketocholesterol (7-kcho) in pathophysiology of diabetic nephropathy (DN):STREPTOZOTOCIN(STZ) induced disease model   | 5,000,000             | VCSFI             | On going |
| 2   | Establishment of a Microbial Bio source center (BIOBANK)   | 5,000,000             | VCSFI             | On going |
| 3   | Role of Autophagy in Different Histological subtypes of Adult diffuse gliomas  | 350,000               | VCSFI             | On going |
| 4   | Effects of Antenatal administration of Budesonide and Fluticasone Propionate on Intrauterine Fetal Growth: Special Emphasis on the regulation of breast cancer resistance protein (BCRP) and P glycoprotein (P-gp) | 500,000               | VCSFI             | Ongoing  |
| 5   | Pharmacodynamics and pharmacokinetic studies on analogues of fluoroquinolones against MDR-TV   | 900,000               | VCSFI             | Ongoing  |

|    |   |           |       |         |
|----|---|-----------|-------|---------|
| 6  | Gene correction of specific 619 BP deletion using CRIS-PR-Cas9 in Induced Pluripotent stem cell derived from beta Thalassemia patients  | 500,000   | VCSFI | Ongoing |
| 7  | Participation in DUHS in normative Pakistan data collection for the evaluation Ayres sensory integration (EASI) an international project in collaboration with Thomas Jefferson University Philadelphia USA | 700,000   | VCSFI | Ongoing |
| 8  | Housing & Health use of C-reactive protein (CPR) as a biomarker data  | 775,000   | VCSFI | Ongoing |
| 9  | Experimental validation of computationally designed anti-cancerous peptide, dip-36, against c-myc-usp 36 complex in diffused last beta-cell   | 725,000   | VCSFI | Ongoing |
| 10 | Microbial De Phosphorylation of phytic acid - An alternative approach to increase the bioavailability and bio access  | 500,000   | VCSFI | Ongoing |
| 11 | Investigation c-MYC sequential and expressional polymorphism in oral squamous cell carcinoma  | 250,000   | VCSFI | Ongoing |
| 12 | Comparative analyses of physical and elemental characteristics of dental material of vertebrates  | 165,500   | VCSFI | Ongoing |
| 13 | Preclinical studies of a novel simvastatin -licithin stabilized nanoformulation against atherosclerosis in Apo-E knockout mice  | 5,000,000 | VCSFI | Ongoing |
| 14 | Osteogenic differentiation of Wnt Activated human periodontal ligaments stem cell (hPDLSCs) in Three dimensional (3D) hydrogels   | 500,000   | VCSFI | Ongoing |

## 2.7 Operation of Office of Research, Innovation and Commercialization (ORIC)

The Office of Research, Innovation and Commercialization Vision is to promote a culture of research and innovation, with a purpose to streamline the quality of research with commercialization.

### Introduction

In 2011, under the directives of Higher Education Commission (HEC) of Pakistan, DUHS developed the Office of Research, Innovation and Commercialization (ORIC) to promote innovation and commercialization at the university.

The ORIC, DUHS since then, adapted policies for augmenting activities related to innovation and commercialization at DUHS. The ORIC office at DUHS has divided its activities into four diverse segments including research projects, linkage establishment, innovation support and commercialization.

## **2.7.1 All Pakistan DUHS-DICE Health Innovation Exhibition**

Dow University of Health Sciences is on a mission to revolutionize academia with entrepreneurial activities. The All Pakistan DUHS – DICE Health Innovation Exhibition is held every year in the month of October.

This distinguished and unique event will provide a platform for the entrepreneurs and young generation to share their innovative ideas and work for Academic Industry, Capitalists from Government and Private sectors and the expatriates to interact jointly and share knowledge at par with the developed countries.

The main objectives of this exhibition are:

1. To establish a strong linkage between Academia and Health providing institutions.
2. Motivate professionally educated youth to generate innovative ideas and utilize currently available state of art technologies and software, for practically possible development of health related products and services.
3. To foster a culture of innovation and Entrepreneurship in the country and make it a part of Nation's DNA.
4. Creating a positive and favorable image of Pakistan's health sector.

### **Vision Statement of the Exhibition**

"Produce globally innovative ideas related to health industry to improve the quality of life of every individual".

### **Mission Statement of the Exhibition**

- Absorb core values
- Promote innovative observers at all levels
- Reform procedures, systems and processes at all levels
- Mature faculty and staff members to meet the trials

### **National Innovation Basket Session (NIB)**

Activity followed by Panel discussion to list down short term, medium term and long term projects for the sustainable growth of textile exports of Pakistan.

5 sessions related to improving the quality of life of every individual were also the highlights of this auspicious event participated by well-known personalities related to medical devices, alternative medicine, health care, pharma & nutrition.

### **DUHS-DICE Shark Session**

An initiative to pitch Top 10 good student research projects to CEOs/Technical Directors for funding with the objective to encourage innovation by youth and to make it beneficial for industry.



## 2.7.2 Commercialization Activities of DUHS

ORIC, DUHS, envisions financial sustainability of the University; therefore, it promotes transformation of innovative discoveries into industrial ventures. The entrepreneurship spirit has been nurtured at the University, leading to commercial projects in the year 2019-20, including the following:

| Team Name                            | Team Synopsis  | Startup-Phase                                  |
|--------------------------------------|--|--|
| <b>Vaswani's Healthcare products</b> | Vaswani's Herbal Balm® for muscular & joints pain: The Journey to entrepreneurship, Concentrated Herbal Balm with pure essential Oils. Not diluted with water (Like most Creams), no alcohol, no chemicals or stabilizers. Natural with Aromatherapy benefits. No harmful preservatives, no Paraben, no sulfates, no toluene, no artificial colors, no artificial fragrances, no synthetic irritants/irritation. Deep penetration comfort & support with potent herbs and natural oils. Used with a Back Pain Relief Brace, Copper Based Compression, Knee Brace, Tennis Elbow Brace and after TENS/EMS Machine. Our blend of traditional herbs creates a solution without harsh side effects. Made in PAKISTAN. | Launched                                       |
| <b>Morlieve Cosmetics</b>            | Grow to glow eyelashes serum promotes natural growth, Promote Naturally Longer, Thicker lashes in just 3 to 4 weeks contains naturally nourishing ingredients that strengthen eyelash hair over time against breakage. It is totally organic without the use of any chemicals so this might be a good choice for those with sensitive skin. Easy applicator with brushes, Liquid formula, Night application, Feels like a Soft viscous liquid. Nourishing, Hydrating. This product can be stored at room temperature. It can be stored for up to 2 years. People having any lifestyle can use this product before bed time.  | Launched and Commercialized with 10+ Customers |

### *Consultancy Contracts Executed through ORIC with Industry*

| SN | Title of Project                                     | Name of PI with Designation, Department | Company Details (Name, Country, etc. | Type of Consultancy Services | Date                 |
|----|--|---|--------------------------------------|------------------------------|----------------------|
| 1. | Mass Production of Commercially Important Microalgae | Dr. Shaukat                             | Pak-Ethanol                          | Testing, Analysis            | 11th September, 2020 |



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 3

# Quality Assurance

### 3.1 Impact of Quality Assurance in the University

**Dow University of Health Sciences has a well-developed Quality Assurance mechanism that monitors the academic programs, in compliance with HEC criteria, Accreditation Councils and benchmarking with international standards.**

Worldwide, universities rely on quality assurance procedures to achieve excellence in their academic programs, as well as to sustain it in future. In 2006, as per the directives of Higher Education Commission (HEC) Pakistan, the Quality Enhancement Cell (QEC) at Dow University of Health Sciences was established.

In this regard, a number of measures for quality enhancement and assurance has introduced to have an effective quality assurance setup with standardized procedures and practices in health education, which includes:

- Faculty and course assessment through student feedback.
- Preparation of Program Self-Assessment Reports for all degree awarding programs.
- Implementation of the Quality Management System at Dow University of Health Sciences, in accordance with minimum HEC criteria for graduate level and post-graduate programs.

### 3.2 Quality Enhancement Cell at DUHS

The Quality Enhancement Cell at Dow University of Health Sciences was established in the 1st phase of HEC implementation in 2006, along with 29 other cells in various public sector universities throughout Pakistan. The prime objective of QEC is to practice evaluative measures in order to achieve excellence in program delivery. Since its establishment, QEC has been continuously involved in monitoring and measurement of Quality Management System (QMS) processes and the academic services throughout the DUHS.

#### Effectiveness of QEC-DUHS by HEC

- The Yearly Progress Report for 2020-21 is already submitted to HEC for evaluation.

#### Responsibilities of QEC-DUHS

The responsibilities of QEC include:

- Preparing and reviewing the program evaluation through Self- Assessment.
- Reviewing the Quality of teaching and learning in each subjected area through HEC prescribed feedback forms as per the guidelines given for each form in coordination with QMS coordinators and SAR Program Teams.
- Ensuring that the University's Quality Management System is designed to fit with the requirements of HEC.
- Follow-up on the accreditation of all the degree awarding programs offered by the University.

## Major Achievements of QEC-DUHS

The major achievements of QEC-DUHS in 2019-2020 include:

### Compliance for Online /Readiness Assessment:

The QEC, in support of the Directorate of Distance Education was able to successfully bring on board all courses authorized for online delivery, with more than 400 faculty members trained for online teaching through a certificate of training for online courses (Coursera Intl.), with a score of 91% overall on the following evaluation parameters by June 7<sup>th</sup>, 2020, as part of the Covid -19 pandemic shift of classes online and delivery of teaching through virtual means:

1. University Readiness
2. Course Readiness
3. Faculty Readiness
4. Technology Readiness
5. Library Readiness
6. Student Readiness
7. Evaluation Readiness
8. Laboratory Readiness

| Key Performance Indicators of QEC-DUHS in University                      | Status as of 2020 - 2021     |
|---|------------------------------|
| <b>QEC Assessments</b>  |                              |
| No. of Academic Programs Assessed through Self-Assessment Reporting       | All degree awarding programs |
| No. of Courses Assessed (Course-Wise Assessment Evaluations)              | 1843 Courses Assessed Online |
| No. of Faculty Assessed (Student-Teacher Evaluation as Prescribed by HEC) | 925 Online                   |
| Number of Programs with National or International Accreditations          | 96 Programs are Accredited   |
| Number of Faculty Trained   | 349 Faculty Trained          |

### HEC prescribed Feedback Forms:

QEC-DUHS successfully conducted the following online Performa's for feedback evaluation in all the degree-awarding programs of DUHS:

|                 |                |
|-----------------|----------------|
| Faculty Survey  | Alumni Survey  |
| Employer Survey | Faculty Resume |

|  |   |
|--|---|
| Faculty Course Review Report                 | Teacher Evaluation Form                 |
| Research Student Progress Review Form        | Survey of Graduating Students           |
| Survey of Department Offering Ph.D. Programs | Student Course Evaluation Questionnaire |

## Quality Initiatives FY 2020 - 2021

The quality initiatives for the Year 2020-2021, in compliance with the Higher Education Commission, Pakistan are the following:

1. Accreditation of All Programs, and grant of NOC from HEC for all postgraduate programs.
2. Establishment of the QEC Setup at all the affiliated colleges of Dow University of Health Sciences
3. Transition to Online teaching environment for teaching and learning.

### **Establishment of the QEC Setup at all the affiliated colleges of Dow University of Health Sciences, as required by HEC, Pakistan**

1. British College of Nursing
2. St. James Institute of Nursing and Health Sciences
3. Peace Institute of Nursing and Health Sciences
4. Al-Jadoon College of Nursing & Health Sciences
5. Rehman Institute of Nursing and Health Sciences
6. Oxford College of Nursing and Allied Health Sciences
7. Allied Institute of Nursing and Health Sciences
8. Bakhtawar Mannar Institute of Nursing
9. Advanced Health Sciences Institute of Nursing
10. Life Saving Institute of Nursing
11. College of Nursing, Dr. Ruth K. M. Pfau Civil Hospital
12. National Institute of Physical Therapy and Rehabilitation
13. Qadri Academy of Nursing
14. Patriotic Health Sciences Institute of Nursing
15. Naz Nursing Institute of Health Science

|  |
|--|
| 16.College of Nursing for Male, Sindh Govt Hospital Korangi, Karachi       |
| 17.United College of Nursing and Midwifery                                 |
| 18.Jesus and Mary Institute of Nursing and Allied Sciences                 |
| 19.College of Nursing Male, Sindh Govt Hospital Liaquatabad, Karachi       |
| 20.Ayaz Samoon College of Nursing  |
| 21.Karachi Institute of Nursing & Allied Health Sciences                   |
| 22.College of Nursing for Female, Sindh Government Qatar Hospital, Karachi |
| 23.College of Nursing for Male, Sindh Govt Lyari General Hospital, Karachi |

### 3.3 Membership of Quality Association/Networks

QEC has valuable memberships of different associations/networks at International/National levels:

| Memberships in Quality Associations/Networks   |
|--|
| <ul style="list-style-type: none"> <li>● Accreditation Agency Curacao – AAC</li> </ul>   |
| <ul style="list-style-type: none"> <li>● Member of Talloires Network since 2009.</li> </ul>  |
| <ul style="list-style-type: none"> <li>● Prospective member of Asia Pacific Quality Network (APQN).</li> </ul>                               |
| <ul style="list-style-type: none"> <li>● Member of the Learning Innovation Division, HEC Pakistan since 2005.</li> </ul>                     |
| <ul style="list-style-type: none"> <li>● International Network for Quality Assurance Agencies in Higher Education</li> </ul>                 |
| <ul style="list-style-type: none"> <li>● Pakistan Network of Quality Assurance in Higher Education-PNQAHE</li> </ul>                         |
| <ul style="list-style-type: none"> <li>● American Association of Medical Colleges, Visiting Students Learning Opportunities.</li> </ul>      |
| <ul style="list-style-type: none"> <li>● Corporate and Associate Member of Association of National and International Universities</li> </ul> |
| <ul style="list-style-type: none"> <li>● Research and Educational centers, such as PIQC, Institute of Quality, Pakistan</li> </ul>           |



### 3.4 Accreditations of Degree Awarding Programs from Accreditation Councils

|  |
|--|
| 1. MBBS program at Dow Medical College (DMC) - Accredited by Pakistan Medical Commission (PMC)   |
| 2. MBBS program at Dow International Medical College (DIMC) - Accredited by Pakistan Medical Commission (PMC)  |
| 3. Bachelor of Dental Surgery (BDS) program at Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) – Accredited by Pakistan Medical Commission (PMC) |
| 4. Bachelor of Dental Surgery (BDS) program at Dow International Dental College (DIDC) – Accredited by Pakistan Medical Commission (PMC)                             |
| 5. Bachelor of Dental Surgery (BDS) program at Dow Dental College (DDC) – Accredited by Pakistan Medical Commission (PMC)  |
| 6. Pharm D program at Dow College of Pharmacy (DCOP) - Accredited by the Pakistan Pharmacy Council (PPC).  |
| 7. Post RN Nursing program at Institute of Nursing (ION) - Accredited by Pakistan Nursing Council (PNC).   |
| 8. BS Generic Nursing program - Accredited by Pakistan Nursing Council (PNC).  |
| 9. Post RN BSM , Midwifery program at the Institute of Nursing and Midwifery- Accredited by Pakistan Nursing Council (PNC)   |
| 10. Master of Nursing (MSN) program- Accredited by Pakistan Nursing Council (PNC).   |
| 11. MPhil (Pharmaceutical Sciences) at Dow College of Pharmacy (DCOP) - Accredited by the Pakistan Pharmacy Council (PPC).   |
| 12. MPhil (Basic Medical Sciences) at Institute of Basic Medical Sciences- Accredited by Pakistan Medical Commission (PMC)   |
| 13. Master of Dental Surgery (MDS) program at Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) - Accredited by Pakistan Medical Commission (PMC)  |
| 14. Master of Public Health (MPH) at School of Public Health- Accredited by Pakistan Medical Commission (PMC)  |
| 15. MS in Epidemiology and Biostatistics (MSBE) at School of Public Health- Accredited by Pakistan Medical Commission (PMC)  |

|  |
|--|
| 16. MS in Public Health (MSPH) at School of Public Health- Accredited by Pakistan Medical Commission (PMC)   |
| 17. Master in Health Professional Education (MHPE) at Dow Institute of Health Professionals Education- Accredited by Pakistan Medical Commission (PMC) |
| 18. Master of Surgery (MS) at Department of Postgraduate Studies- Accredited by Pakistan Medical Commission (PMC)                                      |
| 19. Doctor of Medicine (MD) program at Department of Postgraduate Studies- Accredited by Pakistan Medical Commission (PMC)                             |
| 20. BBA & MBA Programs are in the process of accreditation from the National Business Education Accreditation Council (NBEAC).                         |

### 3.5 Seminars/Workshops & Training Events at QEC

Following seminars/workshops and training QEC organized and contributed in the year 2020 – 2021

| S. No. | Name of Event/Seminar/Workshop/ Training   | Date                         | Purpose  |
|--------|--|------------------------------|--|
| 1      | Conducted workshop on "Quality Assurance-Internal & External Mechanism and Self-Assessment Report", organized by QEC-SMBBMU-Larkana                | 29 <sup>th</sup> June, 2021  | To review the institutional performance, as per the standards recommended by QAA-HEC.  |
| 2      | Attended Online Session on "QEC Targets for Progress Report 2019-21", organized by HEC.  | 14 <sup>th</sup> June, 2021  | To discuss the challenges & queries faced by the HEI's and how to meet those challenges and maintain the quality of education.       |
| 3      | Invited Special guest speaker session on the topic of "Strapped Quality of Higher Education in Pakistan and the Role of QEC" organized by QEC-DUHS | 12 <sup>th</sup> April, 2021 | To highlight the main causes of poor standards in HEI's, how to overcome/improve them & the role & responsibilities of QEC in HEI's. |
| 4      | Attended an Online Training Session on "HEC Undergraduate & Ph.D. Undergraduate Policy 2021", organized by University of Gujrat.                   | 8 <sup>th</sup> April, 2021  | To brief and discuss the HEC undergraduate & Ph.D. Policy 2021 announced by HEC.   |

|    |  |  |  |
|----|--|--|--|
| 5  | Participated in the online session on "8th Deans & Directors Conference 2021 on Business Education in a Time of Change: Towards a New Normal for Business Schools in Pakistan" organized by NBEAC. | 6 <sup>th</sup> -7 <sup>th</sup> April, 2021                     | To focus on delivering quality Business Education in a Time of Change and moving towards a New Normal for Business Schools in Pakistan.  |
| 6  | Participated in "Progress Review Meeting & Training for QECs", organized by Quality Assurance Agency- HEC at Agha Khan University, Karachi   | 9 <sup>th</sup> & 11 <sup>th</sup> -12 <sup>th</sup> March, 2021 | To strengthen the Quality Assurance System through Internal Quality Assurance Mechanism and External Quality Assurance Mechanism.  |
| 7  | Participated in online session on "2nd International Conference on Quality Assurance in Academia", organized by ILMA University  | 9 <sup>th</sup> -10 <sup>th</sup> February, 2021                 | To provide an opportunity for academicians, practitioners, consultants, scholars, researchers and policy makers with different backgrounds and experiences, to present their papers in the conference and to discuss their experiences, ideas, research results, as well as any practical challenges encountered and/or the solutions adopted during their work. |
| 8  | Participated in an online session on "Developing Competencies for General Education Courses as per New Undergraduate Education Policy", organized by QEC-JSMU.                                     | 2 <sup>nd</sup> February, 2021                                   | To comprehend the need for including the general education requirements in degree programs, the basic structure of competencies and to identify competencies required for General education at undergraduate level. Also, to formulate elementary level competencies for general education courses.  |
| 9  | Participated in webinar on "Assessment of Online Education", organized by QEC-Indus University   | 17 <sup>th</sup> December, 2020                                  | To rethink their approaches to assessment and what kind of assessment strategies could be used for online education.   |
| 10 | Attended an online training session on "HEC Policy for Recognition of Journals", organized by the Higher Education Commission.   | 5 <sup>th</sup> Nov, 2020  | To build the capacity of editors, researchers, faculty members and Ph.D. Students regarding Research Journals/Publications for the Year 2020-21, to meet the requirements of HEC's   |

|    |   |   |   |
|----|---|---|---|
|    |   |   | accreditation's standards of publishing and uplifting the local research journals to meet the international standards.  |
| 11 | Online session on "Introduction to Online Teaching and Dow Online Education System Course", organized by QEC-DUHS.  | 16th October, 2020                                      | To aware & train the DUHS faculty regarding the online teaching and Dow Online Education System Course used by the university for distance learning education.                |
| 12 | Participated in webinar on "New Challenges for the Universities in the 21st Century in Maintaining Education Quality", organized by Quality Assurance & Liaison, ILMA University. | 5 <sup>th</sup> October, 2020                           | To discuss the new challenges faced by the HEI's in the 21st Century and how to meet those challenges and maintain the quality of education.                                  |
| 13 | Training on "Implementation of SOP's for Reopening of University " delivered by Prof. Nighat Nisar & Team & organized by QEC - DUHS.  | 9 <sup>th</sup> September & 27 <sup>th</sup> July, 2020 | To aware & train the faculty of DUHS on how to teach and perform their duties and what procedures & precautions to follow and implement for the re-opening of the university. |



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 4

# Faculty Development

## 4.1 Professional Development Center (PDC) DUHS

With the establishment of Dow University of Health Sciences (DUHS) in 2004, it was envisioned that Continuing Medical Education (CME) should be promoted within the faculty and students of Dow University. Professional Development Center started working as the “Office of CME” as of January 2004. Under this office, CME lectures, seminars, symposia and conferences were conducted on a regular basis. Furthermore, International Health Days were celebrated regularly. Over a period of a year and a half, the faculty dedicated to PDC managed to organize more than 100 national and International events, with the dedication and efforts of the Faculty and Alumni abroad.

After the devastating earthquake of 2005, it was thought to add hands-on workshops in addition to the CME lectures, which were mostly theoretical. Thus the Office of CME was amalgamated into a more comprehensive Professional Development Centre (PDC) of Dow University of Health Sciences. Also, a formal inauguration was performed by the Chancellor of the University, Governor of Sindh.

Subsequent to its formation, two divisions were formed within the PDC, namely Surgical and Allied and the Medical and Allied, where faculty members were designated as Directors of these two divisions. They were given the task to do a Training Needs Assessment and offer programs for different categories of health Professionals.

The Professional Development Centre has a simulated ICU, simulated Operation Theatre, Laparoscopic / Endoscopic Suites, three training halls and a Conference Room. Equipped with the latest audio-visual and multimedia systems, state of art equipment, electronic simulators and manikins, the PDC is a site for all those healthcare professionals looking to enhance their skills with hands-on training.

The Professional Development Centre currently provides training facilities in the basic and advanced skills to undergraduates, postgraduates, residents, faculty members and other health professionals. PDC has its head office at DMC with its branch at Dow International Medical College (DIMC), Ojha with similar facilities, equipment and instructors. Each wing of PDC has a dedicated Undergraduate Skills Lab.

### **PDC consists of CME, CPD, and Skills & Misc. Programs**

1. Continuing Medical Education (which deals with Seminars, lectures, symposia and conferences).
2. Continuing Professional Development (that deals with long duration & short duration training courses and hands-on workshops).
3. Undergraduate Skills Lab (which deals with the training of undergraduate students).
4. Miscellaneous programs (that include programs like visiting faculty, reproductive health and alumni affairs).

Since its inception in October, 2005 Professional Development Centre has conducted CMEs & Miscellaneous Programs in collaboration with National & International Organizations, like PTC

Foundation UK, American Heart Association, North Middlesex University Hospital, London, IMPACT Nepal, Amber Institute of California, INTER BURNS, INFORM, EMAME & EmONC, FALAH, US AID, UNFPA & WHO.

## 4.2 Faculty Developments Programs (Local & Foreign MS/Ph.D.)

The purpose of faculty development is to support and encourage the activities undertaken for development and professional growth of the faculty members of the Dow University of Health Sciences.

These initiatives are framed keeping in mind the University's Mission to create a culture of academic excellence. Furthermore, the teaching departments of the University are anchored on faculty continuous training and development.

## 4.3 Returned Scholars (Present in the University)

| Returned Scholars (Present within the University) |                           |                             |
|---|---------------------------|-----------------------------|
| Dr. Asma Khurshid                                 | Dr. Rafat Amin            | Dr. Naresh Kumar            |
| Dr. Jawad Safdar                                  | Dr. Sadaf Khan            | Dr. Omer Mustapha           |
| Dr. Kashif Shafiq                                 | Dr. Shaukat Ali           | Dr. Mushtaq Hussain         |
| Dr. Maheera Moin                                  | Dr. Sonia Siddiqui        | Dr. Samreen Memon           |
| Dr. Mansoor Ahmed                                 | Dr. Syed Imran Mehmood    | Dr. Mohsin Wahid            |
| Dr. Tehseen Fatima                                | Dr. Sadia Shakeel         | Dr. Syed Saoud Zaidi        |
| Dr. Muhammad Aamir Mirza                          | Dr. Muhammad Asif Qureshi | Dr. Muhammad Furqan Bari    |
| Dr. Muhammad Sameer Qureshi                       | Dr. Muhammad Yahya Noori  | Dr. Syed Jaffar Abbas Zaidi |
| Dr. Kashif Aslam                                  | Dr. Shumaila Aman         | Dr. Sadia Shakil            |
| Dr. Sumaira Nasim                                 |                           |                             |

## 4.4 Present Scholars



## Present Scholars Within the University

| S.# | Name                       | Specialty          |
|-----|----------------------------|--------------------|
| 1.  | Shazia Jabbar              | Gynae & Obs        |
| 2.  | Junaid Ashraf              | Neurosciences      |
| 3.  | M. Asim Khan Rehmani       | Neurosciences      |
| 4.  | Naila Naeem                | Neurosciences      |
| 5.  | Muhammad Masroor           | Medicine           |
| 6.  | Mahjabeen Khan             | Public Health      |
| 7.  | M. Athar Majeed Khan       | Public Health      |
| 8.  | Malik Tajuddin             | Public Health      |
| 9.  | Muhammad Tahir Rizwan Khan | Public Health      |
| 10. | Shahkamal Hashmi           | Public Health      |
| 11. | Mazhar Iqbal               | Public Health      |
| 12. | Zeeshan Noor Shaikh        | Public Health      |
| 13. | Syeda Kanwal Aslam         | Public Health      |
| 14. | Qamar Saeed                | Public Health      |
| 15. | Nabil                      | Public Health      |
| 16. | Naheed Khan                | Anatomy            |
| 17. | Khalida Parveen            | Anatomy            |
| 18. | Sofia Nigar                | Anatomy            |
| 19. | Aisha Abdul Haq            | Anatomy            |
| 20. | Sarwat Jabeen              | Anatomy            |
| 21. | Mahrukh Qasim              | Anatomy            |
| 22. | Syed Inayat Ali            | Anatomy            |
| 23. | Sahar Mubeen               | Anatomy            |
| 24. | Iffat Raza                 | Anatomy            |
| 25. | Sahar Iqbal                | Chemical Pathology |
| 26. | Tazeen Mustansar           | Histopathology     |
| 27. | Durr-e-sameen              | Histopathology     |
| 28. | Ruqaiya Shahid             | Histopathology     |
| 29. | Farheen Sultan             | Histopathology     |
| 30. | Rubina Gulzar              | Histopathology     |
| 31. | Saba Hassan                | Histopathology     |

|     |                      |                     |
|-----|----------------------|---------------------|
| 32. | Lubna Avesi          | Histopathology      |
| 33. | Bushra Sikandar      | Histopathology      |
| 34. | Uzma Bukhari         | Histopathology      |
| 35. | Zameer Ahmed         | Microbiology        |
| 36. | Fatima Fasih         | Zameer Ahmed        |
| 37. | Saima Naseem         | Fatima Fasih        |
| 38. | Ambreen Fatima       | Saima Naseem        |
| 39. | Fuad Shaikh          | Pharmacology        |
| 40. | Nighat Mannan        | Physiology          |
| 41. | Ambreen Qamar        | Physiology          |
| 42. | Amynah Charania      | Oral Biology        |
| 43. | Ambrina Qureshi      | Community Dentistry |
| 44. | Muhammad Adeel Ahmed | Operative Dentistry |
| 45. | Arshad Hassan        | Operative Dentistry |
| 46. | Anwar Ali            | Oral Surgery        |
| 47. | Shaheen Ahmed        | Oral Surgery        |
| 48. | Ashar Afaq           | Community Dentistry |
| 49. | Sofia Ali Syed       | Oral Pathology      |

### **Faculty Enrolled in PhD program outside DUHS**

|     |                       |                          |
|-----|-----------------------|--------------------------|
| 1.  | Sidra Zaheer          | Statistics               |
| 2.  | Auwais Ahmed Khan     | Pharmacology             |
| 3.  | Syed Ahsan Ali        | Pharmaceutics            |
| 4.  | Saba Inayat Ali       | Pharmaceutics            |
| 5.  | Sadia Iqbal           | Pharmaceutical chemistry |
| 6.  | Erum Shah             | Pharmacognosy            |
| 7.  | Hina Tabassum         | Pharmacology             |
| 8.  | Habib Ur Rehman       | Finance                  |
| 9.  | Kashif Baig           | Management               |
| 10. | Wajiha Saghir         | Marketing                |
| 11. | Syed Ahmed Ghayas     | Management               |
| 12. | Muhammad Rizwan       | Finance                  |
| 13. | Kiran Amir            | Finance                  |
| 14. | Mehmooda Abdul Razzaq | Nursing                  |

|  |                     |                      |
|--|---------------------|----------------------|
| 15.  | Faraz Siddiqui      | Nursing              |
| <b>Present Scholars Within the University-Induction in Year 2021</b> |                     |                      |
| 1.   | Sana                | Public Health        |
| 2.   | Umme Rubab          | Public Health        |
| 3.   | Haji Sohail         | Public Health        |
| 4.   | Zulfiqar Ali Shaikh | Public Health        |
| 5.   | Mahveen Iqbal       | Medical Microbiology |

#### 4.5 Pre-Services and In-Services Professional Development Programs

Healthcare Professional & Other Faculty Trained by Professional Development Center at DMC & Ojha Campus.

| S. No.   | Title of Training                                       | No of Workshops | No. of Participants | Audience Type (student /faculty /staff) |
|--|---|-----------------|---------------------|---|
| <b>Workshops/ Trainings/ Professional Skills Development at DMC Campus</b>           |   |                 |                     |   |
| 1  | CPR and Choking   | 60              | 464                 | All                                     |
| 2  | Basic Life Support (BLS) (AHA)                          | 58              | 290                 | All                                     |
| 3  | Basic Surgical Skills                                   | 26              | 222                 | All                                     |
| 4  | Basic ICU Skills  | 11              | 379                 | All                                     |
| 5  | Basic Ilizarov Workshop                                 | 1               | 8                   | All                                     |
| 6  | Advanced Arthroscopic ACL Reconstruction & Live Surgery | 1               | 10                  | All                                     |
| 7  | Advanced Cardiac Life Support (ACLS) (AHA)              | 12              | 74                  | All                                     |
| 8  | Pediatric Advanced Life Support (PALS) (AHA)            | 9               | 47                  | All                                     |
|  | <b>Total</b>  | <b>178</b>      | <b>1494</b>         |   |
| <b>National Workshops/ Trainings/ Professional Skills Development at Ojha Campus</b> |   |                 |                     |   |
| 1  | CPR and Choking   | 9               | 143                 | All                                     |
| 2  | Hands on Workshop on Tracheostomy and Bronchoscopy      | 1               | 33                  | All                                     |
| 3  | Workshop on Interpretation on Electrocardiography       | 1               | 140                 | All                                     |
| 4  | Workshop on Parenteral Nutrition                        | 1               | 33                  | All                                     |
|  | <b>Total</b>  | <b>12</b>       | <b>349</b>          |   |

## 4.6 Online Teaching and Faculty Readiness

In the wake of the uncertain situation due to the sudden coronavirus lockdown, the Higher Education Commission (HEC) had asked all universities to switch to online teaching.

HEC had provided policy guidelines that mandated all universities to train their staff / faculty accordingly and restart academic activities online. In view of the above, Dow University of Health Sciences framed a policy for Distance Education & Online Teaching in April 2020, which was formulated and shared with all relevant stakeholders shortly thereafter. The purpose of this policy was to set the framework for distance education and online courses offered by the University during the Covid-19 circumstances. A policy guideline was also provided by the Higher Education Commission Pakistan labeled 'Policy Guidance Note 5: Online Readiness,' which provide parameters for guidance on working domains of university governance, course readiness, faculty readiness, teaching readiness, library readiness, technology readiness, student readiness, evaluation readiness, laboratory readiness and the re-opening policy. Furthermore, the scope of the online teaching policy was to define the mission of distance education and online teaching, so as to help students with educational opportunities offered outside the traditional classroom, in an environment that meets DUHS's high-quality standards and commitment to academic excellence, Learning Management System (Dow Online Education System – DOES) was developed and implemented, which was reflected in overall University readiness score awarded by HEC at 91.43%, encompassing all those domains as defined above.

There was a special emphasis placed on faculty readiness in terms of being able to teach and deliver courses online, which was enhanced by training and other needed development courses offered to them. Then during the latter half of the semester, DUHS was able to offer and take online examinations, with a fully developed evaluation mechanism. Students were promoted based on real time assessments and viva voce examinations, which were a valid method of assessment as per policies of HEC and other regulatory bodies. The successful transition to online teaching fully equipped the University to transition to a hybrid mode of teaching for the fall semester, where 428 courses were authorized to be offered online, out of 478 totals, out of which 189 were taught in hybrid mode and 50 courses taught on campus, which mostly included laboratories and other practical sessions. The faculty readiness was at its peak, with all 1110 faculty having certified successfully to be able to teach online through an introductory course on the subject, with 927 faculty members actively involved in online teaching during the semester.



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 5

## Access

## 5.1 Basic Enrollment

Total Student enrollment during FY 2020-2021 is **7322** for graduate, post-graduate and diploma programs offered.

## 5.2 Equity

In Dow University of Health Sciences, admissions are granted on transparent open merit basis for all applicants, regardless of gender, sex, race or ethnic background.

## 5.3 Gender-wise Detail

| Enrollment for the Period of 2020-2021, DUHS              |                               |      |        |       |
|---|-------------------------------|------|--------|-------|
| Institute Name  | Programs                      | Male | Female | Total |
| Dow Medical College                                       | MBBS                          | 493  | 1179   | 1672  |
| Dow Dental College  | BDS                           | 26   | 171    | 197   |
| School of Postgraduate Studies                            | Master of Surgery             | 27   | 20     | 47    |
|   | Doctor of Medicine            | 23   | 1      | 24    |
|   | Diploma                       | 14   | 36     | 50    |
| Institute of Physical Medicine & Rehabilitation           | DPT                           | 75   | 377    | 452   |
|   | BS Occupational Therapy       | 11   | 69     | 80    |
|   | BS Prosthetics & Orthotics    | 9    | 24     | 33    |
|   | MS Advanced Physiotherapy     | 8    | 29     | 37    |
| Dow International Medical College                         | MBBS                          | 316  | 429    | 745   |
| Dow International Dental College                          | BDS                           | 43   | 171    | 214   |
| Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences | BDS                           | 76   | 324    | 400   |
|   | MDS                           | 56   | 74     | 130   |
|   | MSc. DS                       | 7    | 18     | 25    |
| School of Dental Care Professionals                       | BS Dental Care Professional   | 12   | 105    | 117   |
| Dow College of Pharmacy                                   | Pharm-D                       | 102  | 629    | 731   |
| Dow College of Pharmacy                                   | MPhil Pharmaceutical Sciences | 2    | 12     | 14    |
| Dow Institute of Medical Technology                       | BS Medical Technology         | 63   | 347    | 410   |
| Department of Ophthalmology and Visual Sciences           | BS Optometry                  | 6    | 54     | 60    |
| Institute of Business & Health Management                 | BBA                           | 113  | 165    | 278   |
|   | MBA                           | 21   | 34     | 55    |

|  |  |             |             |             |
|--|--|-------------|-------------|-------------|
|  | EMBA                                     | 22          | 20          | 42          |
| <b>Dow Institute of Nursing &amp; Midwifery</b>                | BS Nursing                               | 111         | 171         | 282         |
|  | Post RN BS Nursing                       | 75          | 72          | 147         |
|  | Post RN BS Midwifery                     | 0           | 38          | 38          |
|  | MS Nursing                               | 14          | 12          | 26          |
| <b>Dow Institute of Radiology</b>                              | BS Radiologic Technology                 | 13          | 78          | 91          |
|  | Diploma in Medical Radiology             | 1           | 9           | 10          |
|  | Diploma in Echocardiography              | 6           | 1           | 7           |
| <b>School of Public Health</b>                                 | BS Nutrition                             | 0           | 144         | 144         |
|  | Master of Public Health                  | 12          | 47          | 59          |
|  | MS Public Health                         | 4           | 12          | 16          |
|  | MS Biostatistics & Epidemiology          | 4           | 15          | 19          |
| <b>Dow College of Biotechnology</b>                            | BS Biotechnology                         | 57          | 338         | 395         |
| <b>Institute of Biomedical Sciences</b>                        | MPhil                                    | 15          | 60          | 75          |
|  | PhD                                      | 19          | 30          | 49          |
| <b>Institute of Health Professionals Education</b>             | Master of Health Professional Education  | 15          | 29          | 44          |
| <b>National Institute of Diabetes &amp; Endocrinology</b>      | MSc. Diabetes & Endocrinology            | 3           | 2           | 5           |
| <b>Ojha Institute of Chest Diseases</b>                        | Diploma in Tuberculosis & Chest Diseases | 1           | 1           | 2           |
| <b>Dow Institute of Physical Medicine &amp; Rehabilitation</b> | DPT                                      | 11          | 89          | 100         |
| <b>Total</b>   |  | <b>1886</b> | <b>5436</b> | <b>7322</b> |

## 5.4 Employability

The graduates of Dow University of Health Sciences are serving in almost all prominent health care institutions & organizations of Pakistan, as well as at international levels. Some major employers of DUHS graduates include the following:

- Private Hospitals locally, nationally and internationally.
- Public & Private Sector Medical Colleges & Universities
- Multinational and Private Limited companies
- National and Multinational Pharmaceutical Companies
- Manufacturing industry
- Entrepreneurial ventures
- Health Insurance companies
- Banking and Finance Sector



## 5.5 Faculty-Student Ratio

In the year 2020-2021, the faculty-student ratio is calculated as follows:

| Faculty-Student Ratio                      |               |
|--|---------------|
| Total Number of Faculty                    | 921           |
| Total Number of Enrolled Students          | 7322          |
| <b>Faculty-Student Ratio of University</b> | <b>1: 7.9</b> |



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 6

# Universities Building Economies

## 6.1 University – Industry Linkages

Dow University of Health Sciences, Karachi is dedicated to building collaborations and linkages with various national and international industries and is still engaged in the process of enhancing strong linkages.

- Dow University of Health Sciences has developed university industry linkages with several pharmaceutical companies for Research and development.
- Dow University has an agreement with the National Research Program for Universities, which is a National program.
- The University enhanced its industry linkage by signing a MOU with the international organization, DICE Foundation. It will act as a pragmatic platform for health related innovation & for collaboration among academia, industry, government, entrepreneurs and Expatriate community on all matters pertaining to the growth of the health sector in Pakistan.

## 6.2 Initiatives

### Dow Center of Oral Health Research (DCOHR) Lab at DDC

DUHS is a pioneer in research and innovation. The various institutes and departments of DUHS associated with research are spearheading the local and national research front.

The center of the dental research lab was established at 7th floor of Dow Dental College. It is first advanced dental research center in the province.

The post-graduate students from DUHS look at other avenues when equipment such as Scanning Electron Microscope is needed. In order to fulfill this research need, an advanced research DCOHR lab dedicated to dental research was envisioned.

#### Aim:

The aims and objectives of this center are as follows

1. To fulfill research needs of the oral health and medical researchers.
2. To provide a center for research activities at the DMC campus.
3. To train the researchers in cutting edge research techniques.
4. To commercialize the services offered by the center.
5. To build collaborations with research centers and industry nationally and internationally.

#### Structure:

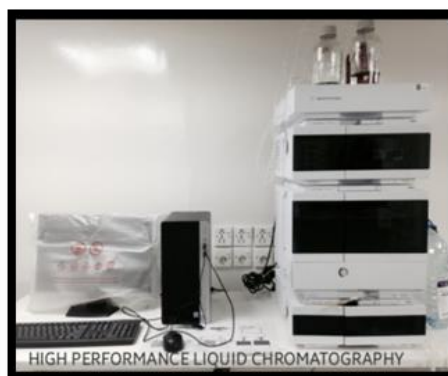
The Research Center has following research facilities/equipment are available.

1. Bio-Materials Research Lab
  - Scanning Electron Microscope (SEM) with EDS
  - Universal Testing machine (UTM) (Tensile, flexure, compressive and tear strength)
  - HPLC

- Thermal Cycler (For thermal aging of samples)
- UV spectrometry
- Stereo-Microscope
- Saw Microtome

## 2. Molecular Research lab

- Cell Culture Lab
- Microbial Culture lab
- Molecular Pathology lab
  - Conventional PCR
  - ELISA
  - Horizontal Gel Electrophoresis
  - Vertical Gel Electrophoresis
  - Western Blotting
  - IEF Two Dimensional Electrophoretic Protein Analysis
- National Institute of Diabetes & Endocrinology provides fellowship in the field of Endocrinology.
- The satellite center of MALIR became fully functional with well-equipped MRI, CT Machines
- Evening ultrasound services offered in DIR, LEJ and Nazimabad campuses
- Oral & Maxillofacial Surgical Unit approved from College of Physicians Surgeons of Pakistan in February 2021 as, Fellowship Training Unit at DDC. It's affiliated & OMFS Ward is located at Shaheed Mohtarma Benazir Bhutto Institute of Trauma. With this major achievement- DUHS has now 2 Dental Colleges approved from CPSP for Fellowship Training in Clinical Dental Specialties.



## 6.3 Patents/Trademarks

Dow University of Health Sciences is engaged in the process of trademark registration by University Legal Consultant.

The registered trademarks of Dow University of Health Sciences are as below:

| S.No. | App. # | Class | Trademark         | Date     | Status     |
|-------|--------|-------|-------------------|----------|------------|
| 1     | 308949 | 44    | DOW               | 21/10/14 | Registered |
| 2     | 344473 | 5     | Shaffaf (Logo)    | 05/08/13 | Registered |
| 3     | 344474 | 32    | Riva (Label Mark) | 05/08/13 | Registered |

Following Patents are applied for Grants:

| S. No. | Title of Invention  | Date      | Status  |
|--------|---|-----------|---------|
| 1      | Process of treating distillery bio-digester effluent with concomitant microalgae biomass production |           | Applied |
| 2      | Filed on multivariant mRNA Vaccine Construct  | 29/4/2021 | Applied |
| 3      | Licensing for Preclinical Contract Laboratory   | 24/5/2021 | Applied |

## 6.4 Internships and Placement Office

**Clinical Electives** In the recent years, there is an increasing interest of the final year students of Medicine for doing electives in different medical schools/hospitals in the United States. The Quality Enhancement Cell, QEC-DUHS, is also responsible for developing collaboration and linkages with other universities and colleges around the globe in different areas of interest.

DUHS has developed a Memorandum of Agreement with some of the prestigious foreign Medical Schools and associations for clinical electives namely:

| Associations of DUHS for clinical electives with the following colleges |  |
|---|--|
| University of Illinois  | Chicago  |
| AAMC  | Visiting Students VSLO Learning Opportunities                            |
| • Jackson park hospital, Chicago.                                       | Clinical Electives offered at various National & International Hospitals |
| • Holyoke Medical Centre, MA  |  |
| • Mayo Clinic, Rochester USA.   |  |
| • Mount Sinai Hospital, New York.                                       |  |
| • Specialty hospital of Washington.                                     |  |

|  |  |
|--|--|
| • Harvard Medical School, Boston USA.                  |  |
| • North West General Hospital, Peshawar                |  |
| • Robert Wood Johnson University Hospital. New Jersey. |  |
| • Harrison Count Hospital, Corydon, USA.               |  |
| • Winnie Palmer Hospital, Florida USA.                 |  |
| • Florida International University, USA                |  |

## Internships

The Placement office of each College/ Institute or School ensures the student secures a placement, which will support their learning requirements and nurture their professional development.

All work placements must be officially approved by the Registrar-DUHS and primarily involve the process of CV selection and competitive interview (if necessary) by the HoD/ Principal or Director, but can also be secured by direct matching if the student applies directly. The selection process is determined by the host organization. The Placement coordinator provides both group and one-to-one support to the students in the researching, sourcing, securing of placement and ongoing support of students whilst on internship or placement.

We are fully conscious of the utility of earning practical experience for students by undergoing internship(s) during their studies and after completion of their studies. Interning in a field of choice will stand out on students' resumes and help them with their job search after graduation. Students/interns should endeavor to gain on-the-job training that integrates education and career development; while organizations and companies hosting interns also benefit from the contributions of creative and innovative students. Students' networking during the course of their internship subsequently become professional "contacts" who can help guide their career path as they make their way into the professional world.

Final year students of the Dow Institute of Physical Medicine and Rehabilitation department are placed at different hospitals and clinics for rotations and for learning purposes. DIPM&R also provide electives to students from Ziauddin College of Rehabilitation Sciences, People's University of Medical and Health Sciences for Women, and Liaquat University of Medical & Health Sciences.

Graduates of Dow College of Pharmacy find placements in Liaquat National Hospital, NICVD, AKUH, Kiran hospital, Dr. Ziauddin Hospital, Indus Hospital and Dr. AQ Khan Institute of Behavioural Sciences. The Placement office of DCOP facilitated the screening activity of students for placement at Martin Dow.

IMT provide internship to graduates at Dr. Ruth Pfau hospital Karachi, South City Hospital, NICVD, Dow University Hospital, Memon Medical Institute, Aga Khan University Hospital, Liaquat National Hospital, Essa Lab, Shaukat Khanum Laboratory, LUMHS laboratory, Dow Diagnostic and Reference Laboratory, Hussaini Blood Bank, SMBB Institute of Trauma, Anatolia Gene Products (Turkey), Allmed, SZABIST, University of Karachi, Dr. Panjwani Center for Molecular Medicine and Drug Research, Dadabhoy Institute of Higher Education,

Red Crescent, Dow University of Health Sciences, Aga Khan University and Liaquat National Hospital

IBHM provides in-house internships of six months duration to ensure that the students secure a placement that will support their learning requirements and nurture professional competence.

School of Public Health offers Internship program for graduate students in Public health organizations like Nutrition Support Program-(NSP), Sindh Water and Sanitation Hygiene (WASH), People's Primary Health Care Initiative (PPHI) and clinical settings provide opportunities for capacity building around the SDGs goals of Pakistan in institutions like Aga Khan University Hospital, SIUT, Patel Hospital, National Medical Centre (NMC), Fatimiyah Hospital, Indus Hospital and Dow University Hospital

The students are being provided with a monthly stipend as per policy and as well as internship certificate at the end of internship period.

### **Benefits of Internship for Students**

The placement department offers paid internships for 6 months to graduates, who have applied for the internship and are selected by the placement committee. They benefit from the internship and are placed in different departments of DUHS after the approval of the Registrar, DUHS. The duration of internships are from May-October, according to the duty roster which was designed on rotational basis (2 months), was handed over the interns, before going to their relevant departments such as Registrar Head office, Finance, HR, OPD, Radiology, IHM and DDRRL. The purpose of offering those internships was to increase their career related knowledge and provide them valuable work experience.

## **6.5 Student Counseling and Career Guidance**

**DUHS Counseling Services for Students available at ION, Ground Floor, OJHA Campus and DMC, PDC building 1<sup>st</sup> floor.**

If students are experiencing any of the following, DUHS has a provision for counseling services offered to our students.

- Counseling may offer them safe and confidential non-judgmental support for their learning needs.
- A safe place to learn to be them, with holistic health counseling for their well-being
- Academic issues and stress/anxiety, time management
- Family related issues.
- A response to their learning disabilities or learning issues.
- Helping them to navigate change in their lives
- Issues with friends and other relationships

Furthermore, a student's Counseling Cell has been inaugurated by the Vice Chancellor DUHS, Honorable Prof. Dr. Saeed Quraishy on the occasion of World Mental Health Day at the Dr. A. Q. Khan Center, Institute of Behavioral Sciences exclusively for Dow Students, where they can get free of cost further extensive treatment and services. The Student Counseling Services are provided at the departmental level regarding academics, personnel or group counseling, crisis assessment/ management, career exploration and professional



training guidelines. Student counseling is also offered through the official mentoring program at the Departmental/Collegiate level. Student Counseling involves meeting with and seeking help from a trained professional who can help you identify your strengths, weaknesses and interests regarding academic/career matters and also offer emotional support and guidance.

The Dow University of Health Sciences has hired an experienced Psychologist for student counseling services to be offered for its students. The professional has knowledge of student counseling/career guidance to students with a variety of issues, ranging from behavioral issues to career preparation. The professional will assist the students with Career and Academic Development and work directly with students to develop academic and career related solutions.

The Dow Institute of Physical Medicine and Rehabilitation DIPM&R has a well-organized mentoring system at the department to provide counseling, guidance and appropriate suggestions to students to rectify their academic, personal and other issues to improve the quality.

There are two modes of student counseling are used in IBHM:

- Educational and Career counseling.
- Personal or Psychological counseling is being provided by professional psychologists through A. Q Khan Center Center for Behavioral Sciences.
- Academic or career counseling is being provided by faculty members.
- Batch counselors are allotted, who look after the whole batch and provide all kinds of counseling regarding student progression, selection of electives and participation in curricular and co-curricular activities.

Student-teacher interaction also helps us ascertain students' need for career counseling. Teachers and management personnel are always available to the students to hear their queries. Additionally, Dow College of Pharmacy has developed a system of mentoring, which may serve as a platform for addressing the needs of the students. Other Colleges & Institutes also have a well-developed mentoring system. In the mentoring system of DUHS, there are assigned mentors for every 20 students and a chief mentor to lead all the mentors. Apart from this they also periodically organize career counseling sessions in which experts from the industry are invited to guide students.

The Institute of Business and Health Management arranged a zoom meeting on 17 February, 2021 with Dr. Khalid- Co-founder and CEO of a Training Company (Infinite Mind Power Co.) to provide counselling and coaching to the students of IBHM.

The career counselling/guidance session was given by Head of HR, Martin Dow Pharma. 25th Nov, 2020 at Dow College of Pharmacy for the final year students.



Agile Leadership program organized at Martin Dow Pharma on 17th Nov.2020 for the final year students of Pharm D program.





DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 7

# Strengthening Physical Infrastructure

## Directorate of Planning & Development

*The Department of Planning and Development of Dow University has completed renovations and refurbishments of the old Dow Medical College and a number of old buildings and infrastructure at the Ojha campus.*

### 7.1 Development Projects (Laboratories, Libraries etc.)

Following development projects are being implemented at Dow University of Health Sciences.

| S.No | Project Title  | Funded by |
|------|--|-----------|
| 1.   | Establishment of An Advanced Molecular Genetics And Genomics Diseases Research and Treatment Center (Ojha campus)  | PSDP      |
| 2.   | Establishment of Trauma Centre, BSL-3 Lab and Provision of support services at Institute of Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi | ADP       |
| 3.   | Establishment of Department of Serobiological and providing power generation by gas along with heat recovery system at ojha campus of DUHS, Karachi                  | ADP       |
| 4.   | Dow International Dental College and 50 Bedded Hospital in Gulistan-e-Johar ,Gulshan-e-Iqbal Town, Karachi.  | ADP       |
| 5.   | Sindh Infectious Diseases Hospital & Research Centre At NIPA, Gulshan-e-Iqbal, Karachi   | ADP       |
| 6.   | Gamma Knife Radiosurgery Centre  | ADP       |

#### Public Sector Development Program Projects:

##### 1. ESTABLISHMENT OF AN ADVANCED MOLECULAR GENETICS AND GENOMICS DISEASES RESEARCH AND TREATMENT CENTRE AT OJHA CAMPUS, DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

The goal of Establishment of an Advanced Molecular Genetics and Genomics Diseases Research and Treatment Centre at Ojha campus of Dow University of Health Sciences, Karachi is to provide a world class sustainable and multidisciplinary cutting-edge genomic facility that will bring together academia and health care providing sectors of the country together to provide genetic testing and advanced therapeutic modalities using genetic approaches leading to the broader concept of 'Personalized Medicines' in future. It will also generate high quality tasks for the field by providing graduate and post-graduate education that will promote national knowledge-based economy through applied genomics research outcomes.

The project falls under the head "Research & Development" funded by Higher Education Commission. The project is a part of overall vision / perspective plan of the Dow University of Health Sciences Karachi which is in line with the government priorities for the development, expansion, up-gradation and improvement of essentially required

infrastructure and research facilities at Public Sector Universities and degree awarding institutions. The scope of the project includes only revenue components. The project's duration is 2 years i.e. 2020-2022 and total cost is 352.211M.

### **Annual Development Program Schemes:**

#### **1. ESTABLISHMENT OF TRAUMA CENTRE, BSL-3 LAB AND PROVISION OF SUPPORT SERVICES AT INSTITUTE CHEST DISEASES OJHA CAMPUS OF DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI**

The On-going project will help to improve the health care services for the seriously injured and trauma patients round the clock, especially at the time of major road / air / sea accidents, bomb blasts and natural calamities like heavy rains, cyclones & hurricanes etc. the total cost of the project is amounting to Rs 681.284 Million (Rupees Six Hundred Eighty One Million & Two Hundred Eighty Four Thousand only) i.e. Capital Rs. 297.580M & Revenue Rs. 383.704M The expenditure incurred till 31st October 2021 is 394.670 M.

#### **PHYSICAL PROGRESS OF SCHEME:**

- Construction of trauma Centre was completed & finished
- BSL-3 lab construction of the first floor of the Radiology department was completed and functional.
- BSL-3 lab construction of the second floor of the Radiology Department was completed and functional.
- The BSL-3 lab was completed and functional. Whereas the equipment of the BSL-3 lab was being procured from DUHS's own funds to functionalize the building.
- Renovation of the first floor of the radiology department was completed and functional
- Renovation of the first floor of the radiology department was completed and functional (Internal Electrification)
- The Entire building of the Trauma Centre is equipped with the latest HVAC system, from the DUHS own funds and it was not in the scope of PC1.

#### **2. ESTABLISHMENT OF DEPARTMENT OF SERO BIOLOGY AND PROVIDING POWER GENERATION BY GAS ALONG WITH HEAT RECOVERY SYSTEM AT OJHA CAMPUS OF DUHS, KARACHI**

The subjected ongoing scheme is a mix of preventive, curative, education and research services. Structure is completed and only supply of medical equipment is in process The Serology Department will have an animal serology laboratory which will produce various immunoglobulin and antibodies for various human diseases and ailments. Human serology laboratories will be capable of diagnosing various diseases. The Serology Research and development unit will be a helping hand for production and diagnostic laboratories.

In Pakistan there is no single serology institute which could produce indigenous quality sera for sero therapy, diagnosis and reference. Indigenously produced sera is very cheap, economical and local production will not only save foreign exchange in billions of Pak Rupees, but also provide opportunity for employment. Total cost is 410.265 M and the expenditure incurred till 31st October 2021 is 310.811 M. The capital component of the project is completed and functional. And now the procurement of equipment is in process.



### **3. DOW INTERNATIONAL DENTAL COLLEGE AND 50 BEDDED HOSPITAL IN GULISTAN-E-JOHAR ,GULSHAN-E-IQBAL TOWN, KARACHI**

Dow International Dental College and 50 Bedded Hospital is ground plus two buildings. Ground Plus 1st floor is reserved for hospitals affiliated with Dow International Dental College and second floor reserved for departments of basic sciences. Since its inauguration, patients of Covid have been admitted in all 4 waves of Covid-19. Between the second and 3rd wave it was used as Covid mass vaccination center 24/7.

For the time being free consultation clinics are carried out in Internal medicine, gastroenterology, diabetes, urology, neurosurgery and Gynae with free facilities of sugar testing, ECG and x-ray. It has a functional pharmacy and Dow lab collection point.

### **4. SINDH INFECTIOUS DISEASES HOSPITAL & RESEARCH CENTRE AT NIPA, GULSHAN-E-IQBAL, KARACHI**

Sindh Infectious Diseases Control Hospital and Research Center at Nipa, Gulshan-E-Iqbal Karachi is available round the clock for patients suffering from corona virus and other infectious diseases. Thus, it served as a center in prevention and control of existing & emerging infectious diseases. The facilities of all major infectious disease control and General OPD, indoor and emergency treatment facilities are available round the clock. In the first phase, a 200-bedded hospital housed in Block-A and B has been completed. It was visited and inaugurated by the Sindh Chief Minister on 5<sup>th</sup> July, 2020.

### **5. GAMMA KNIFE RADIOSURGERY CENTRE**

The project was approved during March 2020. And now the project is completed and functional and it is in accordance with the Provincial Health initiatives to provide quality and advanced Health Care facilities to the people of Sindh particularly and all over Pakistan. The project will go a long way in the treatment of Neurosurgery Cancer Patients. The existing gamma knife radiosurgery Cancer unit provides comprehensive and modern, quality treatment to the patients suffering from Cancer. It is also serving as a Research base to find solutions to problems pertinent to cancer patients, ultimately serving as a nucleus for the control of cancer in the province of Sindh and all over Pakistan. Presently 110 cancer patients have been treated and benefited since 12th August 2021 till now.

The procedure of the Gamma Knife is a pain free, bloodless and day care treatment which is highly targeted and accurate treatment. Gamma Knife radio-surgery was used to treat certain conditions of the brain, many of which could only be treated by open surgery. This is the first such intervention at a public sector hospital in Pakistan. 400 units of this machine have been installed all over the world and this is the first gamma knife Radiosurgery Centre which is operational at Dow University Radiosurgery Centre.

## **7.2 Research Equipment**

Dow University of Health Sciences has modern research equipment which is available for faculty and students to facilitate them in their research work. Recently, DUHS is establishing an Advanced Molecular Genetics and Genomics Diseases Research and Treatment Centre at Ojha Campus.

### **7.3 Ongoing-Construction Projects**

1. Establishment of Trauma Centre, BSL -3 Lab and Provision of support services at the Institute of Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi.
2. Establishment of Department of Serobiological and providing power generation by gas along with heat recovery system at Ojha campus of DUHS, Karachi.
3. Dow International Dental College and 50 Bedded Hospital in Gulistan-e-Jauhar, Karachi
4. Sindh Infectious Diseases Hospital & Research Centre At NIPA, Gulshan-e-Iqbal, Karachi





DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 8

# Strengthening Technological Infrastructure

## 8.1 Digital Library

The Digital Library program was propelled by HEC to help researchers and mentors at public sector universities. Digital Libraries developed by Dow University of Health Sciences in their various campuses and institutes give access to global insightful writing in view of online delivery, peer-reviewed journals, databases, articles and e-books crosswise over an extensive variety of controls. Through HEC's digital library which is available from all computerized libraries built up in DUHS, clients can access more than 75,000 electronic substances. Following are the rundown of digital libraries at various campuses of Dow University of Health Sciences alongside the quantity of accessible systems.

- Digital Library (Ojha Campus) – 75 Computer Systems
- Digital Library (DMC Campus) – 80 Computer Systems
- Digital Library (Institute of Nursing) – 41 Computer Systems
- Digital Library (Institute of Health Management) – 30 Computer Systems
- Digital Library (Dow College of Pharmacy) – 12 Computer Systems
- Digital Library (Dow College of Biotechnology) – 12 Computer Systems

**Total 250 upgraded and/or new Computer systems in all Digital libraries of DUHS.**

## 8.2 PERN (Pakistan Education and Research Network)

PERN was initially launched in year 2002 as a part of an IT action plan providing Internet facility and interconnectivity between universities for data bank integration, research collaboration and upgrading learning and teaching skills. Dow University of Health Sciences receives a total of 730 MBPS in DMC and Ojha Campus; DUHS is acquiring the services of the PERN-II Network. The bandwidth is further distributed to all other campuses.

Pakistan Education & Research Network (PERN) is offering alliance services on the equity model to the education and research community of Pakistan. Including, high speed internet, in addition to PERN, there is the following addition:

- 1Gbps link speed connectivity
- Academic Social Networking
- Eduroam (federated Wi-Fi network authentication)
- Local content hosting, for the partner universities/ institutes.

Through PERN we have acquired:

- 730 Mbps internet bandwidth
- 40 Mbps Intranet bandwidth and
- 48 Live IP Addresses

The internet bandwidth is divided between

- DMC Campus (100 Mbps)
- Ojha Campus (630 Mbps)
- The Smart University Wi-Fi project has been deployed in OJHA campus which is also consuming internet bandwidth.

## 8.3 Video Conferencing

Conferences are conducted in the designated Seminar Halls/Rooms, Faculty Meeting Rooms of each department, VC Board Room at OJHA and DMC Campus.

This facility is provided by the information technology department in all campuses. It is being used in different domains within campus needs and promoting flexible learning utilized by both faculty and students.

- The Clary Icon (PC based web conferencing) setup is installed in Ojha Campus for advanced conferencing. Huawei TE-50 is installed at the Video Conferencing hall at Head Office DMC Campus.
- Tandberg (Cisco) 990 MXP (Multiple unit supporting up to 4 sites) is deployed in the VC BoardRoom, DMC campus. Polycom PVX software is utilized in Ojha Campus for seamless video conferencing and web conferencing experience; which works on H-323 protocol.
- Web-based Conferencing such as International Days, Seminars and other Medical events are being utilized under the web streaming's of HEC Pexip Infinity Connect, Zoom Webinars, Facebook 'go live', Hangouts and Google Meet.
- APPNA Merit training, CTU (CRCP and CRC) classes, HEC workshops, interviews and official meetings are usually conducted through Cisco WebEx facility of DUHS.

## 8.4 Campus Management Solution (CMS)

DUHS is aimed at providing students, faculty, and staff with immediate access to real-time information and connects that information to specific action. CMS is logically divided into several modules, each of which maps to a university function/department. DUHS worked closely with the HEC (Higher Education Commission) and the "Campus Management Solution " project was initiated. The Higher Education Commission selected six public sector universities for the implementation of Oracle PeopleSoft Campus Solutions.

The Campus Management software is an integrated solution which takes care of the various activities of an educational institution like institution management, student management, administrative functions, etc. The solution is available as a basic integrated application upgradeable to an Intranet / Internet system.

Oracle Corporation has a customized ERP Solution for academic institutions i.e. Campus Management or Student Information System. The solution is a combination of software and hardware. It helps manage the business processes of an academic institute in an efficient and professional manner. The integration between various processes and departments i.e. admissions (electronic and manual), enrolment, examination, fees etc. helps in automating the manual and traditional methods of functioning of a campus.

### CMS Features

- CMS makes it easier to prepare and generate reports from different required aspects.
- The web-based features enable the faculty, students as well as the management to interact.

- Users Profile Setup as per Job Roles and Responsibilities.
- Easily integrated with other software applications.
- The application generates various reports useful to the management, to the faculty and to the end user separately.

## 8.5 Web Portal of DUHS

The Website of Dow University of Health Sciences assists in the timely updating of news, events, and information on the official website of the university which is managed by the IT department. It provides all the information regarding admissions, curriculum, examination and events planned in the university. Following facilities are provided through a web portal.

- Faculty profiles
- Microsoft for all users
- Tenders and Admissions
- Accessibility to DUHS official email.
- Curriculum and course outline of MBBS
- DUHS CME (Continuous Medical Education)
- Alumni Association Webpage for Connecting with Dow
- Professional development center workshops schedule
- JDUHS (Journal of Dow University of Health Sciences)
- Dow Diagnostics (Online Lab & Radiology Reports)
- Online Fee & Donation Payment gateway
- Individual academic programs and Colleges/ Institutes and Health Services Data/ Information

## 8.6 Online Admission System

Online admissions assist in reducing workload, avoid data entry mistakes and of course in keeping up to date records by electronic means. DUHS announces admissions in different programs; online admission assists in form filling over the website, provision of electronic copy of prospectus along with related information, eligibility criteria & fee structure of the courses, day to day updates and news alerts about admissions, entry test & interview dates announcements, display of online Merit list.

## 8.7 Cloud Services for Academics: Disseminated Student Account IDs

As part of the ICT Directorate's overall initiative to facilitate and enhance the learning experience at DUHS, the Microsoft Office365 cloud platform has been acquired and disseminated to the students: It will enable collaboration among faculty & students.

The services being offered through this platform are:

- Outlook for Email
- MS Office Online
- Microsoft Teams as collaborative workspace
- Microsoft Planner for teamwork planning
- Skype for Audio/Video Conference
- Yammer for social networking, etc.

To initiate the use of this platform, online accounts have been created for students. Roll out activities are being planned to hand-over these accounts to the students & give them a brief overview.

## 8.8 Dow Connect

Dow Connect connects all departments with our people, across DUHS and also serves as a student grievance portal. In order to streamline requests and better serve you:

1. We utilize a **Dow Connect System** to solve your issues as early as possible.
2. Every request is assigned a unique number which you can use to track the progress and responses online.
3. For your reference we provide complete archives and history of all your requests.
4. A valid email address is required to submit a request through the following features:

### Ticket Filters

Define rules to route incoming tickets to the right department, concerning officers, as well as trigger actions.

By using the filter system, Dow Connect empowers you to automate the creation and routing of tickets. Set actions such as ticket rejection, department/concerning officer assignment or even send an automated canned response. Rule criteria of the filter can include any custom field added to the forms as well as user data.

### Assign, Transfer & Referral

Transfer tickets between departments to make sure it's being handled by the correct concerning officer or assign tickets to a particular department or team of agents.

Refer to a ticket to maintain view-only access to tickets when transferred or assigned to a department/officer. Tickets can be auto-assigned by help topics or departments when they arrive, but what if they need to be reassigned? No problem! You can reassign tickets to agents or a team of agents or transfer to a different department all together. Transfer, Assignment, and Referral notes are logged in the ticket thread to keep track of what happened in the ticket.

### Auto-Responder

Configurable automatic reply sent out when a new ticket is opened, or a message is received. Auto responses can be formatted to pull information from the ticket to personalize the email. Dow Connect supports placeholder variables which will pull the user's first name in the auto response. Auto responses can be edited and customized for each department as well as associated with Help Topics.

### Thread Action

Officers now have the ability to create a Ticket or Task from a Ticket's thread entry or from a Task's thread entry. Need to create a separate ticket or task from a user's message to separate or expand on that item? No problem! Now with thread action, agents can simply create a new ticket or task with the message and keep it in the original ticket thread. Thread actions are noted in the original ticket thread with reference to both the new item as well as the thread item it was pulled from.

## Tasks: Create an Internal to-do list for Agents

Tasks can be associated with tickets or they can stand alone in the help desk. When tasks are ticket-related, this prevents the tickets from being closed until all tasks within the ticket are complete. Add collaborators to include external users to the task items while keeping them separate from the ticket thread and contents.

## **Please Follow DOW Connect Portal Link To Register Your Complaint-**

**[HTTP://DC.DUHS.EDU.PK/INDEX.PHP](http://dc.duhs.edu.pk/index.php)**

## 8.9 Microsoft Dynamics

Microsoft Dynamics 365 Finance & Operations Dynamics 365 Finance & Operations is a cloud-based Enterprise Resource Planning (ERP) system well-suited for large or diversified companies. It offers you the ability to keep track of all your finances and inventory.

Dynamics 365 Cloud based solution licensing is provided to DUHS by HEC. Following are the most popular modules (the complete list is much more extensive):

- Accounts payable
- Accounts receivable
- Budgeting
- Financial management
- Cash and bank management
- Cost accounting
- Project management and accounting
- Asset management
- Inventory management
- Warehouse management
- Human resources management
- Cost management
- Master planning
- Procurement and sourcing





DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 9

# Universities Building Communities



## 9.1 University-Community Interaction

| University and Community Interactions in 2020-2021   |   |
|--|---|
| 1. Workshop on Anti-Harassment at the Workplace  | <b>Community Service, Community Building Activity of Dow Institute of Business and Health Management (IBHM)</b> |
| 2. Accumulation of essentials for Wedding Arrangement of an individual belonging to Underprivileged family by undergraduate students as part of community service activities   |   |
| 3. Dispersion of cash & essentials to deprived families/individuals in wake of covid-19 by undergraduate students  |   |
| 4. IBHM had initiated a 4 weeks' mandatory community service for its graduates for making them responsive to community needs and to make them responsible citizens   |   |
| 5. Leadership in the field of public health research for neglected populations: Prevalence of Frailty and its association with Symptoms of Depression among older adults living in Nursing Homes   | <b>Community Service and Community Building Activities of Dow School of Public Health (SPH)</b>                 |
| 6. Health Promotion Initiative: Pre-Diabetes Awareness Campaign  |   |
| 7. DDC spreads "Oral Health Awareness" virtually through "Google meet" software to connect oral health promoters and includes animated pictures, increasing oral health awareness to teach proper hygiene techniques for maintaining oral health.  | <b>Community Service and Community Building Activities of Dow Dental College (DDC)</b>                          |
| 8. Free Dental Camp DIDC in collaboration with Pakistan Rangers ASGR Wing 91, Lines Area, Karachi  | <b>Community Service and Community Building Activities of Dow International Dental College (DIDC)</b>           |
| 9. World Oral Health Day   |   |
| 10. Dr. Faisal Yameen (PT) delivered a lecture in E-coordination, which is a collaborated program of DUHS with EDUCAST. The goal of this program is to give maximum height to our old age population; regarding this the health department of physiotherapy is providing them the rehabilitation reaching to the registered. | <b>Dow Institute of Physical Medicine &amp; Rehabilitation (DIPM&amp;R)</b>                                     |

### Students from Dow College of Pharmacy served in:

- Medical Camp Volunteer in Rotaract District, Orangi town Karachi on 27<sup>th</sup> Dec 2020.
- Pharmacy Volunteer in PAK-Emirates Medical Camp Pakistan on 28<sup>th</sup> March, 2021.

## 9.2 University Role in Building Community

The Dow University of Health Sciences, since its inception, has been focusing on community services to provide preventive, diagnostic and treatment facilities for community health care especially to the underprivileged class. The students of various undergraduate and postgraduate programs of DUHS are also actively involved with the faculty members in all the Civic Engagements of DUHS.

### Advanced Research Lab, Dow Dental College

Advanced Research lab of DUHS, is situated in the DMC Campus on the 7th floor of DDC. It was constructed with the help of a grant from HEC.

The following research facilities are available.

1. Cell Culture Lab
2. Microbial Culture lab
3. Advanced Bio-Materials Lab
  - Scanning Electron Microscope
  - Universal Testing machine
  - HPLC
  - Thermal Cycler
  - Stereo-Microscope
  - Microtome
4. Molecular Pathology lab
  - PCR
  - ELISA
  - Gel Electrophoresis

The Bio-materials side of the lab is fulfilling an important research need of the scientific community. Its importance can be gauged from the fact the SEM installed in the lab is only the third such microscope in Karachi after NED university and PCSIR available for research purposes. In addition, the Universal testing machine is a first of its kind for any educational institute.

- **Dean, Faculty of Dentistry Prof. Shahjahan Katpar conceptualized & developed Pioneer “Katpar Splint Technique” to treat infants/ small children having fracture lower jaw treatment under General Anesthesia. This is innovative new/national clinical contribution from Pakistan & major achievement.**

## 9.3 Alumni Affairs: Outstanding Achievements

Alumni from Dow University of Health Sciences are serving in various medical and allied health sciences of national as well international repute.

### International Alumni Outstanding Achievements

Over 3000 graduates of Dow University of Health Sciences are practicing in various medical institutions of USA, UK, KSA and other countries. Majority of them are supervising the different medical departments, contributing in the medical researches and in their respective fields as alumni of DUHS:

## National Alumni: Outstanding Achievements

A large number of graduates of Dow University of Health Sciences are serving humanity throughout the country and hold key posts. Majority of them are the heads of various health care institutions.

Graduates of Dow College of Pharmacy are rendering their services in highly reputable private and public sector organizations. Some notable entities where alumni of our institute are performing their duties include Drug regulatory authority of Pakistan, Aga Khan University Hospital, South city Hospital, NMC Hospital, NIBD, Kiran Hospital, Indus Hospital Korangi, leading pharmaceutical manufacturing companies and many others.

Several graduates are also playing their roles in industrial pharmacy and working in multinational and local pharmaceutical industries including Abbot, GSK, Brookes Pharma (Private) Limited, Bosch Pharmaceuticals, The Searle Company Ltd., Hilton Pharma (Pvt) Ltd, AGP Limited, among many others.



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 10

# Sports

## 10.1 Inter-Departmental Sports At DUHS

Every year, DUHS schedules Sports Week so that the maximum number of students and faculty can participate in sporting activities as part of their co-curricular activities. A state-of-the-art gymnasium and cricket ground at Dow University is available where the students can play during and after college hours, as part of their co-curricular activities.

DUHS has provided regular sessions for training students with expert coaches who can groom these players to shine nationally and internationally. During the last few years, with the growth of the university, the faculty participation in sporting activities has also taken place. Therefore we also held faculty matches in which most of the faculty also participated with enthusiasm.

DUHS sporting activities include fitness facilitation to regular training sessions and provide support to athletes so they can progress to the highest sporting level whilst studying at Dow University of Health Sciences. During the annual sports week, various events also take place like English and Urdu Debating competitions, Declamation contests, Literary Festival etc.

Outdoor track events like cricket (for both boys and girls), football, running races, shot put, javelin throw are offered for students to participate; whereas, indoor events, like basketball, throw ball, netball, badminton, and table tennis are offered within the state-of-the-art Gymnasium at the Ojha Campus.



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 11

# Universities Building Leadership

## 11.1 Faculty Leadership

Awards and Representation in Government Policy making committees, memberships on various councils etc.

Faculty Leadership Awards of faculty members are mentioned below:

| Name of Faculty Member        | Title of Award  | Year        | Name of Org.  |
|-------------------------------|-----------------|-------------|---|
| Prof. Mohammed Saeed Quraishy | Tamgha e Imtiaz | August 2020 | Government of Pakistan, awarded by President Dr. Arif Alvi. |

Prof. Dr. Sumbul Shamim, Dr Tariq Ali, Dr. Fakhsheena Anjum, Dr. Anab Fatima, Dr. Shumaila Aman from Dow College of Pharmacy have been included in the Directory of Productive Scientists of Pakistan, Pakistan Council of Science and Technology, Ministry of Science and Technology, Govt of Pakistan as productive scientist.

### Representation in Govt. Policy Making Committee (FY 2020-21)

| Name of Faculty Member | Name of Committee / Representation   | Name of Org.  |
|------------------------|--|---|
| Prof. Nisar Ahmed Rao  | National Strategic Plan to End TB 2020-23<br>TB Clinical Diagnosis Audit Proposal in Country Context | National Health Services Regulations and Coordination<br>The Common Management Unit of (HIV/AIDS, TB & Malaria) |
| Dr. Saifullah Baig     | Strategic Treatment Advisory Group (STAG)  | National TB Control Program Ministry of Health, Pakistan.   |
| Prof. Noor Jahan       | Secretary  | Pakistan Pharmacist Association (PPA) Central   |

### Membership in Various Associations/Councils (FY 2020-21)

| Name of Faculty Member  | Status               | Name of Council                                     |
|-------------------------|----------------------|---|
| Prof. M. Saeed Quraishy | President, PSG & GIE | Pakistan Society of Gastroenterology & GI Endoscopy |
| Atiq ur Rehman          | Board of Directors   | Pakistan Society Therapy Association (PPTA)         |



|                               |  |  |
|-------------------------------|--|--|
| <b>Dr. Umesh Kumar</b>        | Information Secretary                                      | PPTA (Sindh Chapter)   |
| <b>Prof. Ambrina Qureshi</b>  | Reviewer<br>Honorary Editorial Board                       | Scientific Manuscripts published by PLOS-One, Elsevier and JPDA.<br>Journal of Pakistan Dental Association.  |
| <b>Prof. Dr. Arshad Hasan</b> | Migration PMDC Syndicate, IRB, Committee                   | Pakistan Medical Commission  |
| <b>Dr. Rabya Munawar</b>      | Ex. Executive member                                       | Pharmacy Council of Sindh  |
| <b>Dr. Wajiha Gul</b>         | Editorial Board Member                                     | ARC Journal of Pharmaceutical Sciences   |
| <b>Dr. Naresh Kumar</b>       | Co-opted member<br>Standing Recognition Committee (Dental) | Pakistan Medical Commission (PMC)  |
| <b>Dr. Ramsha Khan</b>        | Member   | American Society of Microbiology (ASM)<br>Pakistan Biological Safety Association<br>Health Security Partners Futures Fellowship (HSP)                  |
| <b>Dr. Meha Fatima Aftab</b>  | Member<br>Board Member                                     | Mediterranean Neuroscience Society<br>Pharmacology, Baqai Medical University   |
| <b>Dr. Izhar Hussain</b>      | Member<br>Chairman   | Peer review committee of National Business Education Accreditation Council (NBEAC).<br>Institute of financial markets of Pakistan (IFMP)               |
| <b>Dr. Faryal Salman</b>      | Member   | Peer review committee of National Business Education Accreditation Council (NBEAC)   |
| <b>Dr. Asif Qureshi</b>       | Member   | American Society of Microbiology<br>American Association of Molecular Pathology.<br>Karachi Cancer Registry<br>Pakistan Biological Safety Association. |
| <b>Dr. Ambreen Fatima</b>     | Member   | Medical Microbiology & Infectious Diseases<br>Society of Pakistan<br>American Society of Microbiology<br>Pakistan Biological Safety Association        |
| <b>Dr. Fouzia Zeeshan</b>     | Member   | American Society of Microbiology.<br>Pakistan Biological Safety Association.   |

|                                   |                                    |  |
|-----------------------------------|------------------------------------|--|
|                                   |                                    | Pakistan Society of Microbiology   |
| <b>Prof. Dr. Uzma Bukhari</b>     | Member                             | Pakistan Association of Pathologist  |
| <b>Dr. Fatima Fasih</b>           | Member                             | Medical Microbiology & Infectious Disease society of Pakistan  |
| <b>Prof. Dr. Uzma Bukhari</b>     | Member                             | Pakistan Association of Pathologist  |
| <b>Dr. Fakhshena Anjum</b>        | Vice President                     | Pakistan Pharmacists Association, Sindh Chapter.   |
| <b>Dr. Sumbul Shamim</b>          | Member                             | Independent Ethics Committee (IEC) International Centre for Chemical and Biological Sciences (ICCBS) Dr. Panjwani Centre for Molecular and Drug Research (PCMD), University of Karachi.<br><br>American Society of Gene and Cell Therapy (ASGCT)<br><br>American Society of Experimental Pharmacology and Therapeutics (ASPET)<br><br>Directory of Productive Scientists of Pakistan, Pakistan Council of Science and Technology, Ministry of Science and Technology, Govt of Pakistan |
| <b>Dr. Shuja Farrukh</b>          | President                          | PSOL, Sindh Chapter  |
| <b>Prof. Muhammad Arif Mateen</b> | Member<br>Overseas Member          | Association of Paediatrics Surgeons of Pakistan (APSP)<br><br>British Association of Paediatric Surgeons<br><br>Pakistan Association of Paediatric Nephrologists   |
| <b>Dr. Muhammad Sajjad Ashraf</b> | Member                             | Association of Paediatrics Surgeons of Pakistan (APSP)   |
| <b>Dr. Syed Waqas Ali</b>         | Member                             | Association of Paediatrics Surgeons of Pakistan (APSP)   |
| <b>Dr. Faisal Yameen (PT)</b>     | Board of director<br>Sindh Chapter | Pakistan Society Therapy Association (PPTA)  |
| <b>Dr. Atiq Ur Rehman (PT)</b>    | Board of Directors                 | Pakistan Society Therapy Association (PPTA)  |
| <b>Dr. Salik Rasool</b>           | President                          | Sindh Council, Pakistan Society of Maxillofacial Pathology   |

## 11.2 Student Leadership

Co-curricular Activities: University Dramas, Exhibitions, Expos, Competitions & Debates at National and International Levels

- |   |
|---|
| <ul style="list-style-type: none"><li>• Ms. Syeda Rida Rizvi of BS Biotechnology won best poster presentation award in Fourth International Conference on Bioscience (ICBS-2021), Quaid-e-Azam University, Islamabad held on 15<sup>th</sup> June, 2021.</li></ul>      |
| <ul style="list-style-type: none"><li>• Ms. Nasheen Sadiq and Ms. Samreen Farooq students of BS Radiologic Technology program of Dow institute of Radiology have secured second and third positions in Intra-DUHS-Painting /poster Essay Writing Competition.</li></ul> |
| <ul style="list-style-type: none"><li>• Two students of Dow College of Biotechnology won Research Grants from Vice Chancellor Seed Funding Initiative</li></ul>   |
| <ul style="list-style-type: none"><li>• A member of Dow's IBHM Toastmasters club, Vania Ahmed Abbasi has won 3 contests of Annual Toastmasters Championship in Annual conference PAKTAC held on 22-24th May, 2021.</li></ul>  |



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 12

# Finance

## Financial Year at Glance (2020-2021)

DUHS approved the Strategic Plan (2019-2030), under which we have built, rehabilitated, remodeled and expanded physical and technological infrastructure that had outlived its utility. The new facilities, expanded rapidly, can now easily last for the next ten years. However, the maintenance of these facilities is a big challenge and still posing an uphill task for the management to control.

DUHS ended the last fiscal year 2020-21 with an overall revised **deficit** of **Rs. 401.523 million**.

As per direction of the office of the President of Pakistan and the Higher Education Commission of Pakistan, we have already implemented the strengthening of financial management systems with complete ERP solution Microsoft Dynamics 365, capable of providing accurate and timely financial information necessary for taking informed decision making, that will eliminate administrative efforts and increase efficiency, internal control and sustainability.

## 12.1 Approved Budget

Rs. in Million

|      | Particular                   | Approved Budget<br>2020-21  | Revised<br>2020-21              |
|------|------------------------------|---|---------------------------------|
| 12.1 | Annual Statement of Accounts | Annual Statement of Accounts for F.Y. 2020-21 is in progress.           |                                 |
| 12.2 | Recurring Budget             | 4,214.36 (m)  | 4,138.07 (m)<br>(Annex: I)      |
| 12.3 | Self-Generated Income        | 3,266.14 (m)  | 2,893.43 (m)<br>(Annex: II)     |
| 12.4 | ERP related activities       | Implemented (Financials, Procurement, Inventory Management, HRMS, HMFS) |                                 |
| 12.5 | Trend per Student Spending   | Revised Expense<br>(Rs. 4138.07 million /<br>8128 Students) =           | <b>2020-21</b>                  |
|      |                              |   | <b>0.51 million per student</b> |
| 12.6 | Development Budget HEC       | HEC Rs. 110.00 (million)  |                                 |
|      |                              | GOS Rs. 320.10 (million)  |                                 |
|      |                              | UDWP Rs. 158.50 (million)   |                                 |

## 12.2 Financial Year at Glance (2020-2021)

### A- RECEIPTS:

As per Revised, total receipts for the FY 2020-21 decreased by 0.87% as compare to Budget Estimates 2020-21, mainly due to the following factors:

**Rs. in Million**

| Particulars            | BUDGET<br>2020-21 | REVISED<br>2020-21 | Increase/<br>(Decrease) |
|------------------------|-------------------|--------------------|-------------------------|
| HEC                    | 585.36            | 647.20             | 61.84                   |
| Grant for TTS          | 8.50              | 4.91               | (3.59)                  |
| Provincial Govt. Grant | 150.00            | 279.91             | 186.65                  |
| Self-generated income  | 3,266.14          | 2,893.43           | (372.72)                |
| <b>Total</b>           | <b>4,010.01</b>   | <b>3,975.45</b>    | <b>(34.56)</b>          |

### B- EXPENDITURES:

The Revised Expenditure for 2020-21 have seen a decrease of 1.84% as compared to Budgeted Estimates 2020-21. A summarized comparison of different expenditure heads is as follows:

**(Rs. In Million)**

| Description                               | BUDGET<br>2020-21 | REVISED<br>2020-21 | Difference     |
|---|-------------------|--------------------|----------------|
| <b>Pay &amp; Allowances</b>               | 2,264.23          | 2,226.68           | (37.55)        |
| <b>Communication</b>                      | 53.80             | 48.2               | (5.60)         |
| <b>Utilities</b>                          | 191.90            | 185.97             | (5.93)         |
| <b>Occupancy Cost</b>                     | 57.95             | 50.31              | (7.64)         |
| <b>Travel &amp; Transportation</b>        | 93.00             | 83.50              | (9.50)         |
| <b>Operating Expenses</b>                 | 837.40            | 796.79             | (40.61)        |
| <b>Employees Retirement Benefits</b>      | 168.00            | 166.90             | (1.10)         |
| <b>Repair &amp; Maintenance</b>           | 97.04             | 88.36              | (8.67)         |
| <b>Research &amp; Feasibility Studies</b> | 100.00            | 95.00              | (5.00)         |
| <b>Financial Assistance / Scholarship</b> | 32.00             | 86.59              | 54.59          |
| <b>Entertainments &amp; Gifts</b>         | 5.00              | 4.70               | (0.30)         |
| <b>Physical Assets</b>                    | 104.69            | 98.30              | (6.39)         |
| <b>Civil Work</b>                         | 207.16            | 206.76             | (0.40)         |
| <b>Others</b>                             | 2.20              | 0.00               | (2.20)         |
| <b>Total</b>                              | <b>4,214.36</b>   | <b>4,138.07</b>    | <b>(76.29)</b> |



## 12.3 Audit Report

11/19/21, 10:06 AM

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### DUHS DOCUMENT DISPATCH MANAGEMENT SYSTEM



RECIPIENT NAME :

dc dispatch

DISPATCH DATE :

19/11/2021 09:57:25am

SENDER NAME :

hq.registrar - D.U.H.S HEAD OFFICE - 1846  
Registrar Secretariat 22-11-21 12:11

PRIORITY :



DEPARTMENT OF THE AUDITOR GENERAL OF PAKISTAN

OFFICE OF THE

**DIRECTOR GENERAL AUDIT SINDH**

1<sup>st</sup> Floor, Pakistan Audit & Accounts Complex, Gulshan-e-Iqbal, Block-II,

Main University Road, Karachi.

Ph: 021-99244751, Fax: 021-99244855

No DGAS/CS-VIAIR/32-4/2020-21/114

Dated: 12/11/2021

The Vice Chancellor,  
Dow University of Health Sciences,  
Karachi

Subject: ANNUAL AUDIT INSPECTION REPORT ON THE ACCOUNTS  
MAINTAINED BY VICE CHANCELLOR, DOW UNIVERSITY OF  
HEALTH SCIENCES, KARACHI FOR THE FINANCIAL YEAR 2020-21.

A copy of the Audit Inspection Report on the accounts of your office for the  
year 2020-21 is enclosed as Annexe-A. The annotated reply to the report may please  
be furnished to this office within two weeks of receipt of this letter.

Receipt of this letter may please be acknowledged.

Enclosure: Annexe-A

Copy to the Secretary, Universities & Boards, Government of Sindh, Karachi along with  
the Audit Inspection Report, for information and necessary action.

DIRECTOR

22/11/2021

# AUDIT & INSPECTION REPORT ON THE ACCOUNTS RECORD OF VICE CHANCELLOR, DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI FOR THE FINANCIAL YEAR 2020-21

## INTRODUCTION

Audit on the accounts record of the office of the Vice Chancellor, Dow University of Health Sciences, Karachi for the Financial Year 2020-21 was conducted by the Audit Party of the office of the Director General Audit Sindh, Karachi, headed by Mr. Hasnain Vistro, Assistant Director, assisted by Mr. Masood Ahmed, Assistant Audit Officer and Mr. Wali Mohammad, Senior Auditor during the period from 25.08.2021 to 31.08.2021

The audit was conducted on test check basis. The result of the audit is as under.

## INCUMBENCY

The following officers held the charge of head of the office as well as Drawing & Disbursing Officer of the local office during the period mentioned against their names:

| Name                        | Designation      | Period             |
|-----------------------------|------------------|--------------------|
| Pro. Mohammad Saeed Qureshi | Vice Chancellor  | 02.05.2017 to date |
| Dr. Ashar Afaq              | Registrar        | 16.03.2020 to date |
| Mr. Mujahid Ali Shaikh      | Director Finance | 30.12.2019 to date |

## SECTION - I (PREVIOUS AUDIT)

Previous audit for the year 2019-20 was conducted by Audit Party of the office of the Director General Audit Sindh, Karachi headed by Rahim Bux, Audit Officer, report issued to local office but no further progress was reported.

## SECTION - II (CURRENT AUDIT)

From next page.....

## 12.4 Recurring Budget (2020-2021)

Rs. in Million

| Code No.        | Budget Heads                              | 2020-21<br>(Budget) | 2020-21<br>(Revised) |
|-----------------|---|---------------------|----------------------|
| <b>A012</b>     | <b>Pay &amp; Allowances</b>               | <b>2,264.225</b>    | <b>2,226.680</b>     |
| <b>A031</b>     | <b>Fees</b>                               | <b>8.500</b>        | <b>7.000</b>         |
| <b>A03101</b>   | Bank Fees                                 | 1.000               | 0.900                |
| <b>A03102</b>   | Legal Fees                                | 7.500               | 6.100                |
| <b>A032</b>     | <b>Communication</b>                      | <b>53.800</b>       | <b>48.200</b>        |
| <b>A03201</b>   | Postage and Telegraph                     | 0.700               | 0.625                |
| <b>A03202</b>   | Telephone & Trunk Calls                   | 3.000               | 2.900                |
| <b>A0320402</b> | PERN                                      | 29.000              | 26.750               |
| <b>A0320403</b> | Internet Charges                          | 20.100              | 17.075               |
| <b>A03205</b>   | Courier and Pilot Services                | 1.000               | 0.850                |
| <b>A033</b>     | <b>Utilities</b>                          | <b>191.900</b>      | <b>185.970</b>       |
| <b>A03301</b>   | Gas                                       | 96.800              | 95.900               |
| <b>A03302</b>   | Water                                     | 5.200               | 4.900                |
| <b>A03303</b>   | Electricity                               | 89.900              | 85.170               |
| <b>A034</b>     | <b>Occupancy Costs</b>                    | <b>57.950</b>       | <b>50.308</b>        |
| <b>A03407</b>   | Rates and Taxes                           | 0.500               | 0.470                |
| <b>A03410</b>   | Security Charges                          | 35.450              | 28.338               |
| <b>A03470</b>   | Other Occupancy Cost-Janitorial Services  | 25.000              | 21.500               |
| <b>A036</b>     | <b>Motor Vehicles</b>                     | <b>6.500</b>        | <b>6.000</b>         |
| <b>A03602</b>   | Insurance                                 | 3.500               | 3.100                |
| <b>A03603</b>   | Registration                              | 3.000               | 2.900                |
| <b>A037</b>     | <b>Consultancy &amp; Contractual Work</b> |                     |                      |
| <b>A03702</b>   | Management                                |                     |                      |
| <b>A038</b>     | <b>Travel &amp; Transportation</b>        | <b>93.00</b>        | <b>83.500</b>        |
| <b>A03801</b>   | Training - Domestic                       | 3.000               | 2.700                |
| <b>A03802</b>   | Training - International                  | 7.000               | 6.250                |
| <b>A03805</b>   | Travelling Allowance - TA/DA              | 5.000               | 4.100                |
| <b>A03806</b>   | Transportation of Goods                   |                     |                      |
| <b>A03807</b>   | P.O.L. Charges                            | 17.000              | 14.700               |
| <b>A03808</b>   | Conveyance Charges - for late sitting     |                     |                      |
| <b>A03810</b>   | Study Tours                               |                     |                      |
| <b>A03820</b>   | Others/Transportation Expense             | 61.000              | 55.750               |
| <b>A039</b>     | <b>General Operating Expenses</b>         | <b>822.400</b>      | <b>783.790</b>       |
| <b>A03901</b>   | Stationery                                | 6.000               | 5.500                |
| <b>A03902</b>   | Printing and publications                 | 13.000              | 12.100               |

|                 |  |                  |                  |
|-----------------|--|------------------|------------------|
| <b>A03903</b>   | Conferences / Seminars / Workshops / Symposia                                |                  |                  |
| <b>A0397006</b> | Convocation Expenses   | 15.000           |                  |
| <b>A03905</b>   | Newspapers Periodicals and Books   | 13.000           | 12.950           |
| <b>A03906</b>   | Uniforms and Protective Clothing   |                  |                  |
| <b>A03907</b>   | Advertising & Publicity  | 15.000           | 13.100           |
| <b>A03912</b>   | Expenditure on Pakistani Delegations to Foreign Countries                    | 1.000            |                  |
| <b>A03915</b>   | Payment to Govt. Department for Services Rendered                            | 0.500            |                  |
| <b>A03917</b>   | Law Charges  |                  |                  |
| <b>A03918</b>   | Exhibitions Fairs & Other National Celebrations                              | 0.400            |                  |
| <b>A03919</b>   | Payments to Other services rendered - Audit Fee etc.                         | 5.000            |                  |
| <b>A03936</b>   | Foreign / Inland Training Course Fee   |                  |                  |
| <b>A03940</b>   | Unforeseen Expenditure / Contingencies                                       |                  |                  |
| <b>A0394204</b> | Specific Consumable  | 70.000           | 69.150           |
| <b>A03959</b>   | Stipends Incentives etc.   | 630.200          | 630.000          |
| <b>A03970</b>   | Others   |                  |                  |
| <b>A0397002</b> | i. Operational Cost-Office of Research Innovation & Commercialization (ORIC) | 14.600           | 13.700           |
| <b>A0397003</b> | ii. Operational Cost of Quality Enhancement Cell (QEC)                       | 2.200            | 2.190            |
| <b>A0397005</b> | iv. Conduct of Examinations  | 18.100           | 7.000            |
| <b>A0397006</b> | v. Sports Activities   | 0.100            |                  |
| <b>A0397008</b> | vii. Remuneration to Part-time Teachers / Visiting Faculty                   | 18.300           | 18.100           |
| <b>A03</b>      | <b>Total Operating Expenses</b>  | <b>1,234.050</b> | <b>1,164.768</b> |
| <b>A04</b>      | <b>Employees Retirement Benefits</b>   | <b>168.000</b>   | <b>166.900</b>   |
| <b>A04102</b>   | Commuted Value of Pension  | 131.000          | 130.000          |
| <b>A04114</b>   | Superannuation Encashment of LPR   | 26.000           | 25.950           |
| <b>A04170</b>   | Others - Assistance Package for Families of Employees                        | 11.000           | 10.950           |
| <b>A13</b>      | <b>Repair and Maintenance</b>  | <b>97.036</b>    | <b>88.364</b>    |
| <b>A13001</b>   | Transport  | 14.501           | 13.501           |
| <b>A13101</b>   | Machinery & Equipment  | 18.550           | 15.913           |
| <b>A13201</b>   | Furniture & Fixture  | 9.000            | 7.750            |
| <b>A13301</b>   | Office Buildings   | 20.000           | 18.000           |
| <b>A13302</b>   | Residential Buildings  | 15.000           | 14.250           |
| <b>A13703</b>   | I.T. Equipment   | 3.200            | 3.100            |
| <b>A13801</b>   | Maintenance of Gardens   | 8.825            | 8.700            |
| <b>A13901</b>   | Lines & Wires - Repair   | 5.000            | 4.850            |
| <b>A13920</b>   | Others - Repair  | 2.960            | 2.300            |
| <b>A021</b>     | <b>Feasibility Studies</b>   | <b>2.200</b>     |                  |
| <b>A02101</b>   | Feasibility Studies  | 2.200            |                  |
| <b>A022</b>     | <b>Research Survey &amp; Exploratory Operations</b>                          | <b>100.000</b>   | <b>95.000</b>    |
| <b>A02201</b>   | Research and Survey  | 100.000          | 95.000           |

|                 |  |                 |                 |
|-----------------|--|-----------------|-----------------|
| <b>A061</b>     | <b>Financial Assistance/ Scholarships</b>          | <b>32.000</b>   | <b>86.594</b>   |
| <b>A06101</b>   | Merit Scholarships                                 |                 |                 |
| <b>A0610102</b> | Need Based Scholarships                            |                 | 29.268          |
| <b>A06102</b>   | Other Scholarships                                 |                 |                 |
|                 | HEC Ehsaas Scholarship                             | 30.000          | 48.271          |
|                 | NEST   |                 | 4.812           |
|                 | Patient Aid Foundation                             |                 | 0.800           |
|                 | Professional Education Foundation                  |                 | 3.443           |
|                 | Loan to Students                                   | 2.000           |                 |
| <b>A06103</b>   | Cash Awards - for Meritorious Services             |                 |                 |
| <b>A063</b>     | <b>Entertainments and Gifts</b>                    | <b>5.000</b>    | <b>4.700</b>    |
| <b>A06301</b>   | Entertainments                                     | 5.000           | 4.700           |
| <b>A09</b>      | <b>Expenditure on Acquiring of Physical Assets</b> | <b>104.686</b>  | <b>98.300</b>   |
| <b>A09201</b>   | Hardware   | 26.006          | 26.200          |
| <b>A09202</b>   | Software   | 5.600           | 4.900           |
| <b>A09203</b>   | Purchase of I.T. Equipment                         | 20.000          | 17.000          |
| <b>A09501</b>   | Purchase of Transport                              | 10.000          | 10.000          |
| <b>A09601</b>   | Purchase of Plant & Machinery                      | 21.000          | 20.900          |
| <b>A09701</b>   | Purchase of Furniture & Fixture                    | 11.080          | 10.800          |
| <b>A09470</b>   | Others   | 11.000          | 8.500           |
| <b>A124</b>     | <b>Civil Works - Buildings &amp; Structures</b>    | <b>207.160</b>  | <b>206.760</b>  |
| <b>A12405</b>   | Electrification Plumbing and Other Infrastructure  | 207.160         | 206.760         |
|                 | <b>Total Expenses</b>                              | <b>4,214.36</b> | <b>4,138.07</b> |



## 12.5 SELF-GENERATED INCOME (2020-21)

Rs. in million

| Code No.        | Budget Heads   | 2020-21 (Budget) | 2020-21 (Revised) |
|-----------------|--|------------------|-------------------|
| C02813          | <b>Education General Fees [ 301 - 390 ]</b>                              | <b>3,069.047</b> | <b>2,780.100</b>  |
| <b>C0281301</b> | Admission Fees   | 41.556           | 25.000            |
| <b>C0281306</b> | Tuition Fees - Regular Fee Structure                                     | 374.673          | 300.000           |
| <b>C0281311</b> | Tuition Fees - Self-Support Scheme                                       | 148.280          | 145.000           |
| <b>C0281316</b> | Tuition Fees - Self-Financing Scheme                                     | 2493.088         | 2,300.000         |
| <b>C0281332</b> | Examination Fees - University On Campus Students                         | 8.350            | 7.100             |
| <b>C0281346</b> | Degree / Transcript Fee etc.   | 3.100            | 3.000             |
| C02812          | <b>Hostel Fees / User Charges [ 201 - 226 ]</b>                          | <b>50.000</b>    | <b>25.000</b>     |
| <b>C0281206</b> | Hostel Room Rent   | 25.000           | 10.000            |
| <b>C0281221</b> | Income from Transport / Buses  | 25.000           | 15.000            |
| C02810          | <b>Income from Endowments</b>  | <b>25.000</b>    |                   |
| C02815          | <b>Income from Regeneration &amp; Development Programs [ 566 - 572 ]</b> | <b>18.000</b>    |                   |
| <b>C0281572</b> | Income From Regeneration & Development Programs - Others                 | 18.000           |                   |
| C02818          | <b>Others [ 809 - 870 ]</b>  | <b>101.000</b>   | <b>119.223</b>    |
| <b>C0281830</b> | Sale of Prospectus / Forms   | 22.000           |                   |
| <b>C0281840</b> | Rent / Lease of University Buildings / Shops etc.                        | 2.000            |                   |
| <b>C0281860</b> | Interest on Investments / Cash Balances etc.                             | 37.000           | 60.000            |
| <b>C0281870</b> | Scholarship Income – HEC Ehsaas Program                                  |                  | 32.000            |
| <b>C0281870</b> | Other Misc. Receipts   | 40.000           | 27.223            |
|                 | <b>Total Own Income</b>  | <b>2,093.265</b> | <b>2,505.370</b>  |

## 12.6 Student Financial Aid:

*Dow University of Health Sciences, Karachi, has established a University Advancement Cell and Financial Aid Office for the financial facilitation/assistance to the students. The University is engaged in the process of increasing the number of funding organization / philanthropist and sign MOU with them.*

*The University future planning is to enhance duration of refunding amount of scholarship and develop a new fee structure with emphasis on minimizing the burden of scholarship awardee, to increase promotional activities through workshops, seminars, social media etc. and to arrange Symposium of different funding agencies with students, so that they may explain their program to students directly.*

| S # | Institution/Organization Offerings Financial Aid/ Scholarships To DUHS Students | No of Students provided Scholarship | Type of Assistance                   |
|-----|---|-------------------------------------|--------------------------------------|
| 1   | Ehsas Scholarship   | 365                                 | Scholarship                          |
| 2   | HEC Need Based Scholarship  | 161                                 | Scholarship                          |
| 3   | NEST Scholarship  | In Process                          | Scholarship                          |
| 4   | British Counsilate (Scotland) Scholarship                                       | 2                                   | Scholarship                          |
| 5   | Abdullah T. Wehwaria and Farhat Aleem Trust Scholarship                         | -                                   | Scholarship                          |
| 6   | Balochistan & Fata Scholarship  | 18                                  | Scholarship                          |
| 7   | Board of Intermediate Scholarship   | -                                   | Stipend                              |
| 8   | Dr. Abdul Aziz Khan Scholarship   | 8                                   | Scholarship                          |
| 9   | HEC Scholarship for Afghan National Students                                    | 27                                  | Scholarship                          |
| 10  | Ministry of Minority and Religious Affairs, Minority Scholarship                | -                                   | Stipend                              |
| 11  | Professional Education Foundation (PEF)   | 13                                  | Scholarship/Interest Free Loan/Zakat |
| 12  | Scheduled Caste Students Tharparkar Scholarship                                 | -                                   | Stipend                              |
| 13  | Sindh Endowment Education Scholarship   | In Process                          | Scholarship                          |
| 14  | The A&N Foundation  | -                                   | Scholarship                          |
| 15  | University of Karachi Alumni Association (UKAA)                                 | -                                   | Scholarship                          |
| 16  | GEAR Trust  | -                                   | Scholarship                          |
| 17  | Pakistan Bait ul Maal   | In Process                          | Stipend/Zakat                        |
| 18  | Ihsan Trust   | 20                                  | Interest Free Loan                   |
| 19  | DUHS Financial Assistance   | 13                                  | Financial Assistance                 |



|           |                     |    |             |
|-----------|---------------------|----|-------------|
| <b>20</b> | Zahid Bashir        | 14 | Scholarship |
| <b>21</b> | Sind Indigenous HEC | 13 | Scholarship |
| <b>22</b> | Midwifery           | 38 | Scholarship |



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 13

# University Governance

### 13.1 Syndicate Meetings:

- |  |
|--|
| ● 86 <sup>th</sup> meeting of Syndicate held on Wednesday, 30 <sup>th</sup> June, 2021   |
| ● 85 <sup>th</sup> meeting of Syndicate held on Saturday, 3 <sup>rd</sup> April, 2021    |
| ● 84 <sup>th</sup> meeting of Syndicate held on Saturday, 16 <sup>th</sup> January, 2021 |
| ● 83 <sup>rd</sup> meeting of Syndicate held on Saturday, 17 <sup>th</sup> October, 2020 |
| ● 82 <sup>nd</sup> meeting of Syndicate held on Saturday, 18 <sup>th</sup> July, 2020    |

### 13.2 Academic Council Meetings:

- |   |
|---|
| ● 22 <sup>nd</sup> (Online) Meeting of Academic Council held on Wednesday, 31 <sup>st</sup> March, 2021 |
| ● 21 <sup>st</sup> (Online) Meeting of Academic Council held on Monday, 12 <sup>th</sup> October, 2020  |
| ● 20 <sup>th</sup> (Online) Meeting of Academic Council held on Monday, 13 <sup>th</sup> July, 2020.    |

### 13.3 Board of Advanced Studies and Research Meetings:

- |   |
|---|
| ● 64 <sup>th</sup> meeting of the Board of Advanced Studies and Research held on 13 <sup>th</sup> April, 2021.    |
| ● 63 <sup>rd</sup> meeting of the Board of Advanced Studies and Research held on 16 <sup>th</sup> December, 2020. |
| ● 62 <sup>nd</sup> meeting of the Board of Advanced Studies and Research held on 27 <sup>th</sup> August, 2020.   |



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 14

# Office of Resource Generation / Development

The Vice Chancellor of Dow University of Health Sciences leads the functions of Resource Generation & Development. He is responsible to organize, administrate and manage projects for University Development and control the general activities of the University.

The main function of this office is to generate resources for University Development Programs and provide better services to all the stakeholders.

## 14.1 New Initiatives & Plans for Implementation

Department of Alumni and Marketing communications is persistently working on the Alumni engagement, industry relationships and fundraising activities.

- Around 70 companies, banks and corporate heads are contacted for corporate engagement.
- Extensive Ramadan Zakat Campaign is carried out to create awareness about services offered at the Dow University Hospital.

## 14.2 Future Plans and Development with Resource Generation

- Communication for CSR funds with following companies
  - Gorey International
  - Health Econix
  - Meezan Bank
  - OLP Financial Services
  - Standard Chartered Bank
  - Nestle
  - IFFCO
  - Unilever Pakistan
- Initiation of Alumni Membership Card as an alumni engagement tool to build alumni relationship.
- Alumni Engagement application is also developed and it's in the beta testing phase. It will be launched by the end of March 2022.
- Establishment of an Alumni Database for future fundraising and resource generation activities.
- An NDA is signed with the 1LINK, which is Pakistan's first fully licensed Payment System Operator and Payment Service Provider. 1LINK will provide a payment gateway, the subscription charges will be waived off.
- A Facebook campaign will be launched for Zakat and donation activities.
- In house installation of zakat/donation awareness material such as panaflex, standees and posters will be placed in Ojha Campus.
- Raise awareness & funds for the establishment of Center for Genomics in a public sector University of Pakistan.
- Upgrade in ICT Infrastructure (immediate need of 530 systems) in various digital libraries across DUHS- DVTC, ION, SPH, DCOP, IPM&R & DIMC.



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 15

# Health Center / Medical Facilities

## 15.1 Medical Facilities of Dow University of Health Sciences

Dow University Health System a unit of Dow University of Health Sciences is the largest and the most comprehensive provider of tertiary clinical care in the region. Anchored by Dow University Hospital, the System is comprised of Dow Institute of Radiology, Dow Diagnostic Research & Reference Laboratory, OJHA Institute of Chest Diseases, Dr. Abdul Qadeer Khan Institute of Behavioral Sciences, Institute of Physical Medicine & Rehabilitation, National Institute of Diabetes & Endocrinology, National Institute of Liver & GI Diseases, and Dr. Ishrat-ul-Ebad Khan Institute of Blood Diseases.

Dow University Hospital (DUH) was established in 2009 as a tertiary care teaching and training facility for students, residents and fellows in medicine, pharmacy, nursing, dental, and other allied health sciences. With a capacity of over 500 beds, DUH is the only modestly priced tertiary care hospital that serves the burgeoning healthcare needs of the community. It provides education and training to both undergraduate and postgraduate students in the following colleges/schools/institutes in DUHS:

|   |
|---|
| • Institute of Nursing & Midwifery                          |
| • Dow College of Pharmacy                                   |
| • Dow College of Biotechnology                              |
| • Dow International Dental College                          |
| • Dow International Medical College                         |
| • Dow Institute of Medical Technology                       |
| • Institute of Business & Health Management                 |
| • Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences |

It is among the few hospitals in the region that provide services for liver, kidney and bone marrow transplantation. Additionally, it offers complex and advanced medical and surgical care needed for patients in the areas of cardiology, cardiac surgery, neurology, neurosurgery, gynecology & obstetrics, emergency medicine, pediatrics, nephrology, physical medicine & rehabilitation, dermatology and other disciplines.

### Service area within Dow University- OJHA campus are:

|  |
|--|
| • Renal Transplant Unit                                  |
| • Dow University Hospital (DUH)                          |
| • Dow Institute of Radiology (DIR)                       |
| • Center For Surgical Oncology                           |
| • Dr. Abdul Qadeer Khan Institute Of Behavioral Sciences |



|   |
|---|
| <ul style="list-style-type: none"> <li>National Institute Of Diabetes And Endocrinology (NIDE)</li> </ul>   |
| <ul style="list-style-type: none"> <li>Dow Diagnostic Research &amp; Reference Laboratory (DDRRL)</li> </ul>  |
| <ul style="list-style-type: none"> <li>National Institute Of Liver And Gastrointestinal Diseases With Liver Transplant Unit (NILGID)</li> </ul>                                 |
| <ul style="list-style-type: none"> <li>Dental Sections, DIMC &amp; DDC (With 10 Units For Oral &amp; Maxillo-Facial Surgical Procedures) &amp; Dental OPD Of DIKIOHS</li> </ul> |

## Pharmacy Services

Pharmacy provides 6 days a week services to its customer. All prescription drugs and over the counter drugs are provided by the IPD & OPD pharmacy to cater to the needs of our patients as well as walk-in patients.

## Vaccination Services

Vaccination services are available as provided by the National Expanded Programme of Immunization (EPI) and free of cost at OICD.

## Physical Therapy Services

The Department of Physiotherapy provides comprehensive inpatient and outpatient services. All Physiotherapists are here to assess and treat patients of all ages and ailments and provide an important support service for our inpatients and out patients in need of dire physical therapists.

## In-patient Departments- IPD

|            |             |                 |
|------------|-------------|-----------------|
| Surgical   | Medical     | Pediatrics      |
| E.N.T      | Dialysis    | Psychiatry      |
| Orthopedic | Gynae / Obs | Ultrasound/ VIR |

## Critical care Units

|                            |                                 |  |  |
|----------------------------|---------------------------------|--|--|
| EEG                        | CTG                             | VEP  | EMG / NCV                                      |
| G.A Fitness                | Labor Room                      | Surgical ICU<br>( 06 Bed )   | Dialysis lab<br>(Newly built)                  |
| Medical ICU<br>(11 Bedded) | Neonatal ICU<br>(06 Incubators) | Operation Theater<br>(04 O.T Tables)   | Emergency<br>Department<br>(15 monitored Bed ) |
| Pulmonary<br>Function Test | Sleep Lab<br>(Polysomnography)  | Fully equipped 24 hours running ER<br>including separate minor O.T, Ultrasound<br>& X Ray. |  |

In summary, Dow Hospital provides following services and facilities to their patients:

|   |
|---|
| • Intensive Care Unit (ICU)   |
| • Dialysis Department   |
| • Living donor Liver transplant   |
| • High Dependency Unit (HDU)  |
| • Out Patient Department (OPD Block)  |
| • Neonatal Intensive Care Unit (NICU)   |
| • Hepato-pancreatic biliary surgeries   |
| • 24 hours Emergency Service Department   |
| • 24 hours Emergency Service Department   |
| • Vascular Interventional Radiology (VIR), highly specialized procedure for various diseases minimizing major surgeries |
| • All types of medical & surgical treatments to cardiac patients  |
| • Operation Theatre (OT) Complex for all major & minor surgeries  |

## Dow Diagnostic Research and Reference Laboratory (DDRRL)

*Dow Diagnostic Research and Reference Laboratory (DDRRL) was established in October 2007 to provide reliable, high quality diagnostic services of International standards for routine and specialized tests at economical rates (i.e. approximately at 30% as compared to private rates), for all socioeconomic segments of the population. The laboratory is the fastest growing lab in Pakistan, whose internal quality assurance is guaranteed by daily controls. DDRRL also has the provision of online electronic reporting and Image transfer facilities for all patients.*

## Radiological Testing Services

*The Dow Institute of Radiology and Dow Diagnostic Complex are facilitated with services that include the provision of all modern diagnostic facilities like:*

|                               |                                  |  |
|-------------------------------|----------------------------------|--|
| X-rays                        | Ultrasound                       | Fluoroscopy                                  |
| Mammography                   | Echocardiography                 | General Radiography                          |
| Computed Tomography (CT) Scan | Magnetic Resonance Imaging (MRI) | Dual Energy X-Ray Absorptiometry (DEXA) Scan |

## Operation Theatre (OT) Complex

*Dow University Hospital established a huge operation purpose built theater i.e. OT Complex of International standards having 80,000 sq. ft. area which is fully equipped with most modern equipment. The OT Complex has nine 09 operation theatres. Two are designated for Liver Transplant and hepato pancreatic biliary surgeries while two theatres are designated for Cardiac and Orthopedic Surgeries; the required special instruments and gadgets for the purpose are installed and provided.*

*The remaining five Theatres are also fully equipped with most modern equipment to have operations of General Surgery, Urology, ENT, Plastic Surgery, Neuro Surgery and Thoracic Surgery, Bariatric Surgery etc. This complex also has fully equipped recovery room. The operation floor has a unique channelizing operating in automation to collect the dirty liner with safety, which is then washed, sterilized and stored hygienically preventing infection.*

*The OT complex has state of art equipment including ventilators, invasive hemodynamic monitoring system and hemodialysis. Since various specialties also provide Postgraduate training, camera recording and CCTV system is also installed for telecasting live operative procedures. This new OT complex has lot of facilities for the doctors, staff and students, including rest rooms, canteens and separate lockers besides other facilities.*

## Physiotherapy Services Department

*Dow University of Health Sciences also offers physiotherapy services to outpatients through the attached department of the School of Physical Therapy at Institute of Physical Medicine & Rehabilitation (IPM&R). This department provides comprehensive rehabilitation services, i.e. cardiac, neurological musculoskeletal and pediatric rehabilitation, currently providing physiotherapy services to more than 55 patients per day. Since its establishment 14000 patients have been provided with physiotherapy services.*

## Blood Transfusion Services Program

*Safe blood is a crucial and irreplaceable component in the medical management of many diseases. In Karachi, because of the massive influx of patients from interior Sindh and other rural countryside, the demand of safe blood for transfusion could not be met with only replacement donors. Blood shortage in Pakistan is documented to be about 40% and this problem is further accelerated by inappropriate use of blood and its products.*

*Dow University of Health Sciences has taken the initiative towards provision of safe blood products to the needy patients. The overall project objective is to contribute to lowering hemorrhage mortality and to reduce the risk of transfusion transmitted infectious diseases and provision of safe and efficacious blood and blood products. The Voluntary non-remunerated blood donation (VNRBD) is the ideal source of quality blood, which forms less than 15 % of the demand of the blood in Pakistan. Under this initiative, Safe Blood Transfusion Services have been initiated with the strong pillars of voluntary blood donation with considerable community outreach, training of human resource in blood banking and transfusion medicine as per the recent scientific techniques and under the*

*WHO recommended Quality Management principles, developing service delivery in blood banking and transfusion laboratory sciences with continuous education and research in transfusion medicine.*

*DUHS blood donation services are extremely active under Donor Management Department of the Centre and disseminating the message of Voluntary Blood Donation to the population at large. The purpose is:*

|  |
|--|
| <ul style="list-style-type: none"> <li>• Creation of a culture of voluntary blood donation through communication and education.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Build a stable blood donor pool by motivating and recruiting new donors from low-risk populations, and encouraging existing or lapsed donors to become regular donors and to recognize the contribution to society made by blood donors.</li> </ul> |
| <ul style="list-style-type: none"> <li>• Provide quality donor care, so that blood donation is not onerous</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Provide quality assured blood products to all the needy patients</li> </ul>   |
| <ul style="list-style-type: none"> <li>• And create a sustainable foundation of advanced WHO recommended blood banking in Pakistan.</li> </ul>   |

## **OJHA Institute of Chest Diseases (OICD) & Chest Disease Clinics**

*OICD was established in the early forties, as a TB sanatorium and now recognized as a center of excellence for Tuberculosis by the World Health Organization (WHO). The services provided here are free of cost and normally such type of ICU services costs around Rs. 20,000 - Rs. 50,000 / day in private hospitals.*

*The facilities provided to patients include high quality diet, recreation environment with TV, cable etc. and vocational training and support in the form of training for candle making and stitching etc. The Dow University takes the responsibility to sell their products for them.*

*Four out-patient clinics of OICD in the periphery of the city are also functioning, these are chest clinics of Iqbal Yad, Nazimabad, Lyari and Malir, Each clinic has a well-organized DOT (Directly Observed Treatment), where these patients with TB are provided medicines and health education.*

*Daily about 600 patients visit these TB clinics for DOTS treatment and follow up.*

*TB HOSPITAL of 250 beds provides all possible facilities to indoor and outdoor patients for diagnosis and treatment of tuberculosis.*

*MULTI DRUG RESISTANT (MDR) TB is a great problem. In Pakistan about 15,000-20,000 tuberculosis patients presently suffering from Multi-Drug Resistant (MDR TB), each patient requires approx 500,000 Rs. for management including costly medicines and other logistics but at OICD their treatment is free.*

## 15.2 Health Insurance for DUHS Employees

*Financial responsibilities are considered as the main source of stress. To reduce the financial burden of its employees; DUHS provides medical insurance coverage to its all employees appointed on a Regular basis and to /Contractual basis with at least one year service.*

*The insurance coverage is currently provided by Askari General Insurance. The details of this health insurance scheme are discussed here as under:*

*The Employees & their dependents covered are divided in the following categories:*

### Benefit Structure for Employees and Staff of DUHS

| Benefits/ Coverage                                      | Categories and Annual Entitlements in Rs. |                           |                           |
|---|---|---------------------------|---------------------------|
|   | Plan - A<br>BPS - 19 & 22                 | Plan - B<br>BPS - 16 & 18 | Plan - C<br>BPS - 1 to 15 |
| Hospitalization Limit for Employees & Spouses (each)    | 1,200,000/-                               | 700,000/-                 | 400,000/-                 |
| Hospitalization Limit for Children (each)               | 750,000/-                                 | 350,000/-                 | 200,000/-                 |
| Hospitalization Limit for Parents (each)                | 1,000,000/-                               | 400,000/-                 | 200,000/-                 |
| Daily Room / Bed limit per day                          | 37,000/-                                  | 9,000/-                   | 6,000/-                   |
| Maternity Limit for Normal Delivery & Miscarriage       | 100,000/-                                 | 60,000/-                  | 40,000/-                  |
| Maternity Limit for Caesarean Section & Multiple Births | 200,000/-                                 | 100,000/-                 | 60,000/-                  |
| Out-Patient Reimbursement                               | 70,000/-                                  | 30,000                    | 20,000                    |

Eligible Medical Expenses (including but not limited) to be covered from ANNUAL HOSPITALIZATION LIMITS shall include Hospitalization & Day Care Treatment as Follows (For Premium & Dow ASO Pool Policies).

### Benefits of Employees Covered under IPD/ Hospitalization

|    |                   |
|----|-------------------|
| 1. | Burns             |
| 2. | Stroke/CVA        |
| 3. | Surgical fee      |
| 4. | Thyroid Dichotomy |

|     |  |
|-----|--|
| 5.  | Psychiatric Treatments   |
| 7.  | Diagnostic Investigations  |
| 8.  | Local Ambulance Charges.   |
| 9.  | Congenital Birth Defects.  |
| 10. | Organ Transplant Implants  |
| 11. | Operation Theatre Charges  |
| 12. | Blood and Oxygen supplies  |
| 13. | Daily Room & Board Charges.  |
| 14. | ICU/CCU/SCU/HDU charges  |
| 15. | Angioplasty/By-Pass Surgery  |
| 16. | Maternity related complications.   |
| 17. | In-Hospital Consultation Charges   |
| 18. | Declared/Undeclared pre-existing conditions  |
| 19. | Emergency Room treatment leading to hospitalization  |
| 20. | Enhancement of Hospitalization limit in case of Accidental injuries (50% of available limit)   |
| 21. | Pre-Post Hospitalization covered including OPD, Diagnostic Tests, Consultation Charges & prescribed Medicines within 30 days prior to or after Hospitalization.  |
| 22. | Miscellaneous Hospital Services and Supplies (Drugs, Dressings, Prescribed Medicines, Laboratory Examinations, Physiotherapy, intravenous injections & solutions, administration of blood and blood plasma including cost and any other fluids administered during surgery.) |
| 23. | Other Operative procedures   |

### **Benefits of Employees Covered Under Maternity**

|     |  |
|-----|--|
| 1.  | Anesthesia Charges.  |
| 2.  | Pre & Post Natal Expenses.                                     |
| 3.  | Coverage of Congenital Birth Defects.                          |
| 4.  | Circumcision Charges of Newborn Baby Boys.                     |
| 5.  | Midwife Charges if delivery takes place at home.               |
| 6.  | Operation Theatre/Physician's/Surgeon's charges.               |
| 7.  | Normal/Caesarea/Multiple Births/Force Delivery.                |
| 8.  | Midwife Charges if delivery takes place at home.               |
| 9.  | Follow-up visits of patients during or after pregnancy.        |
| 10. | Prescribed Medical Supplies & Services during Hospitalization. |

|     |  |
|-----|--|
| 11. | Declare/Undeclared Pre-Existing Conditions will be full covered.                                 |
| 12. | New Born Babies Nursery Care Charges including incubator facility.                               |
| 13. | Obstetricians Fee for Delivery & Consultation during Hospitalization.                            |
| 14. | New Born Babies are to be covered from very 1 <sup>st</sup> day of Birth with Separate IP limit. |

### Benefits Covered Under OPD

|     |  |
|-----|--|
| 1.  | Vaccinations.  |
| 2.  | Prescribed Medicine  |
| 3.  | Psychiatric Treatment  |
| 4.  | Homeopathic Treatment.   |
| 5.  | Prescribed Diagnostics Tests   |
| 6.  | Accident Related Dental Treatment.   |
| 7.  | Declared / Undeclared Pre-Existing Conditions.   |
| 8.  | Physician / Consultant's fees for consultations.   |
| 9.  | Pathology, Radiology and Diagnostic Tests, X-rays & Ultrasounds.                             |
| 10. | Costs for Treatment by Therapists and Complementary Medicine Practitioners.                  |
| 11. | Wellness Mammogram, Pap smear, Prostate Cancer Screening or Colon Cancer Screening.          |
| 12. | Dental Treatment including Extractions Teeth, Root Canaling or Capping or Similar Treatment. |

### Day Care Facilities

|                              |                  |                             |
|------------------------------|------------------|-----------------------------|
| MRI                          | CT Scan          | Lithotripsy                 |
| Angiography                  | Gastroscopy      | Herniorrhaphy               |
| Appendectomy                 | Cataract Surgery | Thallium Scan               |
| Cholecystectomy              | Excision Biopsy  | Kidney Dialysis             |
| Partial Mastectomy           | Veins/Varicose   | Tonsillectomy/Adenoidectomy |
| Non-Malignant Tumors/Abscess |                  |                             |



|  |
|--|
| Endoscopy/Cystoscopy/Colonoscopy   |
| Treatment of Cancer (including chemotherapy & Hormonal therapy with pre and post cover)  |
| Treatment of Hepatitis A B & C such as Inj. Interferon Therapy/Tab. Sovaldi or equivalent along with all combination therapy, consultation & Lab Tests such as PCR/LFT up to Hospitalization Limits. |
| Treatment of all injuries/fractures & lacerated wounds (out-patient within 24 hours).<br>Accidental Dental Treatment (Out-Patient within 48 Hours for Pain relief only).                             |
| Other day care procedures that need on emergency basis.  |
| Other Operative Procedures.  |

## 15.3 Counseling for Stress Reduction

### For Students:

*Dow University of Health Sciences, Karachi, has taken the initiative to council the University students for their stress reduction by facilitating or providing financial assistance through various Institutions/Organizations. There are various organizations which are not in connection with the University, in such organizations University still facilitates students as a forwarding authority like others. Currently University signed MOU with various philanthropists, to facilitate students as well as channelize system. Meanwhile, University forwarded applications to the following Institutions with respective assistance/facility.*



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

# DUHS

## ANNUAL STANDARDIZED REPORT

### 2020-21

## CHAPTER 16

# Sustainability

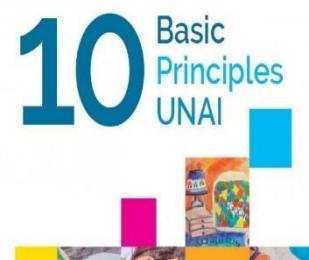
## 16.1 Good Health & Well Being - SDG 03

### Global and National Collaborations

The Dow University of Health Sciences collaborated with different organizations / bodies at local, national and international levels to improve health and wellbeing.

At Global level, DUHS has acquired United Nation Academic Impact (UNAI) Membership

Citation in April 2020, as a member and values its commitment to its ten principles which includes; Commitment to the United Nations Charter, Human Rights, Educational opportunity for all, Sustainability, Capacity-building in higher education systems, Global citizenship, Peace and conflict resolution, Addressing poverty, Higher Education opportunity for every interested individual and the “unlearning” of intolerance.



### Community Outreach Programs

- **Department of Community Medicine, Dow Medical College (DMC)**

The Department of Community Medicine, DMC organized various outreach sessions/TV programs for the community i.e. Importance of Polio Vaccination, Child Immunization, Advocacy Session for Parents during COVID-19 and breast-feeding promotions etc. Below is the event calendar hosted by community medicine department beyond campus during 2020-21.

| S. No | Event/ Course   | Date                        | Venue   | Facilitator/s   |
|-------|---|-----------------------------|---|---|
| 1.    | Seminar on COVID19 Health promotion and prevention (zoom webinar) | 9 <sup>th</sup> July, 2020  | Online Webinar                                  | Prof. Nighat Nisar, Dr. Zulfiqar, Dr. Ashraf, Dr. Maham, Dr. Khalid |
| 2.    | Seminar on COVID19 Health promotion and prevention (zoom webinar) | 13 <sup>th</sup> July, 2020 | Online Webinar                                  | Prof. Nighat Nisar, Dr. Zulfiqar, Dr. Ashraf, Dr. Maham, Dr. Khalid |
| 3.    | Awareness session, being on importance of polio vaccination.      | 30 <sup>th</sup> July, 2020 | Facebook Seminar in Collaboration with Pakistan | Dr. Khalid Shafi  |

|    |   |                               |                              |                  |
|----|---|-------------------------------|------------------------------|------------------|
|    |   |                               | Polio Eradication Initiative |                  |
| 4. | March to School- Advocacy Session for Parents during covid-19 pandemic  | 15 <sup>th</sup> August, 2020 | Facebook Webinar             | Dr. Khalid Shafi |
| 5. | Community awareness session on GTV child immunization against covid-19  | 12 <sup>th</sup> Sept, 2021   | GTV                          | Dr. Khalid Shafi |
| 6. | Dr Khalid Shafi spent whole day of 3rd Nov in this area along with Polio teams for advocacy for polio vaccine | 5 <sup>th</sup> Nov, 2020     | UC no 5 Godhra North Karachi | Dr. Khalid Shafi |
| 7. | Community advocacy through Radio channel for National immunization drive (NID)                                | 2 <sup>nd</sup> Dec, 2020     | Radio Pakistan Karachi       | Dr. Khalid Shafi |
| 8. | Community awareness Webinar on Child Immunization   | 28 <sup>th</sup> June 2021    | Hashmanis Hospital           | Dr. Khalid Shafi |







- **Department of Community Dentistry, Dow International Dental College (DIDC)**

### **Free Dental Camp DIDC in collaboration with Pakistan Rangers ASGR Wing 91, Lines Area, Karachi**

The Department of Community and Preventive Dentistry, Dow International Dental College participated in a Community Outreach program on Sunday, 28-3-2021 in collaboration with Pakistan Rangers. A Free Medical and Dental camp was organized by Pakistan Rangers, Headquarter Abdullah Shah Ghazi Rangers (ASGR) Wing 91 at Government Boys and Girls Secondary School, Lines Area, Saddar Town Karachi.

The Faculty members along with House officers participated in this oral health screening and health promotion activity. The event concluded with a certificate distribution ceremony and all participants received great appreciation and certification from the Wing Commander.



### **World Oral Health Day - DIDC**

Every year, World Oral Health Day is celebrated on 20 March. The slogan for this year was “Be proud of your mouth”. For the celebration of World Oral Health Day, a seminar was organized by the Department of Community Dentistry, Dow International Dental College. This event was initiated with the recitation of the Holy Quran by Dr. Umar Hassan. Dr. Mustafa Naseem Assistant Professor in the Department of Community Dentistry highlighted the significance of oral health to the audience. Later on, Dr. Bilal Basheer gave an overview of CBCT. Lecturers of Community Dentistry, Dr. Wajiha Anzar and Dr. Maryam together with House officers took part in oral screening and free sample distribution in Oral Diagnosis Department.





- **Department of Community Dentistry, Dow Dental College (DDC)**

### Community Dental Health Education at Ahmed Bawany Academy, Karachi

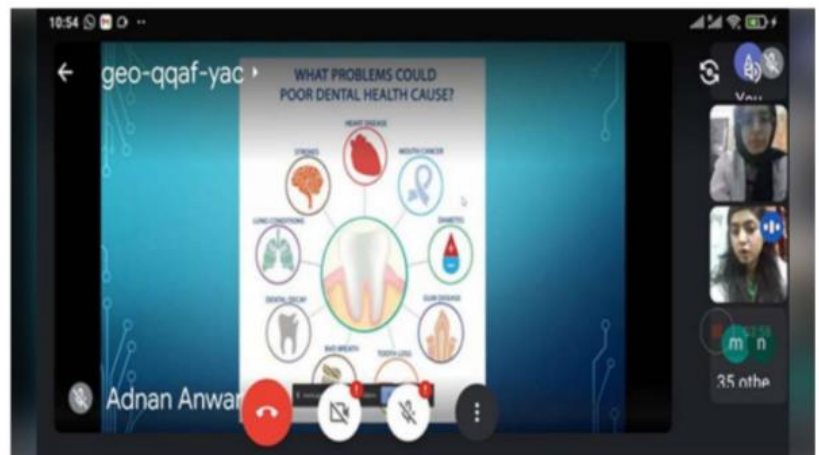
The Department of Community Dentistry of Dow Dental College conducted an online health promotion activity with faculty and students of Ahmed Bawany Academy on 5<sup>th</sup> May, 2021 to educate about oral health and healthy diet. They used “Google Meet” to connect with oral health care promoters including Dr. Muhammad Taqi, Head of Community Dentistry Department DDC, Dr. Adnan Anwar Ali Sukkurwalla, Fatima Farooq, Laiba Ali, Sarosh, Sonia, Kalpana and Chena with students and seven school teachers. At the end of the session an interactive session was conducted in which the students asked questions about their personal and daily life issues regarding oral health. The teachers and the principal of the school appreciated the efforts of Dow Dental College.



#### Dow Dental College Arranges E-Oral Health Awareness Visit

DN Report • 12:52 PM, 22 Sep, 2021

National



dow, oral health, awareness

SHARE: in f t w

**KARACHI:** The Community Dentistry Department of Dow Dental College (DDC), Dow University Of Health Sciences (DUHS), recently arranged an E-visit of faculty and students of DUHS to Ahmed Bawany Academy to assure the uninterrupted continuation of health promotion efforts.

As Academic Life was disrupted in the wake of the COVID 19 pandemic, internet-based E-learning provided the platform necessary to continue uninterrupted dental education in a safe environment while maintaining Covid 19 measures.



- **School of Dental Care Professionals (SDCP)**

1. An administrative collaboration between School of Dental Care Professionals and Woman run Fun to Learn organization was carried out on 16<sup>th</sup> November 2020.
2. Harmful effects on general and oral health were discussed under the “Student led Public awareness programs” in August 2020 where group of students prepared Oral Health awareness posters and those were displayed in the main OPD area of Dow University hospital.
3. Civic engagement activity through “Fun to learn health and hygiene program” held on 21st November 2020, where students of Secondary School and madrassa were given Dental Hygiene awareness.



- **School of public Health (SPH)**

### **Health Promotion Initiative**

The aim of this project was to improve understanding of pre-diabetes, both among healthcare professionals as well as general public and increase their awareness for early detection, behavioral modification and to prevent type 2 diabetes. School of Public Health (SPH)-DUHS and the Primary Care Diabetes Association Pakistan (PCDA) have partnered with the Martin Dow Pharmaceuticals (Pak) Ltd in May 2021, to launch the first awareness campaign “Rakho Khayal Apna Diabetes se Pehle” about prediabetes.

## **Pak-UAE Free Medical Camp-DUHS**

A one day free Medical Camp was set up at Rehri Goth Ibrahim Hydri-Karachi by Emirates Doctors and Pakistan Eye Bank Society on 31<sup>st</sup> January, 2021 where doctors examined more than 1000 patients and gave free medicine. Prof. Dr. Amanullah Abbasi professor of Medicine Dow university of Health Sciences, Dr. Khalid Shaikh-Commissioner Healthcare Commission, Prof. Dr. Farhan Essa Abdullah-Governor Rotary Club Karachi, Prof. Dr. Saeed Khan-Professor of Microbiology Dow University of Health Sciences and other famous personnel from social and political organizations and a large number of residents visited the camp. The team of doctors included Eye care specialist, Cardiac specialist, Child specialist, General Physician, Dental surgeon, Endocrinologist and other doctors who examine the patients.

## **PAK – UAE FREE MEDICAL CAMP**

**VENUE:**  
**REHRI GOTH**  
**IBRAHIM HYDERI**



**SUNDAY 31ST**  
**JANUARY, 2021**

**EMIRATES DOCTORS &**  
**PAKISTAN EYE BANK SOCIETY**

**Organize One Day Free Medical Camp**

### **General Clinic:**

• Cardiac • Pediatric • Eye • General Physician • Gynae

### **Diagnostics:**

• Lipid Profile • Blood Sugar • ECG • BP

• Mini Lab Biochemistry • Cardiac Monitor And Provide Free Medicine

**Dear All Volunteers Should Wear Mask All Camp Time & Make Sure Social Distancing Due to COVID-19 Pandemic & Bring a White Coat.**

**The Volunteers Will Provided Certification, Transportation,  
Pick & Drop**

**Departure 1: 7:15 am Pakistan Eye Bank Hospital Near Nagan Chowrangi**

**Departure 2: 7:45 am From DIMC Cafeteria, DOW University Hospital  
(OJHA CAMPUS) Karachi.**


**VENUE: REHRI GOTH IBRAHIM HYDERI**

| LIST OF COMMUNITY OUTREACH PROGRAMS                     |  |                    |   |
|---|--|--------------------|---|
| S. No   | Event/Course   | Date               | Hosted by   |
| <b>Dr. Fakhshena Anjum-Dow College of Pharmacy</b>      |  |                    |   |
| 1.  | Breast Cancer Awareness  | 8th November, 2020 | Essa Lab, by Rotaract Club of Karachi Kolachi                                   |
| 2.  | Breast Cancer Awareness  | 27th October, 2020 | Nazeer Hussain University in collaboration with Pakistan Graduates' Association |
| <b>Dr. Saeed Khan-Dow International Medical College</b> |  |                    |   |
| 1.  | Biorisk Management Conference  | 4-5 June-21        | Online  |
| 2.  | ADMINISTRATIVE FRAMEWORK   | 3-Mar-21           | Online  |
| 3.  | COVID-19 Pandemic: Challenges and Opportunities  | 1-Feb-21           | The Department of Biology at the College of Science, University of Bahrain,     |
| 4.  | Laboratory Emergency Preparedness And Response Program number: organized by Safer behaviors (USA) and Pakistan Biological Safety Association     | 4-Dec-20           | Safer behaviors (USA) Online  |
| 5.  | Shipping of Infectious Substances; organized by Safer behaviors (USA) and Pakistan Biological Safety Association                                 | 2-Dec-20           | Safer behaviors (USA) Online  |
| 6.  | ISO 35001 and Safety Surveillance; organized by Safer behaviors (USA) and Pakistan Biological Safety Association                                 | 2-Dec-20           | Safer behaviors (USA) Online  |
| 7.  | Addressing Human Risk Factors   Safety Climate Vs. Culture; organized by Safer behaviors (USA) and Pakistan Biological Safety Association        | 4-Dec-20           | Safer behaviors (USA) Online  |
| 8.  | Effective Training Strategies   Behavioral Cues   Online Training; organized by Safer behaviors (USA) and Pakistan Biological Safety Association | 4-Nov-20           | Safer behaviors (USA) Online  |

|            |  |           |                              |
|------------|--|-----------|------------------------------|
| <b>9.</b>  | Donning And Doffing PPE   Effective Glove Removal Strategies; organized by Safer behaviors (USA) and Pakistan Biological Safety Association                        | 12-Nov-20 | Safer behaviors (USA) Online |
| <b>10.</b> | SOP Evaluation, Validation, And Verification; organized by Safer behaviors (USA) and Pakistan Biological Safety Association  | 6-Nov-20  | Safer behaviors (USA) Online |
| <b>11.</b> | Inherent And Residual Risk Factors & Containment Levels; organized by Safer behaviors (USA) and Pakistan Biological Safety Association                             | 15-Nov-20 | Safer behaviors (USA) Online |
| <b>12.</b> | Biological risk mitigation & the Four primary controls of Biosafety and biosecurity; organized by Safer behaviors (USA) and Pakistan Biological Safety Association | 2-Nov-20  | Safer behaviors (USA) Online |
| <b>13.</b> | Leaders care model; organized by Safer behaviors (USA) and Pakistan Biological Safety Association  | 29-Oct-20 | Safer behaviors (USA) Online |




## Pictorial Gallery of Community Outreach Programs


 UNIVERSITY OF BAHRAIN  
COLLEGE OF SCIENCE


Under the Patronage of  
**H.E. Prof. Riyad Yousif Hamzah**  
President of the University of Bahrain


The Department of Biology at the College of Science  
invites you to join our Virtual Symposium  
**"An Insight into COVID-19 Pandemic"**


Monday, 01 Feb. 2021, 14:00 PM – 17:00 PM  
Tuesday, 02 Feb. 2021, 10:00 AM – 13:00 PM


 **Dr. Muhammad Munir**  
Molecular Virologist, Lancaster University, UK


 **Prof. Dr. Saeed Khan**  
Molecular Virologist, Dow University of Health Sciences, Pakistan


 **Dr. Salman Afridi**  
Scientist, Institute of Virology, Technical University Munich, Germany

 **Dr. Jameela Al Salman**  
Senior Consultant in Infectious Diseases, Ministry of Health, Kuwait

 **Dr. Sohaib Ashraf**  
Research Fellow, Newcastle General Hospital, Newcastle School of Biomedicine, UK

 **Dr. Abdulkarim Abdulrahman**  
Team member of National COVID-19 Task Force, KHI Hospital, Pakistan

 **Dr. Muhammad Nauman Zahid**  
Molecular Virologist, Asst. Prof., Dept. Of Biology, UOB

 **Dr. Maysoon Nedham Awadh**  
Assistant Professor, Dept. of Biology, UOB

**VIRTUAL**  
**BIORISK MANAGEMENT CONFERENCE**

**JUNE 4-5, 2021 4:00-07:00 PM PKT**

The virtual conference is open to scientists, health care workers, lab technicians and technologists, students and teachers in life science fields.

**THEMATIC AREAS**

- Biological Risk Management: Lessons learnt from the pandemic
- Biosafety in Clinical Settings
- Biological Risk Management in the Laboratories
- Innovation and Challenges Related to PPE During Pandemic
- How the Public Dealt with the Pandemic
- Future Steps and Potential for Improvement

**Registration and Abstract Submission Link**

<https://forms.gle/N1yYB8VboA8aqRQo7>

- Registration is free
- Conference certificate will be awarded
- Best oral & poster presenter will be awarded with souvenir/cash and certificate

**Last date to Apply: May 25, 2021**





**Organizing Committee**

**Members**

**Prof. Dr. Saeed Khan**

-Dr. Uzma Bashir -Dr. Javed Muhammad  
-Dr. Mashaal Chaudari -Ms. Fariha Munir -Mr. Shehroze Ameen

-Dr. Saima Saleem/Ms. Aneeta Hotwani (Sindh) -Dr. Hafsa Muhammad (KP)  
-Dr. Ali Ahmad Sheikh (Punjab) -Dr. Syeda Shazia Adeel (Federal, Islamabad) -Dr. Zahida Qasim (AJK)  
-Dr. Ishtiaq Hussain (Gilgit Baltistan) -Dr. Asadullah (Balochistan)

For details visit [www.pbsa.org.pk](http://www.pbsa.org.pk) for any query

Shehroze: +92-321-5288900  
OR  
farihamunir.pbsa@gmail.com

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## 16.2. Quality Education – SDG 04

### Access to Educational Resources

Students and faculty at DUHS have access to COURSERA through HEC Pakistan, which provided access to Coursera, which is one of the best learning platforms with 1000+ courses and 28 learning tracks that will help students and faculty to develop their skills and fast track their career.

HEC distributed licenses to Public Sector University students and faculty. In order to encourage and motivate the students and faculty, the HEC has decided to further subsidize licenses, i.e. Rs 4000 / license and 100% reimbursement, subject to successful completion of at least three courses. For students with disabilities, the license is 100% free.

### NAHE: National Academy of Higher Education introduces the online teaching and learning section:

In keeping with the remit of NAHE, and in view of the current COVID-19 pandemic, we are extending support to the higher education sector in moving to online delivery of courses. An important aspect of this support is to share resources that will help us all to take our instruction online, which for many is the start of a new journey and into untested domains of working.

To this end we have generated a list of online resources for teaching and learning. These consist of a variety of resources presented in various formats – webinars, PowerPoint presentations, tutorials as well as short courses to learn about online teaching and learning. The resources identified below have been collated from our international networks, shared by colleagues and institutions.

### Public Events hosted by DUHS

DUHS hosted various public lectures, walks and community educational events such as **World TB Day Walk** organized by OJHA Institute of Chest Diseases – DUHS on 24<sup>th</sup> March, 2021, public awareness walk organized by Dow Institute of Cardiology on the occasion of **World Heart Day** on 29<sup>th</sup> September, 2020, a live webinar on **World Hepatitis Day** hosted by National Institute of Liver and Gastrointestinal Diseases-DUHS on 28<sup>th</sup> July, 2020, webinar on **Breast Cancer Awareness** was held on 12<sup>th</sup> October, 2020 training workshop on **Biosafety and Security in Health Care Institutions** held on January 09, 2021.



**Ojha Institute of Chest Diseases**  
Dow University of Health Sciences



In collaboration with  
TB control program Sindh, Stop TB Partnership Pakistan & Pakistan Chest Society

Invites you to

## WORLD TB DAY WALK

ON 24<sup>TH</sup> MARCH 2021 AT 09:00 AM FROM MAIN GATE OJHA TB HOSPITAL

### GUEST OF HONOUR

**Mr. Heer Ismail Sohoo**  
Parliamentary Secretary: Zakat & Ushr

### Partner Representation

Dr. Teerath Das, TB Control Program  
Dr. Iqtedar Ahmed, Stop TB Partnership Pakistan  
Dr. Nausheen Ahmad, Pakistan Chest Society

### EVENT HOST

**Prof. Zamaz Wahid**  
Pro-Vice Chancellor & Principal DIMC,  
Dow University of Health Sciences

### Prof. Nisar Ahmed Rao

Director, Ojha Institute of Chest Diseases

**DOW INSTITUTE OF CARDIOLOGY**

**DOW UNIVERSITY OF HEALTH SCIENCES**



*CORDIALLY INVITE YOU TO ATTEND*

*"Public Awareness Walk"*

*Organized by*

**Dow Institute of Cardiology**

*On the occasion of*

**World Heart Day**

**Date:** Tuesday, 29<sup>th</sup> September 2020

**Time:** 09:00 am

**Venue:** O.T. Complex To OPD Block,  
Dow University Hospital Ojha campus  
Dow University of Health Sciences, Karachi.



**USE ♥ TO BEAT ♡**

**Dow University of Health Sciences**  
**HEC & PINK RIBBON YOUTH AWARENESS PROGRAMME 2020**  
**Webinar on Breast Cancer Awareness**

**Moderator**  
  
Dr. Imrana Zulfikar  
Associate Professor Surgery  
DUHS

**Panellist**  
Questions and answer  
  
Prof. Shaista Masood Khan  
Consultant Breast Surgeon  
Aga Khan University Hospital

Prof. Noor M. Soomro  
Oncologist,  
Medical Superintendent CHK

**Panel Discussion**  
  
Prof. Farhat Jaleel  
Consultant Breast Surgeon  
Head of Department Breast Unit  
CHK DUHS

Dr. Omemma Saleem  
Assistant Professor  
DUHS

Dr. Masooma Zaidi  
Consultant Oncoplastic Breast Surgeon,  
Portsmouth UK

Dr. Asghar H. Asghar  
Oncologist,  
Kiran Hospital

**TOPICS**  
Breast Cancer Awareness  
The need of time

Breast cancer screening and  
local perspective

Advances in breast surgery:  
International perspective

Myths in  
Breast Cancer

Online event link: TBA  
Date: October 12, 2020  
Time: 2:00p.m. - 4:00p.m.

dow.university dow\_uni dow\_university DUHS

**Thinking beyond COVID**  
**Live Webinar**  
on  
**WORLD HEPATITIS DAY**  
TUESDAY 28<sup>th</sup> JULY 2020 @ 11:00AM - 12:00PM

**ELIMINATE HEPATITIS**  
**Find The Missing Millions.**

Dr. Nadeem Syed Hassan  
Expert  
Director  
NILGID, DUHS

Prof. S. M. Zahid Azam  
Expert  
Medical Superintendent  
DUHS, Ojha Campus

**Target Audience:**  
1. Health care workers  
2. General public  
3. Patients / care takers  
4. General practitioners

Dr. Abdullah Bin Khalid  
Assistant Professor  
NILGID, DUHS

Dr. Muhammad Tayyab Usmani  
Assistant Professor  
NILGID, DUHS

Dr. Sabiha Shabbir  
Assistant Professor  
NILGID, DUHS

Dr. Kailash  
Assistant Professor  
LTU, DUHS

**Liver Cirrhosis and Complications**  
**Chronic Viral Hepatitis**  
**Fatty Liver**  
**A Transplant Hepatologist's Perspective**

+92301-0083083 Zoom Meeting ID: 923 7670 2342  
Zoom Password: 733391

Facebook/Twitter/Google Plus/Blog/YouTube



**Events hosted by Prof. Dr. Saeed Khan-American Society for Microbiology Ambassador to Pakistan**

|     |  |                  |        |
|-----|--|------------------|--------|
| 1.  | Impact of COVID-19 Pandemic on Education and Tourism in Gilgit Baltistan                         | 30-Jun-21        | Online |
| 2.  | Laboratory Diagnostic Methods for COVID 19   | 24-25 June, 2021 | Online |
| 3.  | COVID-19 Updates from Khyber Pakhtunkhwa (KPK)   | 23-Jun-21        | Online |
| 4.  | Training on Laboratory Biorisk Management  | 21-23 Jun 2021   | Online |
| 5.  | Update on COVID-19 Pandemic: Importance of Training and Biorisk Management                       | 16-Jun-21        | Online |
| 6.  | COVID-19 Diagnosis and Clinical Management   | 9-Jun-21         | Online |
| 7.  | The Story of Microbiology and ASM in Pakistan  | 2-Jun-21         | Online |
| 8.  | Challenges Faced by Molecular Lab During COVID-19  | 27-May-21        | Online |
| 9.  | COVID-19: Transitioning Towards a New Normal   | 26-May-21        | Online |
| 10. | Understanding COVID-19 Antibody Tests  | 19-May-21        | Online |
| 11. | My COVID Experience as HCW from Bench to Bed: Myths and Facts                                    | 12-May-21        | Online |
| 12. | SOPs + Vaccination = Solution for COVID-19 Pandemic  | 5-May-21         | Online |
| 13. | Current COVID-19 Situation: India vs Pakistan  | 28-Apr-21        | Online |
| 14. | COVID-19: Herd Immunity  | 21-Apr-21        | Online |
| 15. | COVID-19: Vaccination in Pakistan and related concerns   | 14-Apr-21        | Online |
| 16. | COVID-19: Vaccine and Vaccination  | 7-Apr-21         | Online |
| 17. | COVID-19: Available lab test, Interpretation, and Misunderstandings                              | 31-Mar-21        | Online |
| 18. | COVID-19 variants: What's the concern?   | 24-Mar-21        | Online |
| 19. | SARS-Corona Virus-2 (COVID-19 Pandemic)  | 17-Mar-21        | Online |
| 20. | Biosafety and Biosecurity  | 15-Oct-20        | Online |
| 21. | Introduction to Biomedical waste management (BWM) system. Administrative Framework of BWM system | 14-Oct-20        | Online |

**AMERICAN SOCIETY FOR MICROBIOLOGY**

The ASM Ambassador to Pakistan is organizing a series of webinars to acknowledge and highlight the valuable services of Microbiologists during the current pandemic

## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #13: COVID-19 Diagnosis and Clinical Management**

**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan

**Guest Speaker**  
Dr. Shobha Luxmi  
Assistant Professor  
Infectious Diseases Specialist  
Dow University of Health Sciences, Karachi, Pakistan

**09th June 2021**  
11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
Meeting ID: 973 9816 2691  
Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)

Free and Open Webinar

**AMERICAN SOCIETY FOR MICROBIOLOGY**

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan

**Guest Speaker**  
Dr. Faisal Sultan  
Special Assistant to the Prime Minister on Health,  
Chief Executive Officer,  
SKMCH, Lahore,

**05th May 2021**  
11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
Meeting ID: 973 9816 2691  
Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)

Free and Open Webinar

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #16: Impact of COVID-19 Pandemic on Education and Tourism in Gilgit Baltistan**

**Guest Speaker**  
Dr. Ishtiaq Hussain Mondoo  
Associate Professor  
University of Baltistan, Skardu,  
Gilgit-Baltistan

**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan

**Guest Speaker**  
Prof. Dr. M. Naeem Khan  
Vice Chancellor  
University of Baltistan, Skardu,  
Gilgit-Baltistan

**30th June 2021; 11:00 am - 12:00 pm**

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>; Meeting ID: 973 9816 2691;  
Passcode: 726037

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #15: COVID-19 Updates from Khyber Pakhtunkhwa (KPK)**

**Guest Speaker**  
Dr. Javed Muhammad  
Assistant Professor  
Department of Microbiology,  
University of Haripur, KPK

**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan

**23rd June 2021**  
11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
Meeting ID: 973 9816 2691  
Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)

Free and Open Webinar

**AMERICAN SOCIETY FOR MICROBIOLOGY**

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Topic: Vaccination in Pakistan and related concerns**

**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan

**Guest Speaker**  
Prof. Dr. Javed Akram  
Vice Chancellor  
University of Health Sciences (UHS), Lahore

**14th April 2021**  
11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
Meeting ID: 973 9816 2691  
Passcode: 726037

E-Certificate will be issued to participants on request  
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Free and Open Webinar

**AMERICAN SOCIETY FOR MICROBIOLOGY**

The ASM Ambassador to Pakistan is organizing a series of webinars to acknowledge and highlight the valuable services of Microbiologists during the current pandemic under the title of

## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Host**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan

**Guest Speaker**  
Prof. Dr. Zahra Hasan  
Aga Khan University Hospital

**24th MARCH 2021**  
11:00 am - 12:00 pm

Zoom Meeting ID: 952 5165 9289  
Passcode: 187324

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)

Free and Open webinar




**AMERICAN SOCIETY FOR MICROBIOLOGY**

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST


American Society for Microbiology

**Topic: Current COVID-19 Situation: India vs Pakistan**



**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan





**Guest Speaker**  
Prof. Dr. M. Iqbal Choudhary  
(HI, SI, TI)  
Director ICCBS  
Coordinator General COMSTECH

**28<sup>th</sup> April 2021**  
**11:00 am - 12:00 pm**

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
**Meeting ID: 973 9816 2691**  
**Passcode: 726037**

**E-Certificate will be issued to participants on request**  
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**AMERICAN SOCIETY FOR MICROBIOLOGY**

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #11: COVID-19: Transitioning Towards a New Normal**



**Host Speaker**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan





**Guest Speaker**  
DR. SAQIB HUSSAIN ANSARI  
Pediatric hematologist at  
Children's Hospital Karachi,  
Blood and Bone Marrow  
Transplant Center

**26<sup>th</sup> May 2021**  
**11:00 am - 12:00 pm**

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
**Meeting ID: 973 9816 2691**  
**Passcode: 726037**

**E-Certificate will be issued to participants on request**  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)

Free and Open Webinar

**PATIENT & OCCUPATIONAL SAFETY WORKSHOP**

**OCT 13-16 2020** Pre-Registration

Organized By  
Center for Occupational & Patient Safety  
National Institute of Health (NIH)

In collaboration with  
DOW UNIVERSITY OF HEALTH SCIENCES



Prof. Saeed Khan



Dr. Ambreen Fatima



Dr. Fatima Fashi



Dr. M. Amjad Khan



Dr. Imtiaz Ali Khan



Sameer Ullah



Muhammad Waheed



Saadia Ambreen



Dr. Saba Savul

**National Speakers**

- Prof. Saeed Khan
- Dr. Ambreen Fatima
- Dr. Fatima Fashi
- Dr. M. Amjad Khan
- Dr. Imtiaz Ali Khan
- Mr. Sameer Ullah
- Mr. Muhammad Waheed
- Ms. Saadia Ambreen
- Dr. Saba Savul

**Topics**

- ✓ Infection Prevention & Control
- ✓ Lab Quality Management System
- ✓ Anti-Microbial Resistance
- ✓ Biosecurity & Biosafety
- ✓ Innovation & Research
- ✓ Good Lab Practices

**AMERICAN SOCIETY FOR MICROBIOLOGY**

The ASM Ambassador to Pakistan is organizing a series of webinars to acknowledge and highlight the valuable services of Microbiologists during the current pandemic under the title of

## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology



**Host**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan





**Guest Speaker**  
Prof. Dr. Farhan Essa  
CEO, Dr. Essa Laboratory &  
Diagnostic Centre

**07<sup>th</sup> April 2021**  
**11:00 am - 12:00 pm**

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>  
**Meeting ID: 973 9816 2691**


**E-Certificate will be issued to participants on request**  
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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology



**Host**  
Prof. Dr. Saeed Khan  
ASM Ambassador to Pakistan





**Guest Speaker**  
Dr. Seemin Jamali (T.I)  
Executive Director  
Jinnah Postgraduate Medical Centre

**31<sup>st</sup> March 2021**  
**10:00 - 11:00 am**

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/95463101708>  
**Meeting ID: 954 6310 1708**  
**Passcode: 022428**

**E-Certificate will be issued to participants on request**  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com) Free and Open Webinar





AMERICAN  
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MICROBIOLOGY

The ASM Ambassador to Pakistan is organizing a series of webinars to acknowledge and highlight the valuable services of Microbiologists during the current pandemic under the title of

## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology



Host

**Prof. Dr. Saeed Khan**  
ASM Ambassador to Pakistan



Guest Speaker

**Dr. Hafsah Muhammad**  
PhD, M.Phil. (Distinction), DPH, D.Crim.  
Khyber Medical University, Peshawar



17<sup>th</sup> MARCH 2021

11:00 am - 12:00 pm

Zoom Meeting ID: 998 8540 9355 Passcode: 942956

E-Certificate will be issued to participants on request  
Free and Open webinar



AMERICAN  
SOCIETY FOR  
MICROBIOLOGY

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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Topic: Herd Immunity**



Host Speaker  
**Prof. Dr. Saeed Khan**  
ASM Ambassador to Pakistan



Guest Speaker  
**Dr. Summiya Nizamuddin**  
Shaukat Khanum Memorial  
Cancer Hospital and Research  
Center, Lahore



21<sup>st</sup> April 2021

11:00 am - 12:00 pm



Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>

Meeting ID: 973 9816 2691

Passcode: 726037



E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com) Free and Open Webinar



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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #9: My COVID-19 Experience as HCW from Bench to Bed (2):  
Myths and Facts**

Host Speaker  
**Prof. Dr. Saeed Khan**  
ASM Ambassador to Pakistan



Guest Speaker  
**Dr. Yasir Raza**  
Assistant Professor  
Dept. of Microbiology  
University of Karachi  
Consultant Molecular Biologist  
One Health Diagnostics



12<sup>th</sup> May 2021

11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>

Meeting ID: 973 9816 2691

Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)



The ASM Ambassador to Pakistan is organizing a series of webinars to acknowledge and highlight the valuable services of Microbiologists during the current pandemic

## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #14: Update on COVID-19 Pandemic : Importance of  
Training and Biorisk Management**



Guest Speaker  
**Zia Ashraf**  
Lecturer (Medical Sciences)  
IFBA Certified Professional  
Biosafety/Biosecurity Trainer



Host Speaker  
**Prof. Dr. Saeed Khan**  
ASM Ambassador to Pakistan



Guest Speaker  
**Samreen Sarwar**  
Technical Advisor  
Health Security Partners

Date and Time  
16<sup>th</sup> June 2021  
11:00 am - 12:00 pm



Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>

Meeting ID: 973 9816 2691

Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)



Free and  
Open  
Webinar



The ASM Ambassador to Pakistan is organizing a series of webinars to acknowledge and highlight the valuable services of Microbiologists during the current pandemic

## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #10: Understanding COVID Immunology and Antibodies Tests  
Interpretation**

Host Speaker  
**Prof. Dr. Saeed Khan**  
ASM Ambassador to Pakistan



Guest Speaker  
**Prof. Dr. Rabia Hussain**  
(T.I, S.I)  
Ghulamali Hirji Professor of  
Microbiology  
Department of Pathology &  
Microbiology  
The Aga Khan University



19<sup>th</sup> May 2021

11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>

Meeting ID: 973 9816 2691

Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)



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## COVID-19 PANDEMIC AND ROLE OF MICROBIOLOGIST

American Society for Microbiology

**Webinar #12: The Story of Microbiology and ASM in Pakistan**

Host Speaker  
**Prof. Dr. Saeed Khan**  
ASM Ambassador to Pakistan



Guest Speaker  
**Prof. Dr. Shahana  
UROOJ KAZMI**  
Vice Chancellor  
Women University Swabi  
KPK, Pakistan



02<sup>nd</sup> June 2021

11:00 am - 12:00 pm

Join Zoom Meeting: <https://asmusa-org.zoom.us/j/97398162691>

Meeting ID: 973 9816 2691

Passcode: 726037

E-Certificate will be issued to participants on request  
[pak.asmambassador@gmail.com](mailto:pak.asmambassador@gmail.com)



Free and  
Open  
Webinar



## Events Hosted by Dow College of Pharmacy

|    |  |                               |                         |
|----|--|-------------------------------|-------------------------|
| 1. | Hands-on Workshop for M.Phil Scholars on Research Techniques in Pharmacology | 18, 23, 30 Jan and 6 Feb-2021 | Dow College of Pharmacy |
| 2. | Webinar on Forensic Pharmacy, Present with a promising Future                | 1-Feb-2021                    | Online                  |
| 3. | Webinar on Evidence Based Pharmacy Practice                                  | 5-Sep-2020                    | Online                  |
| 4. | Webinar on Pharmacy Practice   | 30-Jan-2021                   | Online                  |
| 6. | Workshop on Bioethics  | 12-Apr-2021                   | Dow College of Pharmacy |
| 7. | Dermatology, use and abuse of Corticosteroids                                | 28-Mar-2021                   | Online                  |

### HANDS ON WORKSHOP ON RESEARCH TECHNIQUES IN PHARMACOLOGY

**Day 1: 18<sup>th</sup> January 2021**

- Title:** Experimental Animals use in Pharmacological research
- Trainers:**
  - Prof. Dr. Sumbul Shamim
  - Dr. Samia Mahmood (Facilitator)
  - Dr. Shumaila Aman
  - Dr. Hina Abrar
  - Dr. Fahema Siddiqui
  - Dr. Aunais Ahmed Khan
- Venue:** Pharmacology lab and Animal House
- Time:** 9:30am - 3:00pm

**Day 2: 23<sup>rd</sup> January 2021**

- Title:** Instruments handling and their use in Research
- Trainers:**
  - Prof. Dr. Sumbul Shamim
  - Dr. Samia Mahmood
  - Dr. Shumaila Aman (Facilitator)
  - Dr. Hina Abrar
  - Dr. Fahema Siddiqui
  - Dr. Aunais Ahmed Khan
- Venue:** Pharmacology lab
- Time:** 9:30am - 3:00pm

**Day 3: 30<sup>th</sup> January 2021**

- Title:** Toxicological Studies: procedures and practical implementation
- Trainers:**
  - Prof. Dr. Sumbul Shamim
  - Dr. Hina Abrar
  - Dr. Fahema Siddiqui (Facilitator)
  - Dr. Hina Abrar
- Venue:** Pharmacology lab and Histopathology lab
- Time:** 9:30am - 3:00pm

**Day 4: 6<sup>th</sup> February 2021**

- Title:** Computational drug designing
- Trainers:**
  - Prof. Dr. Sumbul Shamim
  - Dr. Mahwish Akhtar (Facilitator)
- Venue:** Pharmacology lab and Digital Lab
- Time:** 9:30am - 3:00pm

**NOTE:** Each day bring your personal laptops with you for your on the spot work in all four days.

**PRE-REQUISITES FOR CERTIFICATE**

- Pre-workshop Registration
- Viewing Instruction Manual
- Post-workshop test

**M.Phil PROGRAM DIRECTOR**  
Prof. Dr. Noor Jahan  
Dean, Faculty of Pharmaceutical Sciences, Dow College of Pharmacy

**ORGANIZED BY**  
Prof. Dr. Sumbul Shamim  
Chairperson, Department of Pharmacology  
Principal, Dow College of Pharmacy

Dow College of Pharmacy, Dow University of Health Sciences, Karachi





### PHARMACY GRADUATES ASSOCIATION PROFFERS ONE DAY FREE WEBINAR ON TOPIC

## "FORENSIC PHARMACY, PRESENT WITH A PROMISING FUTURE"




**Key speaker**  
**Dr. Anab Fatima**  
(PH.D. PHARMACEUTICS AND LL.B)  
HEC APPROVED SUPERVISOR ASSOCIATE  
PROFESSOR-PHARMACEUTICS & CLINICAL  
PHARMACY, DOW COLLEGE OF PAKISTAN  
LEGAL CONSULTANT ASSOCIATE  
EX-ASSOCIATE PROFESSOR PHARMA  
CEUTICS AND CLINICAL PHARMACY  
EX-HOD DEPARTMENT OF PHARMACY  
PRACTICE EX-INCHARGE SUCCEOR  
DRUG AND POISON INFORMATION CENTER  
FACULTY OF PHARMACY, HAMDARD

**CO SPEAKER**  
**DR. ZAINULHASNAIN**  
PHARMACY SERVICES  
DRUGMART  
PHARMACY  
PATRON IN CHIEF  
PHARMACY GRADUATES  
ASSOCIATION PGA

**HOST: DR. ALINA ALI**  
Pharmacist, Vice  
president PGA  
Balochistan

**MONDAY, 1ST FEBRUARY 2021**  
4:00 PM TO 5:00 PM PST  
CATCH US LIVE ON ZOOM  
MEETING ID: 514 184 9689  
PASSCODE: 12345

you can have recorded webinar at Facebook [HTTPS://WWW.FACEBOOK.COM/ZAINUL.HASNAIN.3975](https://www.facebook.com/zainul.hasnain.3975)




### Dow University of Health Sciences Dow College of Pharmacy, Faculty of Pharmaceutical Sciences

Presents a workshop on  
**BIOETHICS**  
With following OBJECTIVES

The workshop is designed for final year students, postgraduates, researchers, and faculty of DUHS. At the end of the workshop, the participants will learn:

- Basic Concepts of Bioethics including (Autonomy, Beneficence, Non-Maleficence, Justice, Informed Consent)
- ROLE of Ethics in Clinical Trials
- Therapeutic Misconception
- Ethics of Trials in Healthy Volunteers etc.

**DATE & TIME**  
Monday 12<sup>th</sup> April, 2021: 9:30 a.m. to 11:30 AM

**VENUE:**  
Lecture hall # 3, Dow College of Pharmacy, Building B, DUHS, Ojha Campus.

**FACILITATOR:** DR. ZULFIQAR ALI SHAIKH

**COORDINATOR:**  
Dr. Samia Mahmood Malli

**ORGANIZER:**  
Prof. Dr. Noor Jahan, Dean, Faculty of Pharmaceutical Sciences, DCOP.

**ABOUT SPEAKER:**

- QUALIFICATION:** MBBS, MA (Eco), MSPH, DPM, MBE (AKU), GC-BSPH (Johns Hopkins)
- AFFILIATION:** DMC, DUHS
- EXPERIENCE:** More than 26 years of teaching, training & research i.e. since 1995.

Teaching in almost all the Colleges/Institutes of Dow University, including DMC, DMC, DDC, BMS, IHM, IPMR, Pharmacy, Nursing & SPH. Master Trainer at various UG & PG Institutes. Supervisor / Guide for different degree programs. Reviewer of a dozen of PMDC & HEC Recognized Journals. Projects with National & International Organizations including Health Department, GoS, PEI, Gallup International, WHO, USAID/JSI, MALC. Publications: 30 peer-reviewed, indexed publications; Several paper & poster presentations in national & international conferences. Visiting Faculty at SZABIST, Ziauddin Medical University, CPSP, BMSI, NI.





### CERTIFICATE OF PARTICIPATION

This certificate is presented for attending Beats Webinar

**BEATS**  
BROOKES EDUCATIONAL ACTIVITY  
TRANSITION SERIES

**28<sup>th</sup> Mar, 2021**



**DR. ABDUL RAB NISHAT**  
CHIEF DERMATOLOGIST  
INSTITUTE OF SKIN DISEASES, SINDH KARACHI



**DR. M. RIZWAN RAFIQ**  
FCPS, Assistant Professor  
Consultant Dermatologist  
INSTITUTE OF SKIN DISEASES, SINDH KARACHI



**DR. ERUM ASHRAF**  
FCPS  
CONSULTANT DERMATOLOGIST  
INSTITUTE OF SKIN DISEASES, SINDH KARACHI



**MR. M. YASIR MUBARAK**  
SENIOR BUSINESS UNIT HEAD  
Brookes Dermatology



**PROF. DR. SUMBUL SHAMIM**  
PRINCIPAL  
DOW COLLEGE OF PHARMACY  
DOW UNIVERSITY OF HEALTH SCIENCES



**DR. FARVAL SHAREEF**  
FCPS  
CONSULTANT DERMATOLOGIST  
INSTITUTE OF SKIN DISEASES, SINDH KARACHI

## Executive Training or Vocational Training Programs

DUHS provides a platform for health care professionals by signing agreement with Pakistan Institute of Quality. An executive education program which Certified Healthcare Quality Professionals and is open to all those not just from the University that provides lectures and interactive discussion sessions, each semester, open specifically to personnel working in health services or healthcare management.

Moreover, Dow University of Health Sciences has a separate department for training with the name of Dow Vocational Training Center. It is registered/affiliated with Sindh Board of Technical Education Karachi and National Vocational & Technical Training Commission (NAVTTTC), and conducted Professional Computer Courses as well as regular vocational trainings for faculty/ staff. However, there are some trainings that are specifically designed and offered to females, which includes:



ڈاؤ یو وی ایچ ایس ایڈمکسیکلی ٹریننگ سینٹر  
ڈاؤ یو وی ایچ ایس ایڈمکسیکلی ٹریننگ سینٹر  
انٹرنیٹ ایڈاک فیسٹ فور او جی اے سیس، مین سارکو روڈ، کراچی۔  
فون نمبر: + 92 - 21 - 99232660 & 38771111, EXT (4330, 4331)

Professional Computer Courses  
(Morning Program)

|  |                    |
|--|--------------------|
| © MS-OFFICE (3-Months)                             | ► Course Fee: 2600 |
| © Certificate in Information Technology (6-Months) | ► Course Fee: 3600 |
| © Web Designing (3-Months)                         | ► Course Fee: 3100 |
| © Graphics Designing (3-Months)                    | ► Course Fee: 3100 |
| © Multimedia Animation (6-Months)                  | ► Course Fee: 4100 |

- Basic Dress Making
- Fabric Painting
- Glass Painting
- Macramé Work
- Ceramic Dough
- Textile Designing
- Advanced Dress Making
- Candle Making
- Mehndi (Basic)
- Fashion Designing
- Sewing
- 3D Japanese Paper Art



## Educational Outreach Activities

Professor Dr. Saeed Khan, faculty member at Virology Molecular Diagnostics DUHS was invited as a guest speaker in the seminar on **Awareness of Biorisk Management for Human Health and the Environment** organized by Department of Biochemistry, Jinnah University for Women-Karachi in collaboration with Pakistan Biological Safety Association held on March 25<sup>th</sup>, 2021. Furthermore Dr. Saeed Khan gave oral presentation on Current scenario of COVID-19 in Pakistan in a conference **Awareness on the psychological consequences and mental health in pandemics; A case of COVID-19 Infodemic** in collaboration with UNESCO held in Jakarta, Indonesia on December 31, 2020 and gave oral presentation on title Good Laboratory Practices in a PCR Lab in a conference **Biorisk Management Webinar Series Cohort II** held on October 28 2020



### Awareness of Biorisk Management for Human Health and the Environment

**E-WORKSHOP**  
 March 25, 2021 (10:00 am – 1:00 pm)  
 Join Zoom Meeting  
<https://us02web.zoom.us/j/88436415440?pwd=VVd3VkpUZHl5emZxZlJlYXN0d0pJRz09>  
 Meeting ID: 884 3641 5440  
 Passcode: 022935

Organized by Department of Biochemistry, Jinnah University for Women, Karachi in collaboration with Pakistan Biological Safety Association

**OUR SPEAKERS**





Prof. Dr. Saeed Khan  
*PhD, Postdoc. (USA)*  
 Vice President, PBSA  
 Dow University of Health Sciences,  
 Karachi



Dr. Saima Saleem, *PhD, Postdoc. (USA)*  
 Chapter Head, PBSA Sindh  
 KIBGE, University of Karachi, Karachi



Ms. Aneeta Hotwani  
 Chapter Head, PBSA Sindh  
 Aga Khan University Hospital, Karachi



### Conference on “Awareness on the Psychological Consequences and Mental Health in Pandemics; A Case of COVID-19 Infodemic”

December 31, 2020 (Thursday)

Timing: 10AM to 2:30PM (Through Microsoft Teams meeting)



Chief Guest: Prof. Dr. Muhammad Ali, Vice Chancellor, QAU, Islamabad

Organizing Secretary: Dr. Muhammad Ali, Assistant Professor, Department of Biotechnology

**Distinguished Speakers**

Professor Dr. Zabta Khan Shinwari  
 Quaid-i-Azam University, Islamabad

Professor Dr. Muhammad Idrees  
 Vice Chancellor, University of Peshawar

Dr. Aamer Ikram  
 National Institute of Health, Islamabad

Dr. Ali Talha Khalil  
 Lady Reading Hospital, Peshawar

Dr. Javid Muhammad  
 Dept. of Microbiology, University of Haripur

**Event Facilitators**

- Abdul Waris
- Lubna Yar
- Misbahud Din
- Fatima Zia
- Muhammad Waqar
- Sana Ullah
- Hammad Ali

**Distinguished Speakers**

Dr. Adeel Gardezi  
 Consultant Microbiologist, CMH Peshawar

Dr. Abdul Baset  
 Bacha Khan University Charsadda, Pakistan

Adnan Bashir  
 National Institute of Health, Islamabad

Dr. Tabinda Azhar  
 Senior Advisor Communication, Health Security Partners Washington DC.

Dr. Saeed Khan  
 Dow University of Health Sciences, Karachi

Department of Biotechnology, Quaid-i-Azam University Islamabad, Pakistan

Prof. Dr. Sumbul Shamim, professor of Pharmacology invited as key speaker in Webinar on **Telemedicine and the role of a Pharmacist** organized by Pharmacy Graduates Association on 11th April 2021.

Prof. Dr. Noor Jahan was invited as speaker on Webinar on **Online Education System and Current Scenario** by organized by Pharmacy Graduates Association on 13th Dec 2020.

Dr. Khalid Shafi, Secretary General Pakistan Pediatric Association and professor of Dow University of Health Sciences, was invited as speaker at CIAP PEDICON 2021, Mumbai 4-7 February, 2021. The theme of the conference was "Nurturing Care for Early Childhood Development". Dr. Khalid Shafi presented a session on **Challenges to Child Health, Pakistani Perspective**.



PHARMACY GRADUATES ASSOCIATION PROFFERS ONE DAY FREE WEBINAR ON TOPIC

## " TELE MEDICINE"

**KEY SPEAKER:**  
Professor  
**Dr.Sumbul Shamim**

PRINCIPAL COLLEGE OF PHARMACY DOW  
UNIVERSITY OF HEALTH SCIENCES

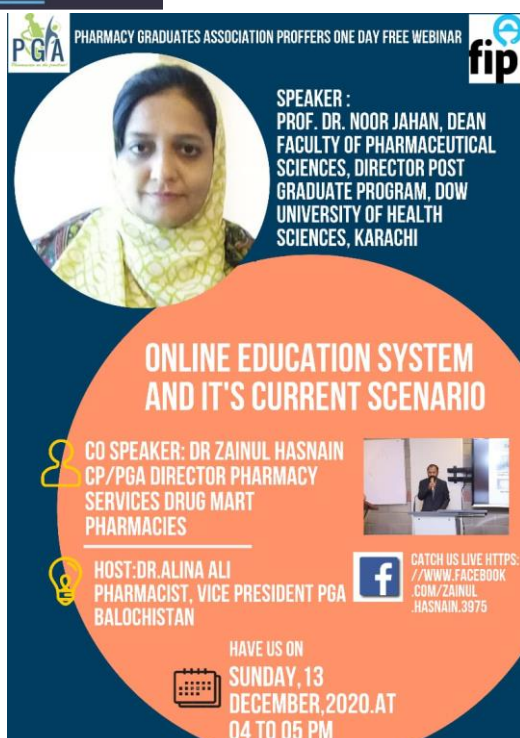
.....  
**CO-SPEAKER:**  
**DR.ZAINULHASNAIN**

Director Pharmacy services Drug Mart Pharmacy &  
Patron in chief Pharmacy Graduates Association PGA

Have us on:  
Sunday, 11 April, 2021  
Time 4pm to 5Pm

Host: **Dr. Alina Ali**  
Pharmacist, Vice president PGA  
Balochistan

 Catch us live  
Meeting ID: 514 184 9689  
Passcode: 12345



PHARMACY GRADUATES ASSOCIATION PROFFERS ONE DAY FREE WEBINAR

**SPEAKER :**  
PROF. DR. NOOR JAHAN, DEAN  
FACULTY OF PHARMACEUTICAL  
SCIENCES, DIRECTOR POST  
GRADUATE PROGRAM, DOW  
UNIVERSITY OF HEALTH  
SCIENCES, KARACHI

**CO SPEAKER: DR ZAINUL HASNAIN**  
CP/PGA DIRECTOR PHARMACY  
SERVICES DRUG MART  
PHARMACIES

**HOST: DR. ALINA ALI**  
PHARMACIST, VICE PRESIDENT PGA  
BALOCHISTAN

**ONLINE EDUCATION SYSTEM  
AND IT'S CURRENT SCENARIO**

Have us on  
**SUNDAY, 13  
DECEMBER, 2020. AT  
04 TO 05 PM**

CATCH US LIVE HTTPS://WWW.FACEBOOK.COM/ZAINULHASNAIN.3975



11:57 CAIP Confere...

**MUMBAI**

A FIRST OF ITS KIND 'PHYSICAL & DIGITAL'.  
A UNIQUE PLATFORM TO REACH OUT 30,000+ PEDIATRICIANS.

4-7 FEBRUARY 2021 Pg. 9

## CIAP PEDICON-2021

HALL C (VIRTUAL)

|                  |  |
|------------------|--|
| 9:00 - 10:00 AM  | Topic: Blood component therapy<br>Moderator: Dr. Tarlochan S Randhawa<br>Panelists: Dr. Deepak Bansal, Dr. Gauri Kapoor, Dr. S. Srisha Rani  |
| 10:00 - 10:30 AM | Chairpersons: Dr. Bharat R Agarwal, Dr. Jagdish Chandra<br>Topic: Management of Hemophilia<br>Speaker: Dr. Tulika Seth   |
| 10:30 - 11:00 AM | Chairpersons: Dr. Bharat R Agarwal, Dr. Jagdish Chandra<br>Topic 1: Current management of ITP<br>Speaker: Dr. Sunil Bhat<br>Topic 2: Oral chelators in thalassemia<br>Speaker: Dr. Satyendra Kalewa  |
| 11:00 - 12:00 PM | Scientific Session: SAPA SYMPOSIUM: Chairpersons: Prof. C.P. Bansal, Founder President SAPA Prof. Ruhul Amin, President SAPA<br>Post COVID Child Health Scenario: Prof. Manzoor Hussain (Bangladesh): 10 min<br>Challenges to Child Health: Pakistani Perspective: Prof. Khalid S. (Pakistan): 10 min<br>Current Situation of National Congenital Hypothyroidism Screening Programme: Dr. Sujewa Amarsena (Sri Lanka): 10 min<br>Smart Clinic 2.0 -- A Digital Initiative by IAP: Prof. Bakul Parekh (India): 10 min |
| 12:00 - 1:00 PM  | Topic: Pancytopenia in children<br>Moderator: Dr. Pooja Dewan<br>Panelists: Dr. Rashmi Dalvi, Dr. Nita Radhakrishnan, Dr. Nivedita Dhinora   |
| 2:00 - 3:00 PM   | Topic: Dealing with mob Moderator:<br>Dr. Vineet K Saxena<br>Panelists: Dr. B. Shantharam Baliga, Dr. Ajay Kumar Gupta, Dr. ... Thwari, Dr. Sonia Kanitkar   |

## **Access to the activities**

DUHS has a faculty handbook that contains the diversity statement of DUHS, which ensures access to these activities is accessible to all, regardless of ethnicity, religion, disability or gender along with equal opportunity and inclusion for all.

### **16.3 Gender Equality SDG-05:**

The Dow University of Health Sciences practices equal access to resources and opportunities, regardless of gender, including employment, admission and decision-making.

#### **Women applications and entry**

The scope of non-discrimination with regards to gender on admission of students is covered in the DUHS Act 2004 (policy document of the university) which states in Clause No. 5.1 Under Section University Open to All “ The University shall be open to all persons of either sex of whatever religion, race, creed, color who are academically qualified for admissions to the courses of study offered by the university and no such persona shall be denied to the privilege on the ground of only sex, religion, creed, race, class, color”.

Furthermore, DUHS demonstrates equal employment opportunity without any discrimination to gender and encourage a participative work culture of equality and professionalism in all the endeavors at DUHS. These aspects include, hiring, learning, development, performance enhancement etc.

#### **Women's access schemes**

Mentoring programs are being offered at constituent Institutes/ Colleges/ Schools at DUHS such as DCOP & DIPM&R. Furthermore, DUHS also have scholarship programs in which different scholarships are awarded to students and Ehsaas Undergraduate Scholarship Program is one of them. It is the country's largest undergraduate scholarship program provided by the Higher Education Commission (HEC) -Pakistan, in which students are given need and merit-based scholarships, with 50% scholarships reserved for girls.

#### **Maternity and paternity policies**

At DUHS, the maternity policy is in place from 2007 as mentioned in the Statutes of DUHS, Maternity Leave Clause No. 11 of the Section, Leaves Statues of DOW University Statues 2007, which are translation of the Act (policy document for every university). However, the formal policy was created in 2019. As a semi-autonomous organization, we follow all Sindh government



rules and regulations, which has granted paternity leave to employees as allowed through the Gazette of Pakistan 2019.

### Childcare facilities for students, staff and faculty

Dow University of Health Sciences has Dow Day Care Center which offers charged day care facility to the students, staff and faculty which allow them to continue their studies and ensure work compliance of all the employees. The Day Care provides child care services to infants of age 3 months to 5 years. It maintains good hygienic environment by following standard child care practices under supervision of trained professionals. It also promotes early childhood development by providing facilities and engaging children in physical and interesting age-appropriate learning activities, days celebrations and by providing best hygiene, furniture equipment, meal, snack time, play time & sleeping time. The details can be found at provided web links of Day Care Centers at both campuses of DUHS.



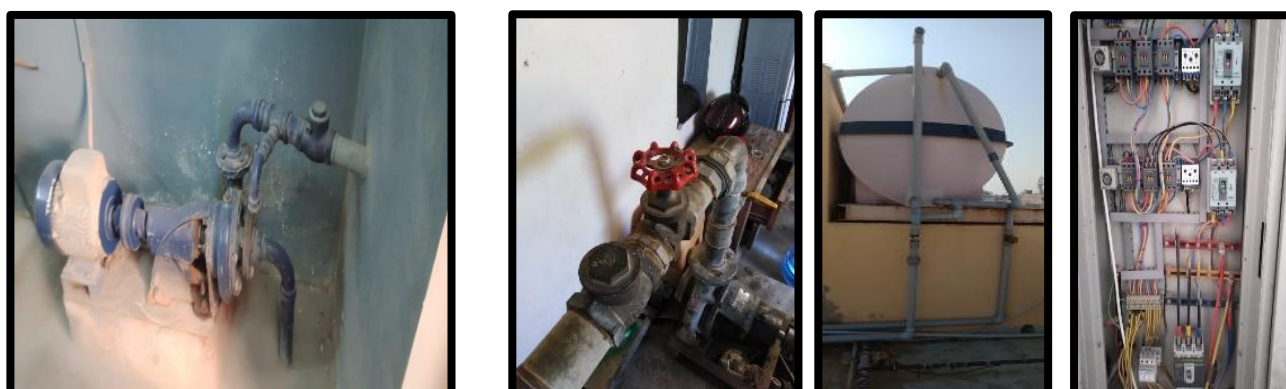
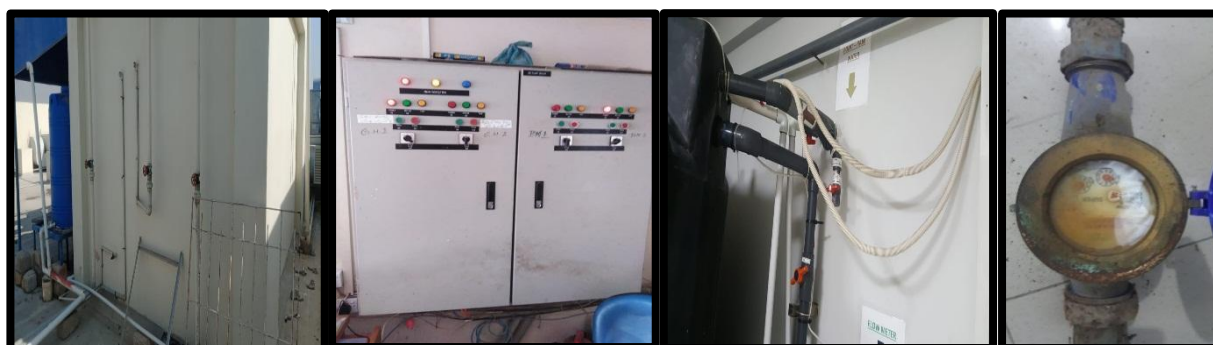
### Protection against discrimination

DUHS has formal policy in place for the protection against discrimination, for instance Policy for Grievance of Students & Policy for Grievances of Employee. Besides the formal policy for the said purpose, we also have various forums/mechanisms in place which deals or allows to report cases regarding such discriminations. "Dow Connect" (<http://dc.duhs.edu.pk/>) is the confidential e-portal for registering complaints/requests of faculty, staff & students regarding discrimination from educational or employment disadvantage. The students can also register their educational matters/complaints to the Academic Committee of DUHS, which meets as and when required and furnish its recommendations/suggestions to the competent authority for approval. Also, the faculty and staff can put up their concerns in the "Grievance Committee", which resolves the cases accordingly.

## 16.4 Water and Sanitation SDG-06

Dow University of Health Sciences has a functional and reliable water system and proper sanitation facilities, providing adequate levels of clean, safe and sufficient water for all needs of the whole university, especially for toilet use, hand washing and drinking purposes. DUHS measures the total volume of water used in the university that is taken from main supply, desalinated, or extracted from rivers, lakes, or aquifers.

Volume is measured by the size of O/H tanks and the flow meter in both the campuses. Only 5 cubic meter water extract from 6" dia bore hole 100 feet depth for old building DMC Campus.



### Process to Treat Waste Water

DUHS encourages the sustainable and eco-friendly environment. Sewerage disposal is separated out and is prevented from entering the main water system. The waste water is collected from building in septic tank then treat it gradually. After treatment, it goes in the main sewerage line of the city. The septic tank is sludge by pumps and are maintained quarterly. The Septic tank (left) is where it is treated gradually before being sent to the main sewerage line of the city (right).



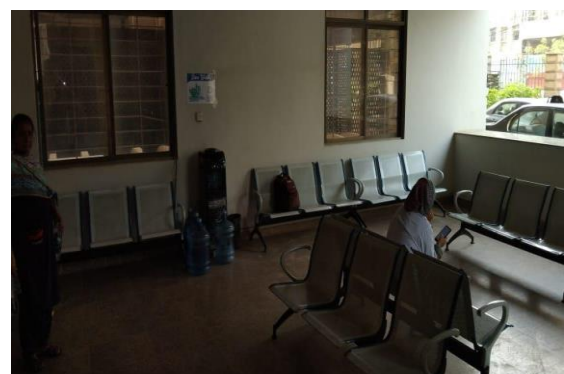


DUHS has a proper process to prevent polluted water entering in the water system, including pollution caused by accidents and incidents at the university. Furthermore, DUHS also support water conservation off campus & utilizes sustainable water extraction technologies on associated university grounds off campus.



## Free drinking water for students, staff and visitors

RIVA drinking water is available for free for students, faculty and staff as well as for visitors at Dow University of Health Sciences.





## Building Standards to Minimize Water Use

DUHS also minimize the water use in both campuses by using automatic switch system to operate the water supply motor and also by manual valve system which support to over flow the water, losses of water and avoid the damages of buildings. Some examples of water efficient appliances' usage for water conservation measures include; low flush WC's and low flow taps.



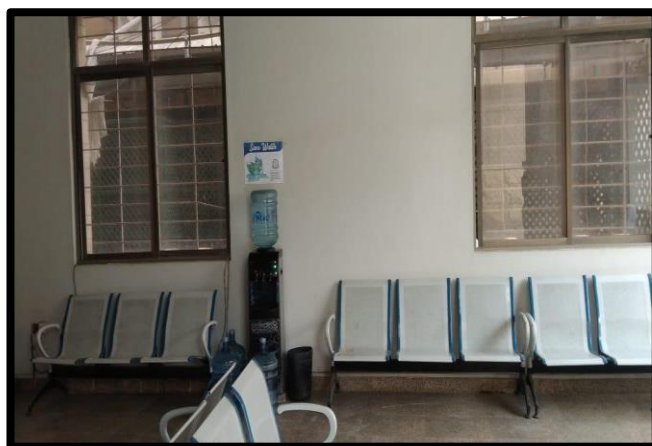
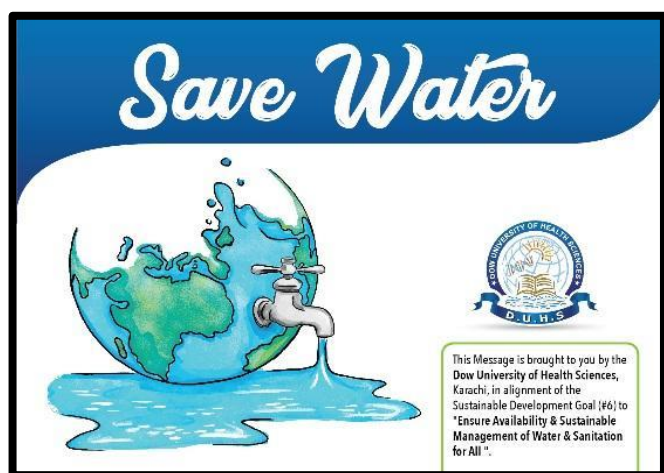
## Landscapes to minimize water usage

Aloe Vera, Euphorbia and Moringa plants are used in the landscaping of Ojha campus DUHS to minimize water usage, as these plans are drought tolerant and require minimal water usage.



## **DUHS actively promote conscious water usage on campus, and in the wider community**

Dow University of Health Sciences encourages conscious water usage on campus by displaying “Save Water” posters on various areas of university to promote conscious water usage on campuses, and in the wider community. An interactive session was organized by the Department of Community Medicine – DMC, DUHS on “Water Conservation”.



## **Support water conservation & Sustainable water extraction technologies on associated university grounds off campus**

The Ojha Campus has its own water purification plant, called DOW RIVA Premium Drinking Water, which also delivers water to each campus and surrounding areas.

The water is collected from an underground source within the campus, for use in the campuses and surrounding areas.

Dow's Riva Premium Drinking Water Plant has manufacturing facilities of international standards and can prepare premium quality drinking water up to thirty thousand gallon per day. The water is filled in 19 litre food grade polycarbonate bottles, 1.5 liters and 600 ml PET bottles DOW RIVA premium Health water can be recognized as the Purest, Safest, and Healthiest water in Pakistan.



DOW RIVA water's production, filling, packaging, and distribution are truly in line with established international standards.

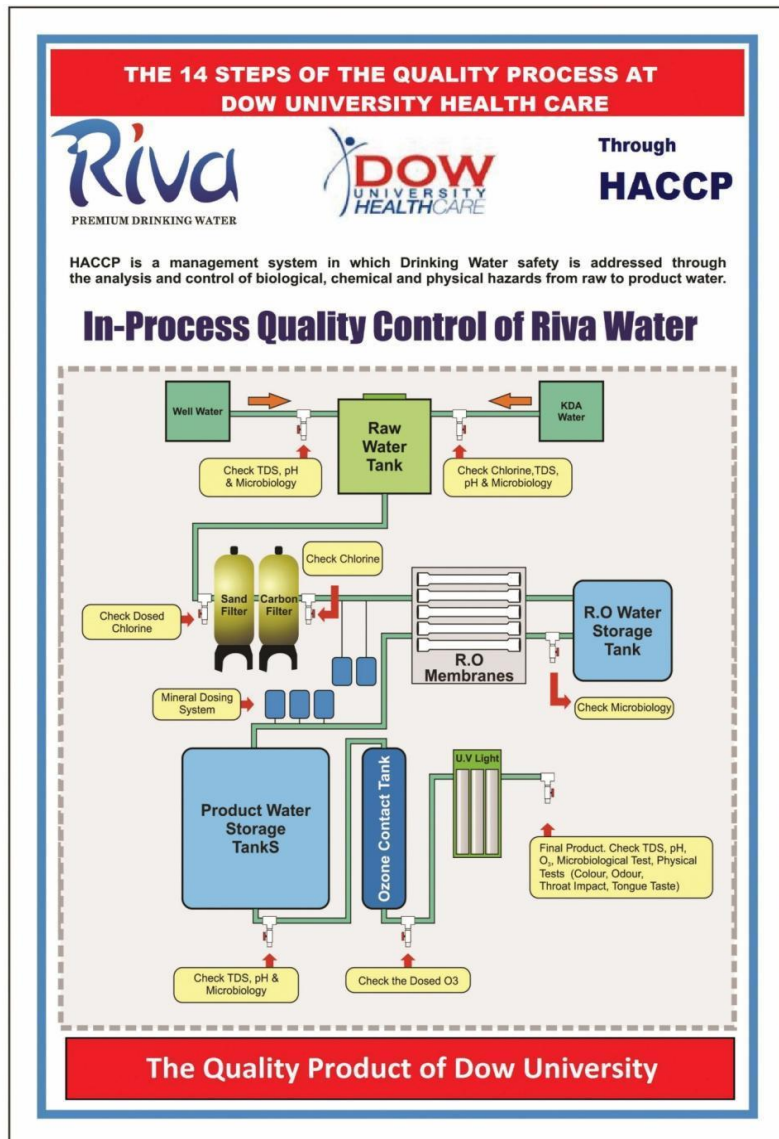
Riva Premium Drinking Water is processed from an underground source and follows state of the art reverse osmosis (R.O) desalination technology, which is a semi permeable membrane separation process. It completely removes viruses, bacteria, pyroxene and most of the organic compounds. Food grade minerals of best quality are automatically dosed strictly keeping in view of WHO and PSQCA drinking water quality standards. Finally, water is disinfected through ozonation and an ultraviolet system. Disinfection of water using ozone and UV is a proven technology.

RIVA Premium Drinking Water is purified through following eleven steps:

1. Chlorination
2. Sand Filtration
3. Activated Carbon Filtration
4. Fine Filtration



5. First Pass RO
6. Microfiltration
7. Second Pass RO
8. Mineralization
9. Microfiltration
10. Ozonation
11. UV Sterilization



## **16.5 Partnership for the Goals – SDG 17**

### **Collaboration with NGOs to tackle the SDGs**

Dow University of Health Sciences has its own student run non-profit, non-political welfare organizations i.e. Pakistan Welfare Association (PWA) & Dow Patient Care Association (DPCA). PWA was established to help those in need, to remove the despair and unease from the lives of those patients who are struggling with poverty.

Furthermore, DPCA, or Dow Patient Care Association, was founded in 2012 and is a resident non-profit, non-political welfare organization that aims to bridge the gap between needy patients and healthcare.

### **Dedicated courses that address sustainability and the SDGs**

Apart from showing commitment to meaningful education through all programs around the SDGs across the university, that is relevant and applicable to all students, Dow University of Health Sciences also offers dedicated courses (full degrees and electives) that address sustainability and the SDGs. In this regard, Fundamental of Public Health, Environmental Occupational Health, Reproductive Health & MCH, Community and Preventive Dentistry, Biomechanics and ergonomics, International Relations and Current Affairs, Environmental Sciences, Sociology, Development Economics, Legal & Regulatory Environment for Business and Health Policy Economics etc. are some courses which are offered in BS Nutrition, MS in Public Health, Bachelor of Business Administration, Bachelor of Dental Surgery and Doctor of Physical Therapy.



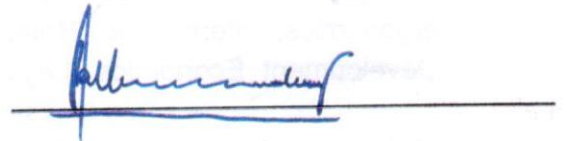
## ENDORSEMENT OF THE ANNUAL STANDARDIZED REPORT 2020-2021

Prepared by:



Ms. Sanam Soomro  
Director  
Quality Enhancement Cell  
Dow University of Health Sciences

Approved by:



Prof. Dr. Mohammed Saeed Quraishy  
Vice Chancellor  
Dow University of Health Sciences