CURRICULUM VITAE OF

PROF. DR. MUHAMMAD IDREES

Meritorious Professor (BPS-22), CEMB, Punjab University,

- Former Vice-Chancellor, University of Peshawar,
- Former Chairman, Pakistan Science Foundation (PSF)
- Former Vice-Chancellor, Hazara University,

• Former Director, CAMB, University of the Punjab Email: <u>idreeskhan@cemb.edu.pk</u> Cell No. 0321-4769212



PART-A: ESSENTIAL QUALIFICATIONS AND EXPERIENCES

A. QUALIFICATIONS:

2008-2015	FRCPath, Fellow Royal College of Pathologist (FRCPath) London United Kingdom (UK)-Member No. 20005720 (Publication-based)- Division-N/A
2006-2007	Post Doctorate in Molecular Hepatitis , Division of Viral Hepatitis, Coordinating Centre for Infectious Diseases, Centers for Disease Control and Prevention (CDC), Atlanta GA 30333 USA- Division-N/A
2001 - 2006:	Ph. D in Molecular Biology (Molecular Virology), University of the Punjab, Lahore Pakistan- Division-N/A Thesis Title: Genome variability studies in the 5'Non-coding region of Hepatitis C Virus and its clinical implications
1997 - 1999:	M. Phil in Molecular Biology (Molecular Bacteriology), University of The Punjab Lahore, Pakistan- FIRST DIVISION Thesis Title: <i>Molecular Studies on Multiple Drug Resistant Genes in Mycobacterium tuberculosis</i> .
1993 - 1995:	M. Sc. in Zoology (Parasitology/Microbiology), University of Peshawar NWFP, Pakistan- FIRST DIVISION Thesis Title: <i>The Dilemma of Zoo prophylaxis: Cattle ownership can increase rater tan reduce Malaria in Pakistan.</i>
1995 - 1996:	B. Ed (Science), Institute of Education & Research, Peshawar University NWFP, Pakistan. FIRST DIVISION
1991 - 1993:	B. Sc. (Zoology, Chemistry, Botany) , GPGJC, Peshawar University NWFP, Pakistan- FIRST DIVISION
1988-1990:	HSSC (Pre-medical), Nisar Shaheed College (FBISE-Islamabad) Risalpur-KPK- 2 nd Division
1986-1988:	HSC (Science) Government High School Shawa Dir (L) KPK- FIRST DIVISION

B. QUALITY OF INSTITUTIONS ATTENDED: Dr. Idrees brings over 25 years of administrative and teaching & research experience in Higher Education, having served at prestigious institutions including: i) University of Peshawar, ii) Hazara University, Mansehra, iii) Centre of Excellence in Molecular Biology (CEMB) University of the Punjab & iv) Centre for Applied Molecular Biology University of the Punjab at the post graduate level.

I. ACADEMIC POSITIONS HELD (Academic Experience):

12 Dec 2023- Continue:	PROFESSOR (BPS-22) /Head, Molecular Virology & Division of Infectious Disease Group, National Centre of Excellence in Molecular Biology (CEMB) University of the Punjab, Lahore.
10 June 2020- to 11 Dec 2023:	PROFESSOR (BPS-21) /Head, Division of Molecular Virology & Infectious Disease, National Centre of Excellence in Molecular Biology University of the Punjab, Lahore.
18 June 2016- to 27 July 2016:	PROFESSOR (BPS-21; on deputation) Centre for Applied Molecular Biology (CAMB) University of the Punjab, Lahore.
01 July 2015- 17 June 2016:	ASSOCIATE PROFESSOR (BPS-20; on deputation) Centre for Applied Molecular Biology (CAMB) University of the Punjab, Lahore.
02 March 2013 – 09 June 2020:	ASSOCIATE PROFESSOR (BPS-20) Virology, National Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore.
06 July 2006 – 01 March 2013:	ASSISTANT. PROFESSOR (BPS-19) Molecular Diagnostics Groups, National Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore.
01 December 2005 – 05 July 2006:	SENIOR RESEARCH OFFICER (BPS-18) Diagnostics, Centre for Applied Molecular Biology (CAMB) Ministry of Science & Technology, Lahore.
01 June 2000 – 30 November 2005:	RESEARCH OFFICER (BPS-17) Centre for Applied Molecular Biology (CAMB) Lahore.
January 1999-April 2001:	MOLECULAR BIOLOGIST/DIAGNOSTICS The Medical Laboratories 34- Lawrence Lahore

II. ADMINISTRATIVE POSITIONS HELD (Administrative Experience):

Dr. Muhammad Idrees, currently serving as a Professor (BPS-22) at CEMB, has a distinguished career as an administrator. Over the past 23 years, he has held various leadership roles, including Director, Incharge, Head, Vice-Chancellor, or equivalent positions in multiple universities and organizations. The details of his extensive administrative experience are as follows:

12 Dec 2020 to 11 Dec 2023:	VICE CHANCELLOR University of Peshawar, Khyber Pakhtunkhwa
20 Nov 2020 to 26 Nov 2020:	CHAIRMAN PAKISTAN SCIENCE FOUNDATION
	I was honored to be appointed as Chairman of the Pakistan Science Foundation (PSF) on merit by the President of Pakistan. This appointment was duly notified by the Establishment Division and published in the Gazette of Pakistan. Following this, I formally assumed office on November 20, 2020 and formally reported for duty to the Secretary of the Ministry of Science and Technology (MoST). However, my joining was not accepted on deputation. This directive was in direct violation of Section 5(ii) of the PSF Act, 1973, which clearly stipulates that the terms and conditions for the position of Chairman, PSF, are determined by the President of Pakistan. Moreover, the status of Chairman PSF was altered from a Grade-22 position to an MP-I Scale under the MP Scale Policy-2020 without obtaining the necessary approval from the President. This change contravened the provisions of the PSF Act and violated a fundamental principle of law, which mandates that only the appointing authority has the jurisdiction to determine the terms and conditions of the officer. As a result of these unlawful actions by the then Minister (Mr. Fawad Chaudhry) and Secretary of MoST (Capt. Retd. Nasim Nawaz), I was unjustly deprived of my rightful position as Chairman of PSF. These actions not only disregarded the statutory authority of the President but also undermined the rule of law.
28 July 2016 to 28 July 2019:	VICE CHANCELLOR Hazara University Mansehra, Khyber Pakhtunkhwa
01 July 2015 to 27 July 2016:	DIRECTOR Centre for Applied Molecular Biology (CAMB) University of the Punjab, Lahore.
01 July 2015 to 27 July 2016:	CONVENER, BOARD OF STUDIES CAMB, University of the Punjab, Lahore.
06 July 2006-Continue:	HEAD, DIVISION OF MOLECULAR VIROLOGY & INFECTIOUS DISEASE National Centre of Excellence in Molecular Biology (CEMB) University of the Punjab, Lahore.
1 June 2000 to 3 July 2010:	INCHARGE DISEASES DIAGNOSTIC FACILITY Centre of Excellence in Molecular Biology (CEMB) University of the Punjab, Lahore.

III. OTHER RELEVANT APPOINTMENTS AND AFFILIATIONS (current & past)

i. Memberships of Autonomous/National Bodies:

- 1. Convener/Chairman, University of Peshawar Syndicate- From 12-12-2020-Continue
- 2. Member, University of Peshawar Senate- From 12-12-2020-Continue
- 3. Convener/Chairman, University of Peshawar Selection Board- From 12-12-2020-Continue
- 4. **Convener/Chairman**, University of Peshawar **Academic Council** From 12-12-2020-Continue.
- 5. Member Senate, Hazara University- From 27-7-2016 to 26-07-2019
- 6. Member senate, Women University Mardan- From 2017 to 2020
- 7. Member Senate, University of Baltistan, Gilgit Baltistan-2017-2020
- 8. Member Senate, Bach Khan University Charsada 2021-Continue
- 9. Convener/Chairman, Hazara University Syndicate- From 27-7-2016 to 26-07-2019
- 10. Member Syndicate, University of Malakand-From 2018-2020 & 2021-Continue
- 11. Member Selection Board, University of Malakand-From 2021-Continue
- 12. Convener/Chairman, Hazara University Selection Board- From 27-7-2016 to 26-07-2019
- 13. Member, Selection Board, University of Malakand, 2021- Continue
- 14. Convener/Chairman, Academic Council Hazara University Mansehra-KP- From 27-7-2016 to 26-07-2019
- 15. Convener/Chairman, Board of Faculties (BOF), Hazara University Mansehra-KP-2018
- 16. **Convener/Chairman**, Board of Studies (BOS), CAMB, University of the Punjab Lahore. From 01-07-2015 to 27-07-2016.
- 17. **Member** Board of Studies (BOS) CAMB, University of the Punjab Lahore. From 28-08-2016-continue
- 18. Member, Board of Faculty, University of Punjab Lahore. From 01-07-2015 to 27-07-2016.
- **19. Member** Board of Studies (BOS) Department of Genetics, Hazara University Garden Campus Mansehra, KPK-**From 2011-2015**
- 20. Member, Academic Council University of Punjab Lahore. From 22-8-2015-27-07-2016.
- **21. Member** National Quality Assurance Committee (NQAC), Higher Education Commission of Pakistan-**From December 2016-July 2019.**
- 22. Member Cabinet Committee on Dengue Control-Health Department Constituted by Chief Minister, Government of the Punjab. From 2012-till date
- **23. Member** (Co-opted) of "**Technical Expert Committee of Medicine**" recommended by Steering Committee on Prevention & Control of Hepatitis Program. **From 2013-till date**
- 24. **Member** Guidance & Examination Committee of Atta ur Rehman School of Applied Biosciences (previously known as NCVI) National University of Science & Technology (NUST) Islamabad- **From 2011- continue**
- **25. Member** Board of Studies (BOS) Department of Molecular Biology, Virtual University of Pakistan M. A. Jinnah Campus Lahore. **From February 2016-continue**
- **26. Group Leader,** Infectious Diseases & Molecular Virology Group CEMB, University of the Punjab- **From 2000- continue**
- 27. Incharge Disease Diagnostic Facility, CAMB, Ministry of Science & Technology Government of Pakistan- From 2001- 2009.
- 28. Member of a team of four Scientist designated by CDC, USA to visit Pakistan (2006-07) to meet with several public health officials from the Ministry of Heath and the National

Institute of Health to discuss various collaborative public health programs and activities that will support the Field Epidemiology & Laboratory Training Program.

- 29. **Member** of Expert Committee for the preparation of guidelines of MERS CoV constituted by Advisor to Chief Minister on Health-2014.
- 30. **Member** of **Departmental Tenure Review Committee** (DTRC) of CEMB, University of the Punjab Lahore. **From 2013-till date**
- **31. Member/Virology Group Leader** of Dengue Research Group constituted by VC, University of the Punjab for the prevention and control of Dengue. **From 2009-2016.**
- **32. Member** Biosafety & Bioresource Committee University of the Punjab to review the research proposals of the faculty members and Ph. D scholars before submission to Higher Education Commission (HEC) and PSF. From 22-9-2015-ongoing.
- **33. Chairman/Convener,** Purchase Committee, Centre for Applied Molecular Biology, University of the Punjab-Lahore. **From 2015- 2016**
- 34. Chairman/Convener, Technical Evaluation Committee, Centre for Applied Molecular Biology, University of the Punjab-Lahore. From 2015- 2016
- **35. Chairman/Convener,** Departmental Doctoral Program Committee (DDPC), Centre for Applied Molecular Biology, University of the Punjab-Lahore. **From 2015-2016**
- **36. Chairman/Convener,** Scholarship Committee, Centre for Applied Molecular Biology, University of the Punjab-Lahore. **From 2015-2016.**

ii. Chairmanship/Membership of different Organizations/Bodies of Government of Khyber Pakhtunkhwa held by Dr. Idrees as the Vice-Chancellor, University of Peshawar:

- 37. Member, Khyber Pakhtunkhwa Textbook Board
- 38. Member, Board of Governors of Edwards College Peshawar
- 39. Member, Board of Governors, Institute of Management Sciences
- 40. Member, Search Committee for appointment of Chairmen and Secretaries of all Boards of Intermediate and Secondary Education, Khyber Pakhtunkhwa
- 41. Member, Search Committee for appointment of Commissioners of Right to Service Commission
- 42. Member, Board of Governors, Centre of Excellence for Countering Violent Extremism
- 43. Member, Selection Board, Centre of Excellence for Countering Violent Extremism
- 44. Member, Board of Intermediate and Secondary Education, Peshawar
- 45. Member, Search Committee for appointment of Members of Khyber Pakhtunkhwa Public Service Commission
- 46. Member, Executive Committee, Higher Education Development Program (HEDP)
- 47. Member, Scholarship Award Committee, Chief Minister Educational Endowment Fund
- 48. Chairman, Board of Governors, Shaykh Zayed Islamic Centre
- 49. Chairman, Board of Governors, Pakistan Study Centre
- 50. Chairman, Board of Governors, Centre of Excellence in Physical Chemistry
- 51. Chairman, Board of Governors, Centre of Excellence in Geology
- 52. Chairman, Board of Governors, Area Study Centre
- 53. Chairman, Promotion Committee, Edwards College Peshawar
- 54. Chairman, Selection Board, Edwards College Peshawar

55. Currently Editor of International Scientific Journals such as

- World Journal of Clinical Infectious Diseases
- Global Journal of Gastroenterology & Hepatology
- World Journal of Virology
- World Journal of Gastroenterology & Hepatology
- World Journal of Gastroenterology
- The Science
- Hepatoma Research
- Journal of Hepatitis Research
- Journal of Holistic Medicine (JHM), USA

56. Reviewer of more than 20 International Scientific Journals most importantly:

- The Lancet Infectious Diseases
- Nature
- Emerging Infectious Diseases
- Virus Genes
- European Journal of Virological Methods,
- BMC Virology,
- BMC Infectious Diseases,
- Infection, Genetics and Evolution,
- Journal of Medical Virology
- 57. Reviewer of grants in the field of Health Biotechnology for Higher Education Commission (HEC) of Pakistan.
- 58. Focal person Higher Education Commission (HEC) of Pakistan for grants in the field of Health Biotechnology-2016-2017.
- 59. Visiting Scientist of:
 - **a.** CDC, US Department of Health & Human Services, Atlanta, USA.
 - **b.** Ministry of Health Government of the Punjab.
 - **c.** Lahore General Hospital Lahore, Pakistan
 - d. Peshawar Medical Collage, Peshawar, NWFP, Pakistan
 - e. Dow University of Health Sciences, Karachi
 - **f.** Liaquat University of Medical & Health Sciences Jamshoro Sindh.

iii. Fellow/Memberships of International Societies:

- 60. Fellow Royal College of Pathologist (**FRCPath**) London United Kingdom (UK)-**Member** No. 20005720
- 61. Fellow, Pakistan Academy of Sciences (PAS)
- 62. American Society of Microbiology (ASM)-Member ID: 56817638
- 63. European Society of Clinical Microbiology and Infectious Diseases (ESCMID)- Member ID: 122577
- 64. Zoological Society of Pakistan
- 65. Hellenic Society of Virology
- 66. International Society for Antiviral Research
- 67. The Federation of European Microbiological Societies

IV. RESEARCH EXPERIENCE (More than 25 years)

i. AS A RESEARCHER:

Dr. Muhammad Idrees, currently serving CEMB as Professor in Grade-22, has a distinguished career as a research scientist. Briefly,

M. SC. (ZOOLOGY) RESEARCH WORK (1995-1996)

He started research career in 1995 with M.Sc. (Zoology) thesis work on "The Dilemma of Zoo-Prophylaxes with special reference to prevalence of Malaria in District Dir, NWFP Pakistan" under the supervision of Prof. Dr. Abdul Hameed Jan (Zoology Department Peshawar University). He conducted parasite prevalence survey in order to examine the possibility that domestic cattle kept in house courtyards might protect occupants against malaria through zooprophylaxis. However, his finding showed that Malaria parasite rate was higher significantly (p<0.01) among families which kept cattle than among those which did not keep it.

M. PHIL. (MOLECULAR BIOLOGY) RESEARCH WORK (1997-1999)

Dr. Idrees started to work for M. Phil. thesis in 1997 on Multiple Drug Resistance and its responsible Genes/mutations in *Mycobacterium tuberculosis* under the direct supervision of Prof. Dr. Fazal Majid Khan (CEMB University of the Punjab). Initially susceptibility testing was done with eight commonly used anti-TB drugs. These studies revealed a growing concern of increasing prevalence of drug resistance in *M. tuberculosis*. Next, he developed and evaluated a rapid and simple technique `PCR-SSCP` for the detection of Rifampicin resistance in *Mycobacterium tuberculosis* associated with mutations in the gene that is responsible for the synthesis of RNA polymerase enzyme. The information, that all the mutations in the RNA polymerase gene (*rpo* B) are clustered within a region of 23 amino acids, was used for the development of Polymerase Chain Reaction-Single Strand Conformation Polymorphism that detected Rifampicin resistant mutations in culture isolates. This was a next step towards the development of a rapid detection method for multidrug- tuberculosis cases.

PH. D. (MOLECULAR BIOLOGY) RESEARCH WORK (2000-2005)

In year 2000, he started to work for Ph.D. thesis on 'Sequence Variability studies in Hepatitis C Virus genome and its implication on treatment response and disease outcome' under the supervision of Prof. Dr. Sheikh Riazuddin.

For the first time in Pakistan, he was able to sequence the 5'Untranslated Region (5'UTR) region of HCV-RNA isolated from HCV positive patients from different parts of Pakistan. During the course of this study, HCV RNA PCR positive serum samples collected from different parts of the country were used for sequence analysis of 5'UTR of HCV. Four primers were designed based on highly conserved 5'UTR of HCV genome for the amplification and sequencing of 5'NCR. The sequence from nt: -35 to -319 (285 nt) was taken for analysis. Pakistani isolates sequenced in the present study were aligned with the representative number of sequences for each major genotype and subtype selected from the GenBank database. The results of the phylogenetic analysis of the sequenced samples showed for the

first time that genotype 3 and type 1 are the predominant genotypes circulating in Pakistan, with an overall prevalence of 62% and 12%, respectively.

He further investigated and isolated novel HCV isolates from Pakistan. On the basis of phylogenetic analysis, the Pakistani isolates were classified as follows: 38% (n = 38) were type 3a, 21% (n = 21) were type 3b, 3% (n = 3) were type 3c, 7% (n = 7) were type 1a, 5% (n = 5) were type 1b/1c, 5% (n = 5) were type 2a/2c, 3% (n = 3) were type 2b, 3% (n = 3) were type 4, and 14% (n = 14) were novel genotypes. One isolate, PP10, still remained nontypeable. The overall nucleotide similarity among different Pakistani isolates was 92.50% + 0.50%. The percent nucleotide identity (PNI) was 98.11% +0.50% within Pakistani type 1 sequences, 98.10% \pm 0.60% for type 2 sequences, 97.97% \pm 0.50% for type 3 sequences, and 99.80% \pm 0.20% for type 4 sequences. The PNI between different genotypes was 93.90% \pm 0.20% for type 1 and type 3, 94.80% \pm 0.12% for type 1 and type 4, and 94.40% \pm 0.22% for type 3 and type 4. There was a stretch of hypervariable region from nt: 166 to 86 in the 5'NCR that had motifs for different genotypes. Pakistani isolates showed 7.5% + 0.50% nucleotide variability in this region. The comparatively conserved stretch from nt 241 to 165 showed only 3.30% + 1.06% variation. It was not possible to differentiate between type 1b and 1c isolates further into different subtypes. Both types clustered together. Similarly, in the case of 2a and 2c, no differentiation was possible in the tree. In the case of the type 3 isolates, there was a clear clustering of isolates into subtypes 3a, 3b and 3c. This study showed that type 3 and type 1 seem to be the predominant genotypes circulating in different parts of Pakistan. More or less equal proportions of type1 and type3 isolates were seen in Bal.

As per need of the nation, he very timely established a simple, rapid and reliable genotyping system for well-characterized Pakistani HCV isolates and determined the suitability of this assay for the routine determination of HCV genotypes. He established a new Molecular-based genotyping system for the specific detection of HCV genotypes 1a, 1b, 1c, 2a, 2b, 2c, 3a, 3b, 3c, 4a-h, 5a and 6a during the course of this study. Total 15 primers were designed for this new genotyping system. Both the outer sense and anti-sense primers and inner sense primer were designed on the basis of the conserved nature of these sequences. Genotype-specific primers were designed on the basis of 116 HCV isolates. The antisense primers were designed on the basis of the conserved nature of those sequences within a genotype and their poor homology with the sequences derived from other HCV genotypes. Extensive experiments were performed to optimize the genotyping PCR. Serum samples having known genotypes were used as positive controls to validate the developed assays and to generate PCR band patterns. Band patterns generated from the clinical serum samples from HCV patients were compared to the patterns produced from these control samples. In addition, the type-specific bands were sequenced from the test patients and control clinical samples to further validate the nested type-specific PCR test results. Sensitivity and specificity of the system was determined by analyzing 260 samples simultaneously by this HCV genotyping system, Ohno's genotyping system and commercially available serotyping kit. The system showed 79.2% concordance with Ohno's system and 65.38% with Serotyping system. Samples with discordant results were sequenced and their genotypes were determined by molecular evolutionary analysis. In all the discordant samples the assigned genotype of the present system was correct.

In addition, he was able to established a genotyping system for mixed HCV infections as till that date the true prevalence of HCV mixed-genotype infections has not been established mainly because currently available methods are not suitable for the detection of mixed genotypes in a viral population. A new genotyping method, primer-specific PCR followed by polyacrylamide gel electrophoresis (TSPCR-PAGE), which is more reliable than other genotyping assays was developed for the detection of HCV mixed-genotype infections. A genotype present at levels as low as 8.3% in a defined mix of HCV genotypes was detected, showing a 20-fold increase in sensitivity over that of direct DNA sequencing. A total of 50 HCV isolates from patients received multiple blood transfusions were genotyped and analyzed for a comparative study of the Adoptibility between the present system and two other genotyping methods. The results showed that viruses in approximately 42% of the samples from this group determined to be infected with mixed genotypes by TSPCR-PAGE. Serotyping assay and restriction fragment length polymorphism analysis performed poorly, being able to identify only 18% and 10% of mixed-genotype infections, respectively. The data lead him to conclude that HCV mixed-genotype infections are more common than previously estimated and that TSPCR-PAGE may be the method of choice when detection of genotypes present at low levels in mixed-genotype infections is required due to its higher level of sensitivity.

He also wanted to find out the common genotypes of HCV present in well-characterized Pakistani HCV isolates as was not well known. Total 3351 serum samples were tested by type-specific genotyping assay. All the tested serum samples were HCV-RNA positive by PCR. Out of the total 3351 tested serum samples, type-specific PCR fragments were observed in 3150 (94.00%) serum samples. The distribution of genotypes of the 3150 typable samples as determined by this assay, was as follows: 280 (8.35%) patients were infected with HCV genotype 1a, 101 (3.01%) patient were infected with genotype 1b, 5 (0.15%) with 1c, 252 (7.52%) patient were infected with subtype 2a, 27 (0.80%) were infected with subtype 2b, 3 (0.09%) were with type 2c, 1664 (49.05%) patients were infected with genotype 3a, 592 (17.66%) were infected with genotype 3b, 25 (0.75%) were with 3c, 50 (2%) patient were infected with genotype 4, 6 (0.18%) were infected with subtype 5a, 4(0.12%) were infected with subtype 6a and 161 (4.80%) patient was infected with mixed infection. Two hundred and one (6.00%) serum samples were found undetermined by the present genotyping system.

Again for the first time in Pakistan he determined the rate of sustained virological response (SVR) and the factors that are associated with SVR in chronic hepatitis C patients treated with interferon alpha and ribavirin combination therapy. For this purpose, four hundred consecutive patients were prospectively evaluated and treated with combination of Interferon Alfa 2 (a or b) three million units subcutaneously three injection weekly and ribavirin 800-1200 mg orally daily for 24 weeks or 48 weeks and followed for another 6 months. End of the treatment response, sustained viral response and side effects were noted. Of four hundred patients, 394 completed the treatment. Over 67% responded at the end of treatment and 16% relapsed. Out of treated, 48.55% males and 57.62% females had sustained viral response with a total combined sustained viral response rate of 51.56%. Patients with cirrhosis had no sustained viral response. Thirty percent patients took longer than three months to show HCV RNA negativity. Side effects were usual and tolerable and only 1.5% discontinued the treatment. Non-responders were mostly males above age 50 years. In conclusion, twenty-four weeks

combination treatment with Interferon alpha 2a or 2b and ribavirin has given 51.56% sustained viral response in patients and treatment was well tolerated.

Due to the importance of HCV related hepatocellular carcinoma, he assessed the association between chronic hepatitis C infection with different genotypes and hepatocellular carcinoma (HCC) in a population of patients presenting to a various hospitals. Eighty-three cases of histologically confirmed liver cancer due to HCV presenting to the various hospital of Pakistan were genotyped. HCV genotype 3a was predominant (34 of 83 patients). In the HCC patient population, broader distributions of genotypes were present (genotype 1a: 8; genotype 1b: 2; genotype 3a: 34; genotype 3b: 13; mixed genotypes 3a & 3b: 10; 1a & 3a: 8; and 1a & 3b: 6). Two of the cases were untypable as no type-specific bands were obtained for them. He observed a strong association between chronic HCV infection and hepatocarcinogenesis in the Pakistani population.

POST-DOCTORAT (Viral Hepatitis) RESEARCH WORK (2006-2007):

After obtaining Ph. D. in Molecular Virology and in keeping with his bright academic record, Dr. Idrees subsequently worked for his post-doctoral research from September 2006 to March 2007 at in the best research laboratories in the world – Division of Viral Hepatitis (DVH), Coordinating Centers for Infectious Diseases, Centers for Disease Control and Prevention (CDC), Atlanta GA USA under the supervision of Dr. Yury Khudyakov (Deputy Brach Chief) and Dr. Saleem Kamili (Branch Chief). The DVH, in collaboration with U.S. and global partners, provides the scientific and programmatic foundation and leadership for the prevention and control of viral hepatitis infections and their manifestations. At DVH, he was a part of various domestic and global activities, including exciting outbreak investigations; surveillance programs; analytic, cost- effectiveness, vaccination, and behavioral studies; and the prevention and control of blood-borne, enteric, sexual, and chronic diseases.

After his return to Pakistan, Dr. Idrees prepared and submitted a joint research proposal with Branch Chief, Dr. Yury Khudyakov of CDC to USA State Department for funding. The project proposed to develop a series of streamlined techniques for rapid evaluation of HCV genome heterogeneity and study of HCV heterogeneity in different epidemiological and clinical settings.

All the major objectives of these studies were achieved such as:

- (1) Developed a new streamlined PCR based approach and serological assay for the identification of HCV genotypes and mixed genotype infections;
- (2) Conducted population-based analysis of HCV genotype distribution in Pakistan and rate of viral clearance in patients infected with different HCV genotypes or mixed HCV genotypes;
- (3) Developed novel approaches to the identification of HCV transmission between hosts using MS profiles of HCV quasispecies and serological profiles of antibody binding to a set of HCV sequence variants of antigens derived from several different HCV trains;
- (4) Conducted analysis of MS quasispecies profiles and serological antibody binding patterns on a large set of HCV chronic cases and patients with HCC;
- (5) Conducted sequence analysis of full HCV genome sequences from patients with chronic hepatitis C and HCC in order to identify viral genetic parameters associated with these outcomes of HCV infection;
- (6) Built computational models predictive of these outcomes.

FRCPATH (FRCPath, VIROLOGY) FELLOWSHIP OF ROYAL COLLEGE **OF PATHOLOGISTS BY PUBLISHED WORKS (2008-2015)**

As recognition of tremendous contribution in the field of Molecular Biology/Virology, The Royal College of Pathologists London-UK awarded him with Fellowship of the College (FRCPath) on September 18, 2015 (Publications-based). Dr. Idrees's virology work relates to six main themes which consist of studies on:

A. Establishment of assays/methods to study viruses;

- B. Virus genome characterization, variability, genotypes/serotypes analysis;
- C. Viral and host genes/proteins and their role in disease outcome and vaccine development;
- D. Virus prevalence, molecular epidemiology and outbreak investigation;
- E. Role of various viral & host factors in treatment response rates; and
- F. Virus association with other abnormal conditions/diseases.

In addition, Dr. Idrees has participated in other studies which include diseases of tuberculosis, typhoid, malaria, anemia, carcinomas etc. Theme-wise detail of published research work is given:

Pub	Publication information
No.	
1	Afzal S, Idrees M*, Hussain M. De Novo modeling of Envelope 2 protein of HCV isolated
	from Pakistani patient and epitopes prediction for vaccine development. Journal of
	Translational Medicine 2014; 12:115. doi:10.1186/1479-5876-12-115.
2	Rafique S, Idrees M*, Ali A, Sahibzada KI and Iqbal M. Generation and using of HCV
	infectious pseudo typed particles for studying the role of CD81 & SRB1 receptors in HCV
	infection. Molecular Biology Reports 2014 Jun 19; 41(6):3813-3819. Epub 2014 Feb 19.
3	Rafique S, Idrees M*, Ali A and Iqbal M. Studies on the role of neutralizing antibodies against
	envelope genes in resolving HCV pseudo-particles infectivity. Mol Biology Reports 2014 Jun
	19; 41(6):3945-3950
4	Idrees M*, Amreek Lal, Fayyaz Ahmed Malik, Abrar Hussain, Irshad ur Rehman, Haji Akbar,
	Sadia Butt, Muhammad Ali, Liaqat Ali, Fayyaz Ahmed Malik. Occult hepatitis C virus infection
	and associated predictive factors: the Pakistan experience. <i>Infection, Genetics and Evolution</i>
	2011 Mar; 11(2): 442-445.
5	Idrees M [*] . Rehman IU, Manzoor S. Akbar H. Butt S, <u>Afzal S</u> , <u>Yousaf MZ</u> , <u>Hussain A</u>
	Evaluation of three different HCV typing methods for detection of mixed-genotype infections.
	J. Digestive Diseases. 2011 June; 12(3): 199-203.
6	Yousaf MZ, Idrees M*, Saleem MZ, Ali M, Expression of core antigen of HCV genotype 3a
	and its evaluation as screening agent for HCV infection in Pakistan. Virology Journal. 2011
	July 26; 8: 364.
7	Rafique S, Nasim A, Idrees M*. Riazuddin S. Stable expression of envelope glycoproteins of
	HCV genotype 3a in Huh-7 cell-lines. International Journal of Applied Biology and
	Pharmaceutical Technology. 2010 Aug-Oct; 1(2): 199-213.
8	Idrees M Development of a New HCV Genotyping Assay and its Suitability for the

Establishment and/or evaluation of different assays/methods to study viruses A.

	Detection of Common Genotypes in Hepatitis C Patients in Pakistan. J. Virol Methods. 2008
	June; 150(1-2): 50-56.
9	Ali A, Nisar M, Idrees M [*] , <u>Rafique S</u> , <u>Iqbal M</u> Expression of Hepatitis C Virus Core and E2
	antigenic recombinant proteins and their use for development of diagnostic assays.
	International Journal of Infectious Diseases 2015 March 18; e84-e89.

B. Studies on Virus Genome characterization, variability and Genotypes/ Serotypes analysis

Pub	Publication information
No.	
10	Ur Rehman I, Vaughan G, Purdy MA, Xia GL, Forbi JC, Rossi LM, Butt S, Idrees M ,
	Khudyakov YE. Genetic History of Hepatitis C Virus in Pakistan. Infection, Genetics and
11	Evolution 2014 Oct;2/:318-324.
11	All M. Renman IU, Idrees M[*] . Emergence of genetically variant Hepatitis C virus population
10	In response to increased antiviral drug pressure, Pakistan. <i>Virus Genes, 2014</i> Jun; 48(3):543-9.
12	built, FA, Allilli I, Idrees M [*] , Iddal M. Hepatilis delta virus genotype-1 alone co-circulates with hopotitis P virus genotypes A and D in Polyiston <i>Fur. I. Castrogenterology Hapatology</i> 2014
	Mar. 26(3).319-324
13	Wagar M Khan All Rehman HII Idrees M* Wasim M Ali A Niaz Z Ismail Z Rehman MII
10	Tarig M Shah M Murtaza BN Determination of Henatitis C Virus Genotypes Circulating in
	Different Districts of Puniab Pakistan. <i>European Journal of Gastroenterology and</i>
	Hepatology. 2014 Jan; 26(1):59-64.
14	Hussain A, Idrees M*. First complete genome of HCV-1a form Pakistani isolate and its
	Phylogenetic analysis with complete genome of rest of world. Virology J. 2013, 10:211.
	doi:10.1186/1743-422X-10-211.
15	Butt S, Idrees M*, Amin I, Younas S, Afzal S, Akbar H, Rehman IU. Change in hepatitis C
	virus clades: A cross-sectional study of chronic HCV in Pakistan from 2000-2010. Eur J
	Clinical Microbiology and Infectious Diseases. 2011 May; 30(5): 669-672. doi:
	10.1007/s10096-010-1138-1. Epub 2011 Jan 6
16	Fatima Z, Idrees M [*] , Bajwa MA, Tahir Z, Ullah O, Zia MQ, Hussain A, Akram M, Khubaib B,
	Afzal S, Munir S, Saleem S, Rauff B, Badar S, Naudhani M, Butt S, Aftab M, Ali L, Ali M.
	service using samples from three mini outbreeks 2007 2000 in Dekisten <i>BMC Misrobiology</i>
	2011 San: 11: 200
17	Ali A Nisar M Ahmad A Saif N Idrees M* Baiwa MA Determination of HCV genotypes
17	and viral loads in chronic HCV infected nations of Hazara Pakistan Virology Journal 2011
	Oct: 8:466.
18	Ullah I, Idrees M [*] , Ahmad H, Ghafoor SU, Ali M, Ali L, Ahmad A. Hepatitis C virus
	genotypes circulating in district Swat of Khyber Pakhtoonkhaw, Pakistan. Virology Journal.
	2011 Jan; 8:16.
19	Butt S, Idrees M*, Akbar H, ur Rehman I, Awan Z, Rehman IU, Hussain A, Afzal S, Shahid
	M, Manzoor S, Rafique S. The changing Epidemiology pattern and Frequency Distribution of
	hepatitis C virus in Pakistan. Infection, Genetics and Evolution 2010 Jul; 10(5): 595-600.
	Epub 2010 May 9.
20	Idrees M*, Butt S, Awan Z, Aftab M, Khubaib B, Rehman IU, Akram M, Mamzoor S, Akbar
	H, Rafique S, Riazuddin S. Nucleotide identity and variability among different Pakistani
	hepatitis C virus isolates. Virology Journal. 2009 Aug 24; 6: 130.

21	Idrees M*, Riazuddin S. Frequency Distribution of Hepatitis C Virus Genotypes in Different
	Geographical Regions of Pakistan and their Possible Routes of Transmission, BMC Infectious
	Dis 2008 May 23; 8: 69.
22	Idrees M*, Khan, S and Riazuddin. S. 2004. Common Genotypes of Hepatitis B Virus Present
	in Pakistan. Journal College of Physician and Surgeon Pakistan. 14 (6): 344-7).

C. Studies on viral and/or host genes/proteins and their role in disease outcome and Vaccine development using Bioinformatics tools

Pub	Publication information
No	
23	Amat-Ur-Rasool H, Saghir A, Idrees M*. Computational Prediction and Analysis of Envelop
	Glycoprotein Epitopes of DENV-2 and DENV-3 Pakistani isolates: A First Step towards
	Dengue Vaccine Development. PLoS One. 2015, Mar 16; 10(3): e0119854.
24	Butt A, Idrees M, Tong Y. Identification and expression profiling of microRNAs in hepatitis C
	patients by using next generation sequencing. Journal of Viral Hepatitis 2014 Oct 14; Vol 21
	(82), 33–33.
25	Butt AM, Feng D, Nasrullah I, Tahir S, Idrees M, Yigang Tong Y, Lu J. Computational
	identification of interplay between phosphory-lation and O - β -glycosylation of human occludin
	as potential mechanism to impair hepatitis C virus entry. Infection Genetics Evolution. 2012
	Aug 10; 12(6): 1235-1245.
26	Butt AM, Khan IB, Hussain M, Idrees M, Lu J, Tong Y. Role of post translational
	modifications and novel crosstalk between phosphorylation and O-beta-GlcNAc modifications
	in human claudin-1, -3 and -4. Molecular Biology Reports. 2012 Feb; 39(2): 1359-1369.
27	Butt AM, Feng D, Idrees M, Tong Y, Lu J. Computational identification and modeling of
	crosstalk between phosphorylation, O-beta-glycosylation and methylation of FoxO3 and
	implications for cancer therapeutics. International Journal of Molecular Sciences 2012;
	13(3), 2918-2938.
28	Rafique S, Idrees M*, Ilyas M, Hussain A, Ali M, Ali L, Butt S, Afzal S, Rehman IU, Saleem
	S. Positional effect of phosphorylation sites 266 and 267 in the cytoplasmic domain of the E2
	protein of hepatitis C virus 3a genotype and Interferon: Resistance through approach of
	Sequence Alignment. <i>Virology Journal</i> 2011 May 5; 8: 204. doi:10.1186/1743-422X-8-204
29	Afzal S, Idrees M, Ali M, Ilyas M, Akram M, Butt S, Salem S, Hussain A, Rehman IU, Ali L,
	Shahid M. Envelope 2 protein phosphorylation sites S75 & 277 of hepatitis C virus genotype
	1a and interferon resistance: A sequence alignment approach. <i>Virology J.</i> 2011, Feb 15; 8:71.
30	Shehzadi A, Rehman SU, Idrees M [*] . Promiscuous prediction and conservancy analysis of
	CTL binding epitopes of HCV3a viral proteome from Punjab Pak:an In Silico Approach.
	<i>Virology J</i> 2011 Feb 8; 8: 55.
31	Butt AM, Siddique S, Idrees M , Tong Y. Avian influenza A (H9N2): computational molecular
	analysis and phylogenetic characterization of viral surface proteins isolated between 1997 and
	2009 from the human population. Virology Journal 2010 Nov 15; 7: 319.

D. Virus Prevalence, Molecular Epidemiology and Outbreak Investigations

Pub	Publication information
No	
32	Ali A, Rehman HU, Nisar M, Rafique S, Ali S, Hussain A, Nausheen, Idrees M*, Sabri S,
	Zada H, Hussain S. Seroepidemiology of dengue fever in Khyber Pakhtunkhawa-Pakistan

	International Journal of Infectious Diseases 2013 Jul; 17 (7): e518-e523.
33	Idrees M*Hussain W, Rehman HU, Tayyab GN. Afzal S, Fatima Z, Akram M, Raza SM, AliL, Hussain A, Amin I, Shahid M, Khubaib B, Saleem S, Nasir B, Tariq A, Wasim M, WaqarM. Dengue Virus Serotype 2 (DEN-2): the Causative Agent of 2011-Dengue Epidemic inPakistan. American J Biomed Sciences. 2012 Aug; 4(4), 307-315.doi:10.5099/aj120400307
34	Butt, S., Idrees M* , Rehman IR, Akbar H, Shahid M, Afzal S, Younas S, Amin I. High Prevalence of dual HCV infection. <i>Emerging Infectious Diseases. 2011 Aug; 17(8): 1565-1567.</i>
35	Khan AU, Waqar M, Akram M, Zaib M, Wasim M, Ahmad S, Niaz Z, Ali S, Ali H, Idrees M* . Bajwa MA. True prevalence of Twin HDV-HBV infection in Pakistan: A Molecular approach. <i>Virology Journal</i> 2011 Sep 4; 8: 420. doi:10.1186/1743-422X-8-420
36	Khan F, Akbar H, Idrees M , Khan H, Shahzad K, Kayani MA. The prevalence of HBV infection in the cohort of IDPs of war against terrorism in Malakand Division of Northern Pakistan <i>BMC Infectious Diseases 2011, Jun 20; 11:176.</i> doi:10.1186/1471-2334-11-176
37	Iqbal T, Idrees M* . Ali L, Hussan A, Ali M, Butt S, Yousaf MZ, Sabar MF. Isolation and characterization of two new Hepatitis E Virus Genotype 1 strains from two Mini-outbreaks in Lahore, Pakistan. <i>Virology Journal</i> 2011 Mar 4; 8: 94. doi:10.1186/1743-422X-8-94
38	Ali A, Ahmed H*, Ali I, Khan S, Zaidi G, Idrees M *, Prevalence of active Hepatitis C Virus infection in District Mansehra Pakistan'. <i>Virology Journal. 2010 Nov 22; 7: 334</i> .
39	Zaidi G, Idrees M* , Malik FA, Amin I, Shahid M, Younas S, Hussain R. Awan Z, Tariq A, Parveen K. Prevalence of Hepatitis Delta Virus in Hepatitis B surface antigen positive patients circulating in the largest province of Pakistan. <i>Virology Journal.</i> 2010 Oct 26; 7: 283.
40	Ali A, Ahmed H, Idrees M* , Molecular epidemiology of Hepatitis C virus genotypes in Khyber Pakhtoonkhaw of Pakistan. <i>Virology J. 2010 Aug 26; 7: 203</i> .
41	Awan Z, Idrees M* , Amin I, Butt S, Afzal S, Akbar H, Rehman IU, Younas S, and Shahid M. Lal A, Saleem S, Rauff B. Pattern and Molecular Epidemiology of Hepatitis B virus genotypes circulating in Pakistan. <i>Infection, Genetics and Evolution. 2010 Aug 17; 10(6): 1242-1246</i>
42	Idrees M*, Lal A, Naseem M, Khalid M. High Prevalence of Hepatitis C Virus Infection in the Largest Province of Pakistan. <i>Journal of Digestive Diseases. 2008 May; 9(2): 95-103.</i>
43	Ali A, Nisar M, Idrees M* , Ahmad H. <u>Hussain A</u> , <u>Rafique S</u> , <u>Sabri S</u> , <u>Rehman HU</u> , <u>Ali L</u> , <u>Wazir S</u> , <u>Khan T</u> . Prevalence of HBV infection in suspected population of conflict-affected area of war against terrorism in North Waziristan FATA Pakistan. <i>Infection, Genetics and</i> <i>Evolution. 2012 Dec;</i> 12(8); 1865-1869 .
44	and D viruses. <i>Virology Journal</i> 2011, Jul; 8: 368.
45	Ali M, Idrees M*. Ali L, Hussain A, Rehman IU Saleem S, Afzal S, Butt S. Hepatitis B virus in Pakistan: A systemic review of prevalence, risk factors, awareness status and genotypes. <i>Virology Journal</i> 2011, Mar 6; 8; 102. doi:10.1186/1743-422X-8-102

E. Studies on Anti-viral therapy: role of various viral & host factors in treatment response rates

Publication information
Ullah S, Rehman HU, Idrees M* . Mutations in the NS5a gene are associated with response to
interferon + ribavirin combination therapy in patients with chronic hepatitis C virus 3a infection.
European Journal of Gastroenterology & Hepatology 2013 Oct; 25(10):1146-1151.

47	Akram M, Idrees M*, Hussain A, Afzal S, Ilyas M, Zafar S, Aftab M, Badar S, Khubaib B.
	Characterization of Hepatitis C Virus genotype 3a Hypervariable region 1 in patients achieved
	rapid virological response to alpha interferon and Ribavirin Combination therapy. Virology
	<i>Journal</i> 2011 May 23, 8(1): 253. doi: 10.1186/1743-422X-8-253.
48	Akram M, Idrees M*, Zafar S, Hussain A, Butt S. <u>Afzal S</u> , <u>Rehman IU</u> , <u>Liaqat A</u> , <u>Saleem S</u> ,
	Ali M, Butt A. Effects of Host and virus related factors on Interferon-alpha + ribavirin and
	Pegylated-interferon+ribavirin treatment outcomes in Chronic Hepatitis C patients. Virology
	<i>Journal</i> 2011, May 17; 8: 234. doi: 10.1186/1743-422X-8-234.
49	Akbar H, Idrees M*, Butt S, Awan Z, Sabar MF, Rehaman Iu, Hussain A, Saleem S. High
	Baseline Interleukine-8 level is a Independent Risk Factor for the achievement of Sustained
	Virological Response in Chronic HCV Patients. Infection, Genetics and Evolution 2011 Aug;
	11(6): 1301-1305.
50	Ali I, Khan S, Attaullah S, Khan SN, Khan J, Siraj S, Iqbal A, Swati ZA, Idrees M. Response
	to combination therapy of HCV 3a Infected Pakistani patients and the role of NS5A protein.
	Virology Journal 2011 May 25; 8: 258.
51	Afzal S, Idrees M [*] , Akram M, Awan Z. Khubaib B, Aftab M, Fatima Z, Badar S, Hussain A.
	Mutations in the E2-PePHD region of hepatitis C virus genotype-3a and correlation with
	response to interferon and ribavirin combination therapy in Pakistani patients Virology
	Journal. 2010 Dec 31; 7: 377.
52	Idrees, M [*] , Riazuddin S. A study of best positive predictors for sustained virologic response to
	interferon alpha plus ribavirin therapy in naive chronic hepatitis C patients. BMC
	Gastroenterol 2009 Jan 20; 9:5.
53	Khubaib B, Idrees M*, Afzal S, Wasim M. The genotype CC of <i>IL-28B</i> SNP rs12979860 is
	significantly associated with a sustained virological response in chronic HCV Pakistani
	patients. Journal of Digestive Diseases 2015 Feb 24; (In Press). doi: 10.1111/1751-
	2980.12238. [Epub ahead of print]
54	Ali L, Idrees M [*] . <u>Ali M, Rehman IU, Hussain A, Afzal S, Butt S, Saleem S, Munir S, Badar</u>
	S . An overview of treatment response rates to various anti-viral drugs in Pakistani
	Hepatitis B Virus infected patients. Virology Journal 2011 Jan 15; 8: 20. doi: 10.1186/1743-
	422X-8-20.
55	Munir S, Saleem S, Idrees M [*] . Tariq A, Butt S, Rauff B, Hussain A, Badar S, Fatima z, Ali M,
	Ali L, Akram M, Aftam M, Khubaib B, Awan Z. Hepatitis C Treatment: current and future
	perspectives. Virology Journal. 2010 Nov 1; 7: 296. doi:10.1186/1743-422X-7-296

F. Studies on Virus association with other abnormal conditions/Diseases

Pub	Publication information
No.	
56	Sabri S, Idrees M*, Rafique S, Ali A, Iqbal M. Studies on the role of NS3 and NS5A non-
	structural genes of HCV 3a local isolates in apoptosis Intern J. Infectious. Diseases. 2014,
	Aug; 25: 38-44.
57	Shahid M, Idrees M*, Nasir B, Raja AJ, Raza SM, Amin I, Rasul A, Tayyab GU. Correlation
	of biochemical markers and HCV RNA titers with fibrosis stages and grades in chronic HCV-
	3a patients. European Journal of Gastroenterology and Hepatology. 2014 Jul; 26(7):788-794.
58	Shah AR, Lal A, Idrees M [*] , Hussain A, Jeet C, Malik FA, Iqbal Z, Rehman HU, Hepatitis E
	Virus Associated Aplastic Anemia: First case of its kind. J. Clinical Virology. 2012 May;
	<i>54(1): 96-97.</i>
59	Shah SAR, Idrees M*, Hussain A. Hepatitis G associated aplastic anemia in Pakistan: A recent

	case from Pakistan. Virology Journal, 2011 Jan 21; 8: 30. doi:10.1186/1743-422X-8-30
60	Manzoor S, Idrees M*, Ashraf A, Mehmood A, Butt S, Fatima K, Akbar H, Rehman IU, Qadri
	Q. Identification of ionotrophic purinergic receptors in Huh-7 cells and their response
	towards structural proteins of HCV genotype 3a. Virology Journal 2011 Sep 8; 8: 431.
61	Idrees, M*, Rafique S, Rehman I, Butt S, Riazuddin S. The impact of hepatitis C virus
	genotype 3a infection on the development of hepatocellular carcinoma: Pakistan experience.
	World Journal of Gastroenterology 2009 Oct 28; 15(40): 5080-5085.
62	Badar S, Khubaib B, Idrees M [*] . Hussain A, Awan Z, Butt S, Afzal S, Akram M, Fatima Z,
	Aftab M, Saleem S, Munir S, Ali L, Rehman IU., Association of Hepatitis C Virus With Insulin
	Resistance: Evidences From Animal Studies and Clinical Studies. Hepatitis Monthly 2012
	Jan; 12(1): 11-15.
63	Faridi R, Zahra A, Idrees M*, Khan K. Oncogenic potential of Human Papillomavirus (HPV)
	and its relation with cervical cancer. Virology Journal 2011 Jun 3; 8: 269.
64	Rauff B, Idrees M [*] . Shah AR, Butt S, Butt AM, Ali L, Hussain A, Rehman IU, Ali M.
	Hepatitis Associated Aplastic Anemia: A review. Virology Journal 2011 Feb 28; 8: 887.

A. FIRST THEM-ESTABLISHMENT OF ASSAYS/METHODS TO STUDY VIRUSES

In first theme (**Theme A**), Dr. Idrees has authored 9 publications where Dr. Idrees is the first and/or senior/corresponding author in 7 (Publication # 1,2,3,4,5,8&9), sole author in one (Publication #8), corresponding author in 4 (Publication # 1, 2, 3 & 9) and contributing author in 2 (Publication # 6&7). These publications describes the establishment of various PCR based and cell culture based assays to study viruses. His publication #1 describes De Novo modeling, isolation & structural analysis of patient derived HCV-3a E2 glycoprotein sequences and B-cells and T-cells-specific epitopes prediction for vaccine development. The sequence, structural and epitope analysis has revealed a number of conserved epitopes in both 3a and 1a genotypes. These epitopes may not only help in diagnosing the pathogens but also may help in developing vaccine against HCV 3a and 1a genotypes. Presence of overlapping epitopes generates the hope that a small fragment of peptide in vaccine formulation can elicit broad immune response and may result in efficient clearing of HCV pathogen.

Dr. Idrees has played a key role in development of infectious pseudo particles of local HCV3a-isolate and further checked HCVpp infectivity in Huh-7 cell lines. He found that a number of other liverspecific surface proteins along with CD81 and SRBI receptors are concurrently responsible for HCV infections (Publication #2). In addition, he studied the role of neutralizing antibodies against E1 and E2 genes in resolving HCVpp infectivity by HCV-3a Pakistani isolate. This was the first study on the role of neutralizing antibodies against envelope genes in resolving HCV-3a pseudo-particles infectivity is available from this region of the globe (Publication #3). Dr. Idrees's group has developed a cell-culture based system (Publication #7) for screening of HCV anti envelope neutralizing antibodies in the serum of HCV patients during acute and chronic HCV infections. This system can be used for the screening of antiviral molecules that can block the entry of the virus into host cell. Dr. Idrees was the first in the country who attempted to determine the etiology of the elevated liver-enzyme levels by investigating occult HCV infection in these patients, utilizing a sensitive real-time PCR assays to detect HCV RNA in liver biopsy specimens from a cohort of patients who were negative for anti-HCV antibodies, negative serum HCV RNA and had abnormal LFTs of unknown origin (Publication #4). Dr. Idrees has developed a new highly sensitive, specific, reliable, reproducible and economic HCV genotyping assay for the specific detection of HCV genotypes 1a, 1b, 1c, 2a, 2b, 2c, 3a, 3b, 3c, 4a–h, 5a and 6a (Publication #8). This method is capable of genotyping reliably HCV RNA directly from clinical samples in routine diagnostic laboratory. His publication # 5 describes the evaluation and clinical applicability of three different genotyping (including his newly developed method) and serotyping assays for the true prevalence of HCV mixed-genotype infections. Their newly developed assay was able to detect mixed genotype at very low level and may be the method of choice when detection of genotypes present at low levels in mixed-genotype infections due to its higher level of sensitivity. Dr. Idrees et al. (Publication #6) has devised a screening assay for the first time in Pakistan ever, utilizing core antigen of HCV genotype 3a. Their developed screening assay is more sensitive, specific and reproducible than the commercially available screening assays in Pakistan. More recently, Dr. Idrees and his colleague have also developed highly sensitive, inexpensive and simple serological assays for the screening of HCV infection utilizing mixture of recombinant (Core & E2) antigens to detect the presence of HCV antibodies in serum specimens (Publication #9).

B. VIRUS GENOME CHARACTERIZATION, VARIABILITY, GENOTYPES/SEROTYPES ANALYSIS:

In subsequent (**Theme-B**) virus genome characterization, variability, genotypes/serotypes analysis, Dr. Idrees has co-authored 13 publications. This series of investigations aimed at identifying the evolutionary history, genetic heterogeneity, discoveries of novel mutations, full-length genome characterizations, distribution of different circulating viruses in different parts and ethnic groups of the country. Recently, Dr. Idrees has presented the evolutionary history of HCV genotype 3a in Pakistan for the first time by analyzing the genetic heterogeneity of HCV NS3 and NS5b subgenomic regions (Publication #10). This article resulted from his collaborating work in Dr. Yury's laboratory at US-CDC, Atlanta GA. Their results show a remarkable genetic diversity among HCV variants in that locale, and substantiate the hypothesis that HCV genotype 3a originated in the Indian subcontinent. Phylogenetic analyses showed that Pakistani genotype 3a variants were as genetically diverse as global variants, with extensive intermixing. Bayesian estimates showed that the most recent ancestor for genotype 3a in Pakistan was last extant in 1896–1914 C.E. (range: 1851–1932). This genotype experienced a population expansion starting from 1905 to 1970 after which the effective population leveled. Death/birth models suggest that HCV 3a has reached saturating diversity with decreasing turnover rate and positive extinction. In addition, Dr. Idrees has discovered novel mutations such as D/N244E, K304R, N/K307G, Q/T329V, and A338V that were found associated with the emerging clades of HCV3a resistance to antiviral therapy (Publication #11). His publication # 13 describes the frequency distribution and pattern of various HCV genotypes circulating in the different districts of Punjab in different age groups and sexes.

Dr. Idrees further studied the change in HCV pattern of distinct clades over 11 years by genotyping more than 22'000 chronic HCV infected patients. A changing pattern in HCV clades was seen in this region as a significant decline was observed in the percentages of HCV clades 2, 4, 5 & 6 and increase in genotype 1 (Publication #15). In addition, he was able to discovered six new HCV genotypes such as 1c, 2c, 3c, 4, 5a and 6a for the first time from Pakistan. This changing pattern in HCV genotypes local Pakistani HCV infected patients may influence success in treating HCV infection in this country and

may make the present situation difficult (Publication #19). His group was also involved in the genotypes/subtypes analysis of circulating HCV genotypes and their possible routes of transmission in other geographical regions including Hazara Division (Publication #17), Swat district of Khyber Pakhtoonkhawa (Publication #18) and rest of the whole country (Publication #21). Dr. Idrees's group has reported the first patient derived hepatitis C virus (HCV) complete genome from Pakistan (Publication #14) as was not previously available from this region of the world The evolutionary divergence analysis for nucleotide and amino acid sequences, conducted by equal input model, suggested that evolutionary nucleotide and amino acid distances showed that the HCV Pakistani strain was genetically far from Denmark strain (0.29400 nt, 0.819646 aa) and near to German strain (0.06557 nt, 0.139449 aa), respectively. For the first time in Pakistan he had determined percent nucleotide identity and variability in HCV isolates prevalent in different geographical regions of Pakistan in year 2001 when few peoples were aware about HCV genome (Publication # 20). Regarding studies on HBV, Dr. Idrees has found out the frequency distribution of common genotypes HBV circulating in all the provinces and was the first virologist of the country who done such type of studies (Publication #22). Further, Dr. Idrees has carried out a study on genotyping of both HBV and HDV in chronically coinfected patients and studied specific interaction between different HBV and HDV genotypes (Publication #12). In addition, Dr. Idrees's group have studied in detail three mini outbreaks of dengue virus infection that occurred in years 2007, 2008 & 2009 (Publication #16).

C. VIRAL AND HOST GENES/PROTEINS AND THEIR ROLE IN DISEASE OUTCOME AND VACCINE DEVELOPMENT

In studies on virus and/or host gens/proteins and their role in disease outcome/vaccine development using Bio-informatics tools (**Theme-C**), Dr. Idrees has co-authored 9 publications. In a more recent study published in high impact factor journal (Publication #23), Dr. Idrees and his coworkers used a number of bioinformatics tools to analyze various features of antigenic epitopes including antigenecity, surface accessibility, flexibility, residue solvent accessibility, spatial distribution and inter-molecular contacts for Dengue virus (DENV) E-protein. Their predicted epitopes are important candidates for developing vaccines. Dr. Idrees has played a key role in the prediction of linear and conformational B-cell epitopes of DENV envelope glycoprotein. His proposed continuous and discontinuous antigenic peptides can be valuable candidates for DENV diagnostic and therapeutic.

The most important publication of this theme is the genome-wide identification and expression profiling of microRNAs in HCV patients by using next generation sequencing (NGS) techniques (Publication #24). Taken together, his report is the first report of NGS based miRNA profiling in HCV patients at varying levels of disease stages. I believe that the findings of this study will be helpful in understanding and expanding current knowledge on the role of miRNAs in HCV disease progression and therapeutic strategies. His publication #25 describes computational identification of interplay between phosphorylation and O-b-glycosylation of human occludin as potential mechanism to impair HCV entry. To my knowledge, this is the first study to report the O-b-GlcNAc potential of occludin and target sites of ERK (Ser8, Ser310, and Thr345), GSK-3 (Ser8, Ser341) and Cdk5 (Thr376). As targeting viral entry holds great therapeutic promise, therefore, his discovery of Yin Yang sites represents an attractive strategy to impair HCV entry. Similarly they were able to find out novel

crosstalk between phosphorylation and O-beta-GlcNAc modifications in human claudin-1, -3 and -4 (Publication #26). In addition, a computational workflow and set of selection parameters modeling of crosstalk between Phosphorylation, *O*-β-glycosylation and Methylation of FoxO3 have been defined for the identification of target sites and crosstalk between different PTMs (Publication #27). Their findings may facilitate the study of therapeutic strategies targeting posttranslational events. Their findings may facilitate the production of anti-cancer drugs for different cancers including hepatocellular Carcinoma (HCC). His publication #28 describes a hybrid in-silico and wet laboratory approach of motif prediction, evolutionary and structural analysis. Dr Idrees has pointed out nucleotide variations in serine 266 and 267 of the HCV-3a E2 gene as a hopeful claimant for the serine phosphorylation that may assist to propose genotype precise therapy to avoid and resolve HCV infections. Using similar approach he has discovered novel nucleotide variations in serine 75 and 277 of the HCV-1a E2 gene as a promising candidate for the serine phosphorylation that may have a significant role in interferon resistance (Publication #29). Next, Dr. Idrees analyzed the entire HCV proteome of Pakistani origin, aimed to identify the viral epitopes and their conservancy in HCV genotypes 1, 2 and 3 of diverse origin using immunoinformatic tools (Publication #30). All the predicted epitopes have important implications in diagnostics as well as CTL-based rational vaccine design, effective for most population of the world and especially the Pakistani Population. Dr. Idrees also conducted an in silico analysis of H9N2 viruses and identified potential novel reassortments and zoonotic potential (Publication #31). His findings support the continuous evolution of avian H9N2 viruses towards human as host and are in favor of effective surveillance and better characterization studies to address this issue. Findings from the study support the genetic instability of influenza A (H9N2) viruses.

D.VIRUS PREVALENCE, MOLECULAR EPIDEMIOLOGY AND OUTBREAK INVESTIGATION:

In theme-D, Dr. Idrees holds 14 publications on virus prevalence, molecular epidemiology and outbreak investigation. Recently, Dr. Idrees has determined the seroprevalence of dengue (IgM and IgG) antibodies and the disease symptoms in the urban as well as in rural areas population of Khyber Pakhtunkhawa, in different seasons. Dengue infection was most prominent in the post-monsoon season, in urban areas, and in young patients with a history of travel to an endemic locality (Publication #32). Dr. Idrees has also carried out a comprehensive study of the 2011 major outbreaks of dengue virus infection on molecular level in which more than 50,000 people were infected. Based on the results of his study, DEN-2 was the responsible genotype for that major dengue epidemic that started from the beginning of year 2011 and is continuing till now. The additional serotype detected was serotype 3 (Publication #33). Regarding work on HCV, Dr. Idrees has surveyed and estimated the prevalence and spectrum of active HCV infection in apparently healthy inhabitants in different age and gender groups of District Mansehra (Publication #38), Khyber Pakhtoonkhaw (Publication #40) and in the entire general population of Pakistan (publication #42). These were the first reports that showed the true picture of high seroprevalence of anti-HCV antibodies in a general and HCV RNA in apparently healthy population of Pakistan. Of highest impact factor (7.3327) is the publication in *Emerging* Infectious Diseases (2011), where Dr. Idrees is the major contributing and corresponding author (Manuscript #34). This publication describes retrospective analysis of genotyping data for paired serum samples from 22,125 HCV-infected patients to determine the prevalence of HCV mixed genotype infections during the past 11 years for all regions in Pakistan. He found a significantly elevated prevalence of HCV mixed genotype infections in Pakistan. Dr. Idrees also demonstrated the prevalence of HBV infection the various socio-economic, demographic and possible risk factors related to HBV infection among the conflict-affected peoples due to war against terrorism in Federal Administered Areas of Pakistan (Manusript #43). Dr. Idrees has further studied the pattern and molecular epidemiology of HBV genotypes circulating in Pakistan (Publication # 41). This is the first and sole study on the subject and represents all the geographical regions of the country. In addition, Dr. Idrees also demonstrated the prevalence of HBV infection in the cohort of internally displaced people (IDPs) of war against terrorism in of Northern of Pakistan (Publication #36). In addition, Dr. Idrees has found out the true prevalence of twin HBV-HDV in different geographical regions of Pakistan for the first time in the country (Publication #35). According to his research the HDV coinfection is common in Pakistan and its prevalence is higher significantly in the Province of Sindh and male six. Dr. Idrees' group also determined the prevalence of HDV super-infection among HBsAg positive individuals in the highly populated province of Pakistan (Publication#39). Importantly, Dr. Idrees' group isolated and characterized two novel hepatitis E virus genotype 1 strains from two mini-outbreaks in Lahore (Publication #37). Their study suggests that both the human HEV strains were closely related to the Sar-55 and is the main endemic HEV strain circulating in various areas of the country. In the last, Dr. Idrees has also published two review articles related to this specific theme. The first one (Publication #44) is a detailed overview on the epidemiology, pathogenesis, transmission, symptoms, diagnosis, replication, disease outcome, treatment and preventive measures of triple hepatitis B, C & delta infections. The second article (#45) is a systematic review on HBV prevalence, risk factors, awareness status and genotypes.

E. ROLE OF VARIOUS VIRAL & HOST FACTORS IN TREATMENT RESPONSE RATES

In Studies on role of various viral and host factors on response rates during antiviral therapy, Dr. Idrees has published 10 articles (**Theme-E**). Recently, Dr. Idrees has discovered an association between HCV3a-NS5A gene mutations and response to interferon+ribavirin combination therapy in patients with chronic HCV (Publication #46). His findings as well as other studies support the hypothesis that HCV-3a resistance toward combination therapy is due to mutations in the ISDR region of the NS5A gene. His another study describes novel mutations in other parts of the viral genome coupled with mutations in the ISDR responsible for anti-viral resistance (Publication #50). In another study, Dr. Idrees has also characterized Hypervariable region-1 of HCV3a infected patients at baseline and correlated antigenic variability with rapid virological responders (RVR), breakthrough and non-responders (Publication #47). Antigenic variability was more significant in RVR than in breakthrough responders. Before, Dr. Idrees has studied the effects of various host and virus related factors and analyzed rate of early and delayed response to antiviral treatment as well as rate of relapse response in chronic HCV patients following both standard IFN a/ribavirin and pegylated interferon treatment (Publication #48).

Dr. Idrees has further investigated the relationship between baseline levels of IL-8 in serum, HCV infection, and response to IFN standard therapy (publication #49). His findings showed that high

baseline interleukine-8 level is an independent risk factor for the achievement of sustained virological response in chronic HCV patients and the changes induced in the level of IL-8 by HCV infection has a predictive value for the net outcome of therapy. In addition, Dr. Idrees has correlated different mutations in the E2-PePHD region of HCV-3a with treatment response (Publication #51). Based on his results, he concluded that PePHD domain in local HCV-3a strains carries novel substitutions that tend to decrease the average hydrophilic activity of PePHD domain in RVR and increase the average hydrophilic activity in breakthrough responders. This leads HCV to persist by evading antiviral activity of interferon alpha. Dr. Idrees has determined the rate of sustained virological response (SVR) and various factors associated with response rates in chronic hepatitis C infected patients treated with interferon alpha and ribavirin combination therapy (Publication #52). His study showed that standard interferon therapy may be as useful as PEG-interferon plus ribavirin for SVR in Pakistan. Patients with RVR, low pre-treatment viral load, HCV genotypes 2 & 3, age < 40 years and ethnic group Pashtoon appear to have the highest probability of ETR and SVR. More recently Dr. Idrees has evaluated the association of genetic variation in interleukin 28B (IL28B) and viral influential factors with treatment outcome in chronic HCV patients (Publication #53). The CC genotype of SNP rs12979860 of IL28B was found a strong independent predictive factor for SVR in Chronic HCV infected patients. SNP rs12979860 CC genotype has statistically strong association with successful treatment outcome in chronic HCV infected patients. Publication # 55 is a review article containing recent advancement in current therapy and future perspectives of HCV treatment. Publication #54 contains an overview on treatment response rates to various anti-viral drugs in Pakistani HBV infected patients.

F. VIRUS ASSOCIATION WITH OTHER ABNORMAL CONDITIONS/DISEASES:

Dr. Idrees's accomplishments on virus association with other abnormal conditions/diseases include 9 publications (**Theme-F**). Dr. Idrees has recently studied the role of NS3 & NS5A non-structural genes of HCV-3a local isolates on apoptosis (Publication #56). Dr. Idrees has successfully established Huh 7 cells lines stably expressing NS3 and NS5A protein of HCV which were used to study the molecular mechanism underlying and studied their relationships with apoptotic protein p53. Dr. Idrees's manuscript is the first report of its kind in Pakistan and may be useful for the development of new therapeutic strategies. The developed model system has the potential to be used for the screening of antiviral drugs. Dr. Idrees also correlated biochemical markers and HCV RNA titers with fibrosis stages and grades in chronic HCV-3a patients (Publication #57).

Dr. Idrees has shown several viral and host markers that have significant correlation with liver injury in CHC patients. Their study suggests that various baseline viral and host factors can be indicative of ongoing liver damage. These noninvasive markers may substitute the necessity for liver biopsy in patients with cirrhosis and in whom the procedure has known limitations and complications. Another research was undertaken by Dr. Idrees to identify the presence of various isoforms of P2X receptors in human hepatoma cell (Huh-7) and to evaluate the response of identified isoforms to HCV structural proteins E1E2 (Publication #60). His findings demonstrated that each of these isoforms of P2X receptors respond differently to HCV structural proteins E1E2. This is one of the first studies which may open a new insight into the pathogenic mechanisms leading to HCV induced liver pathogenesis

via Purinergic (P2X) receptor signaling. Furthermore, these findings also suggest that the most responsive isoform P2X4 receptors could be represented a novel and functionally important component of the purinergic signaling complex in HCV induced pathogenesis. Dr. Idrees has also assessed the association between chronic HCV infection and hepatocellular carcinoma (HCC) in Pakistan, and the genotype distribution among these HCC patients (Publication #61). He has found a strong association between chronic HCV infection and HCC in Pakistan, and between HCV-3a and HCC. During the last four years, Dr. Idrees has extensively studied hepatitis associated aplastic anemia (HAAA). He used various hematological, biochemical, immunological and virological markers for the detection of the causative agent of HAAA. Several viruses such as HCV, HBV, HEV and HGV were found associated with aplastic anemia. His discovered HEV-associated aplastic anaemia is the first case of its kind in the world (Publication #58). Similarly, Dr. Idrees has established the involvement of HGV in the development of aplastic anemia (Publication #59).

Based on his research, Dr. Idrees has suggested that in patients presenting with pancytopenia after an episode of acute hepatitis, the definitive diagnosis should be considered and confirmed by RT-PCR and if possible, by bone marrow biopsy. Dr. Idrees has also published a review article containing a comprehensive literature search to understand the nature and association between HCV infection and insulin resistance (IR) in modulating the course of the insulin-signaling pathways, giving evidences from animal and clinical studies (Publication #62). His another review article (Publication #63) describes oncogenic potential of Human Papillomavirus (HPV) and its relation with cervical cancer. The basic purpose of this review article was to highlight the dire need of awareness of this deadly cancer as increase in risk of HPV infection has a tremendous role in women related sexual problems and the hazardous effect is in the form of cervical cancer which is the major cause of death among all the cancers in developing countries. The most important and last article of this theme is a review on hepatitis associated aplastic anemia (Publication #64) that is a well-documented and diverse variant of clinical syndrome of aplastic anemia, in which an acute attack of hepatitis leads to the marrow failure and pancytopenia that may be acute or chronic. In this review Dr. Idrees has described the reported cases of this disorder in the world, its relation with low socioeconomic status, age, sex, hepatitis viruses manifest the disease symptoms, viruses commonly observed in reported HAAA cases. The review also contains various detection methods for the causative agent of HAAA, clinical features relating to it and various options for its therapy

In addition to the above listed projects, Dr. Idrees is also senior author on several manuscripts that submitted to high impact factor journals such Journal of Hepatology (IF 10.401), PlosOne (IF 3.534) etc and are currently under review. These research activities include differential expression profiles of hepatic microRNAs in chronic hepatitis C patients, identification of novel mutations an the entire genome of dengue virus, Physico-chemical Conservancy Analyzer: A Novel tool to Pin-Point Functional Domains in Multiple sequence alignments and studies on various circulating miRNAs as biomarkers for HCV disease and treatment outcome.

ii. ACADEMIC RESEARCH SUPERVISION EXPERIENCE:

Dr. Idrees has more than 20 years supervisory experience of PhD students leading to successful grant of Ph. D degrees. Till date he has supervised 38 PhD & 53 M. Phil students and is currently supervising 03 PhD and one M. Phil research scholars.

a. PH. Ds PRODUCED AS MAJOR SUPERVISOR (List of PhD Students Supervised and awarded PhD degrees):

S.NO.	NAME OF STUDENT	TITLE OF THESIS	NAME OF UNIVERSI TY	REGIST RATION DATE
1.	Muhammad Zubair	Development of DNA Vaccine vectors against hepatitis C virus genotype 3a: The most prevalent genotype circulating in Pakistan	University of the Punjab	2004-2009
2.	Shazia Rafique	Generation of virus like particles as potentional therapeutic vaccine for hepatitis C virus using enevelop glycoproteins of Pakistani strains	University of the Punjab	2004-2009
3.	Sobia Manzoor	A study of Molecular mechanisms of hepatitis C induced liver fibrosis	University of the Punjab	2004-2009
4.	Shahida AR Shah	Association of Aplastic Anemia with Positive Viral Hepatitis Serology, and its outcome after Immunosuppressive Therapy	SZH/Univers ity of the Punjab	2007-2012
5.	Samia Afzal	Study of inhibition of interferon inducible genes by dephosphorylation of E2 Envelope Gene of HCV Genotype 1a	University of the Punjab	2007-2013
6.	Irshad ur Rehman	Molecular Cloning and Sequencing of Entire HCV Genotype 3a cDNA of Pakistani Isolates and their Quasispecies Analysis	University of the Punjab	2007-2013
7.	Sadia Butt	Establishment of stable cell lines expressing proteins of HCV Genotype 3a Pakistani isolate and their Molecular Characterization	University of the Punjab	2007-2013
8.	Abrar Hussain	Cloning and Sequencing of full length Pakistani HCV-1a & its Quasi Species Analysis	University of the Punjab	2008-2013
9.	Sabeen Sabri	Studies on the role of NS3 and NS5a Non- structural genes of Hepatitis C Virus genotype 3a local isolates in apoptosis	University of the Punjab	2010-2015
10.	Bushra Khubaib	Identification of IL28-B genetic variations associated with virological response of interferon therapy in chronic HCV infected patients	University of the Punjab	2011-2015
11.	Sana Saleem	Interferon Inducible Genes inhibition by Dephosphorylation of E2 Envelope Gene of	University of the Punjab	2010-2015

		HCV-1a genotype		
12.	Madiha Akram	Full length genome sequence analysis of dengue virus serotype-2 isolated in Pakistan and its genome variability studies	University of the Punjab	2011-2016
13.	Zareen Fatima	Correlation of sequence heterogeneity of Dengue Virus with disease severity	University of the Punjab	2011-2016
14.	Azeem Mehmood Butt	Identification and expression profiling of microRNAs in hepatitis C patients using next generation sequencing	University of the Punjab	2012-2017
15.	Muhammad Shahid	Identification and correlation analysis of host genes expression in response to Hepatitis C Virus infection and therapy	University of the Punjab	2014-2019
16.	Dr. M. Akram Bajwa	Correlation of dup A, ice A and hom B genes of <i>Helicobacter pylori</i> in Pakistani <i>Helicobacter pylori</i> isolates with gastroduodenal diseases	SZH/Univers ity of the Punjab	2014-2019
17.	Dr. Nafisa Fatima	Interleukins 1, 2, 4 and 13 as Biomarkers in Beta-thalassemic Major Patients with and without type 1 Diabetes Mellitus.	SZH/Univers ity of the Punjab	2014-2019
18.	Maria Maryam	Identification of DNA methylation profiles of promoter of Ras genes (<i>H-ras</i> , <i>K-ras</i> , <i>N- ras</i>) during HCV 3a genotype Infection in Pakistani population	University of the Punjab	2015-2020
19.	Ayma Aftab	Identification of DNA Methylation profiles of promoter & regulatory genes during HCV 3a genotype infection	University of the Punjab	2015-2021
20.	Sadia Zahid	Study of methylation profile of promoters of IRS1 and IRS2 genes in Hepatitis C Virus 3a genotype induced diabetes patients from Punjab	University of the Punjab	2015-2021
21.	Rabia Nawaz	Development of DNA-based vaccine Vectors against Hepatitis C Virus	University of the Punjab	2016-2021
22.	Javeria Rafique Rao	Next Generation Sequencing Studies on the HVR1 Region of Pakistani isolates of Hepatitis C Virus	University of the Punjab	2015-2020
23.	Muhammad Usman Ashraf	CRISPR/Cas 13-Medicated Targeting of Hepatitis C Virus RNA in Eukarytic Cell	University of the Punjab	2018-2020
24.	Iram Amin	Expression and Molecular Characterization of Antigenic Recombinant Protein encoded by Hepatitis Delta Virus Antigen of Local Isolate	University of the Punjab, Lahore	2016-2022
25.	Rakhtasha Munir	Production and Molecular Characterization of Recombinant Proteins Encoded by Dengue Virus Structural Genes of Local Serotype-2	University of the Punjab, Lahore	2018-2023
26.	Iqra Almas	Dynamic of Genetic Variations and Molecular Epidemiology of Hepatitis B Virus infection	University of the Punjab, Lahore	2018-2023
27.	Aysha Wajiha	Production of Conserved Antigen Recombinant E6 Oncoprotein from High Risk Human	University of the Punjab,	2018-2023

		Papillomavirus in 293 Cell Lines	Lahore	
28.	Muhammad Islam khan	Anticancer Studies of Anti-EGFR Antibody Fragment and Interferon beta Fusion Protein	University of the Punjab	2018-2024
29.	Gulshan Zaidi	Development of vaccines against High Risk HPV viruses	University of the Punjab	2018-2024
30.	Sameen Ahmed	Expression of Recombinant Conserved Antigenic Region of High Risk Human Papillomavirus E7 Oncogene in 293 Cell Lines.	University of the Punjab	2015-2020
31.	Andleeb Hanif	Investigation of Genetic Predisposition and Clinical Manifestation in Pakistani Patients with Haematological Disorders	University of the Punjab	2020-2024

b. PHD PRODUCED AS CO-SUPERVISOR:

S.NO.	NAME OF STUDENT	TITLE OF THESIS	NAME OF UNIVERSI TY	REGIST RATIO N DATE
32	Dr. Saima Chaudhary	Correlation of <i>Helicobacter Pylori</i> in Dental Plaque and Gastric Mucosa of Dyspeptic Patients	University of the Punjab	2006- 2011
33	Farkhanda Yasmin	Development of stable cell lines of Dengue NS3 gene and anti-viral compound analysis	UVAS Lahore	2013- 2018
34	Ghulam Zahra Jahangir	Cloning and expression studies on abiotic stress tolerance genes in Solanum Tuberosum.	LC Women University, Lahore	2014- 2018
35	Mahwish Aftab	Molecular Characterization and Genome-wide Variability Studies of Full-length Genome of Hepatitis Delta Virus Circulating in Pakistan.	LC Women University, Lahore	2014- 2018
36	Muhammad Tahir Iqbal	Molecular Characterization of Avian Hepatitis E Virus from Pakistan	University of Gujrat	2015- 2020
37	Dr. Sadia Minhas	Molecular Characterisation and Phylogenetic analysis of human papillomavirus from oral and cervical secretions in local female population, Lahore.	University of Lahore	2017- 2022
38	Muhammad Islam Khan	Anticancer Studies of Anti-EGFR Antibody Fragment and Interferon beta Fusion Protein	University of Lahore	2018- 2023

c. POSTDOCTORAL RESEARCH SCHOLAR SUPERVISED:

In 2015, Dr. Idrees supervised Dr. Kausar Malik, a Professor of Molecular Biology at Lahore College for Women University, during her six-month postdoctoral research at the Center for Applied Molecular Biology, University of the Punjab.

d. LIST OF PHD STUDENTS CURRENTLY BEING SUPERVISED BY IDREES:

S.NO.	NAME OF STUDENT	TITLE OF THE SYNOPSIS	STATUS	SESSION
20	Dr. Talha	Analysis of factors associated with mutants	External	2016 2021
39	Mahmud	receptors in patients with lung cancer	process	2010-2021
		Production of Recombinant Collagen Type	External	
40	Ms. Khadija	I in Serum free Adapted 293T Cell-line	Evaluation in	2010 2024
40	Zahid	using Ubiquitous Chromatin Opening	process	2019-2024
		Element Containing Lentiviral Vector		
	Momino	Cloning and Expression of Multi-epitope-	Thesis submitted	
41	Afzal	based Dengue sub-unit Vaccine candidates		2021-2025
		in Chlamydomonas Reinhardtii		
	Ilucanoin	Epigenetic Modulation of IL-11 in the	University of the	
42		Progression of Hepatitis C Virus-Induced	Punjab	2023-2028
	All	Hepatocellular Carcinoma		

e. LIST OF M. PHIL STUDENTS SUPERVISED BY DR. M. IDREES AND AWARDED DEGREES:

S.No	NAME OF STUDENT	TITLE OF THESIS	NAME OF UNIVERIST Y	SESSION
1	Attia Muqaddas	Cloning, sequencing and phylogenetic analysis of S-gene of hepatitis B virus	University of the Punjab	1999-2001
2	Maqsood Anwar	Occult hepatitis B virus infection in hepatitis C positive patients	University of the Punjab	1999-2001
3	Sajjad Iqbal	Genetic basis of Isoniazid and Pyrazinamide drugs resistance in Mycobacterium tuberculosis	University of the Punjab	2000-2002
4	Sana Ullah Khan	Common genotypes of hepatitis C virus circulating in Pakistan	University of the Punjab	2001-2003
5	Muhammad Hashim Raza	Detection of hepatitis G virus RNA in patients with hepatitis B virus, hepatitis C virus, Non- A-E and in general population using polymerase chain reaction	University of the Punjab	2001-2003
6	Dr. Ahmad Bilal Waqar	Detection of GB virus C/HGV replication sites in different human tissues using molecular techniques	University of the Punjab	2001-2003
7	Dr. Ejaz Khan	Role of mutations in NS5A genes of hepatitis C virus genotype 3a isolates and its correlation with treatment response	University of the Punjab	2002-2004
8	Abdul Ghafoor Khan	Mutational studies within E2 gene of hepatitis C virus genotype 3a isolates and its correlation with treatment response	University of the Punjab	2002-2004

9	Samia Afzal	Molecular identification, cloning and sequence studies of NS5A gene of hepatitis C virus genotype 3a	University of the Punjab	2002-2004
10	Fouzia Irshad	Molecular identification, cloning and sequence studies of E2 gene of hepatitis C virus genotype 3a	University of the Punjab	2004-2006
11	Nighat Yasmin	Molecular identification, cloning and sequence studies of NS3 gene of hepatitis C virus genotype 3a	University of the Punjab	2004-2006
12	Muhammad Jamil	Detection of Helicobacter pylori in liver tissues of hepatitis C virus infected patients and its possible role in the development of cirrhosis and HCC	University of the Punjab	2004-2006
13	Saifur Rehman	Common genotypes of hepatitis C and hepatitis B virus circulating in Afghanistan and its comparision with that of Pakistan.	University of the Punjab	2004-2006
14	Aaliya Tariq	Development of software based on various HCV genes, chemokines/cytokines in relation to antiviral treatment out come	University of the Punjab	2005-2007
15	Ashiq Hussain	Insilico study of pathogenecity and human gastric colonization of	University of the Punjab	2005-2007
16	Muhammad Tahir Iqbal	Cloning, sequencing and phylogenetic analysis of hepatitis E virus Pakistani isolates from two mini outbreaks	University of the Punjab	2006-2008
17	Sajjad Ullah	Association of HCV NS5a mutations with Interferon plus ribavirin standard therapy outcome	University of the Punjab	2007-2009
18	Zunaira Awan	Detection of ymmd mutations in hepatitis B virus infected patients and its role in lamuvidene resistance	University of the Punjab	2007-2009
19	Sadia Butt	Changing pattern in HCV genotypes circulating in Pakistan in last 10 years	University of the Punjab	2007-2009
20	Mehwish Aftab	Establishment of cell-lines expressing E2 gene of HCV genotype 3a Pakistani isolate	University of the Punjab	2008-2010
21	Madiha Akram	Mutational analysis studies of NS5A gene of HCV-3a and their impacts on treatment responses	University of the Punjab	2008-2010
22	Bushra Khubaib	Development of cell-lines expressing NS5A gene of HCV genotype 3a Pakistani isolate	University of the Punjab	2008-2010
23	Muhammad Ali	NS5B genome based HCV genotyping and evolutionary analysis using modern Bio- informatics tools	University of the Punjab	2008-2010
24	Liaqat Ali	Toxicological analysis and anti-viral effect of Kaolin derivatives in different cell-lines against HCV	University of the Punjab	2008-2010
25	Bisma Rauff	Cloning and expression of E2 gene of HCV-1a in a mammalian expression vector pCDNA3.1	University of the Punjab	2008-2010

		and its transient expression		
26	Zareen Fatima	Molecular characterization of dengue virus Serotypes/genotypes circulating in Dengue outbreak-2011-Punjab Pakistan	University of the Punjab	2008-2010
27	Mahrukh Naudhani	Cloning and expression of NS5A gene of HCV genotype 3a in pCDNA3.1 expression vector and its transient expression	University of the Punjab	2008-2010
28	Sadaf Badar	Mutational studies within E2 gene of hepatitis C virus genotype 3a isolates and its correlation with treatment response	University of the Punjab	2008-2010
29	Azeem Butt	Avian Influenza A (H9N2): Computational Molecular Analysis and Phylogenetic Characterization of Viral Surface Genes and Proteins Isolated between 1997 and 2009 from the Human Population	University of the Punjab	2009-2010
30	Sana Saleem	Cloning & Expression of HCV-E2 gene of Genotype 3b local isolate & its comparison with other genotypes	University of the Punjab	2009-2010
31	Madeha Fayyaz	Expression of HCV-3a envelope protein in mammalian expression vector	University of the Punjab	2010-2011
32	Ayma Aftab	Detection and Bio-informatics studies of mutations in Rifampicin and Isoniazid Resistant Strains of Mycobacterium Tuberculosis in Pakistan	University of the Punjab	2010-2012
33	Fatima A. Butt	Sequence-based genotyping of HDV and its correlation with HBV genotypes circulating in Pakistan	University of the Punjab	2010-2012
34	Naveed Ahmad	Transient Expression of NS3 protein of HCV- 3a in mammalian expression vector	University of the Punjab	2010-2012
35	Saima Younas	Detection of Salmonella typhi in Dengue Virus Sero-positive samples	University of the Punjab	2011-2012
36	Muhammad Shahid	Pathway focused intrahepatic gene expression study of human Oxidative Stress and Anti- oxidant molecules in patients with Hepatitis C Virus induced Liver Fibrosis	University of the Punjab	2011-2012
37	Sayed Mohsin Raza	Pathway focused intrahepatic gene expression study of Inflammatory Cytokines & Receptors and Extracellular Matrix and Adhesion Molecules in patients with Hepatitis C Virus induced Liver Fibrosis	University of the Punjab	2011-2012
38	Rabia Nawaz	Toxicological analysis and anti-viral effect of different natural compounds in different cell- lines against HCV	University of the Punjab	2011-2013
39	Noman Sharif	Expression of envelope genes of HCV-1a in a mammalian expression vector pCDNA3.1	University of the Punjab	2011-2013
40	Sara	Studies on gene expression Inflammatory	University of	2011-2013

	Basharat	Cytokines in patients with Hepatitis C Virus 1a	the Punjab	
		induced Liver Fibrosis using pathway focused		
		Mass Array		
		Establishment of Recombinant Huh-7	University of	
41	Tanzeel	Mammalian Cell Line Expression Vector of	the Punjab	2012-2014
41	Yousaf	NS5A Gene of HCV Genotype3a (Pakistani		2012-2014
		Isolate)		
	Wajeeha	Construction of a Mammalian Expression	University of	
42	Naz	Vector Expressing NS5B Gene of HCV-3a	the Punjab	2012-2014
	INAL	Pakistani Isolate		
	Anam	Studies on the role of genetic variation in SNP	University of	
43	Saghir	rs28416813 & SNP rs 4803219 in interferon	the Punjab	2013-2015
	Sagini	resistance in chronic HCV infected patients		
	Hamna	Identification of blood miRNAs 141, 21, 126,	University of	
44	Intiaz	124 & 320 as a key to hepatitis C disease	the Punjab	2013-2015
	minaz	research		
		Studies on circulating miRNAs-122, 134,198,	University of	
45	Iqra Almas	1, Let 7a, 7b & 7e as biomarkers for HCV	the Punjab	2013-2015
		disease and treatment outcome		
	Faiza	Genetic variation in SNP rs28416813 & SNP	University of	
46	Shame	rs 4803219 in anti-viral resistance in chronic	the Punjab	2014-2016
	Shams	HCV infected patients		
17	Iara Ghaffar	Role of different miRNAs on hepatitis C	University of	2014-2016
		disease outcome	the Punjab	2014-2010
48	Hafiza	Testing of different anti-viral drugs in cell	University of	2014-2016
40	Idrees	culture	the Punjab	2014 2010
	Sana	Expression of SOCS1 gene in naïve and direct	CAMB,	
49	Usman	acting anti-viral drugs treated hepatitis C virus	University of	2015-2017
	Osman	of district Lahore	the Punjab	
	Beenish	Assessment of the cytotxic effect of	CAMB,	
50	Saddique	sulfonamide compound on HFPG-2 cell lines	University of	2015-2017
	Suddique		the Punjab	
		SOCS-1 mRNA in Study of the expression of	CAMB,	
51	Braira	interferon resistant, interferon treated and	University of	2015-2017
51	Wahid	interferon ineligible Sofosbuvir treated HCV	the Punjab	2013 2017
		patients of District Lahore		
	Maham	Downregulation of Apoptotic Gene P53 Due to	CEMB,	
52	Saeed	oncogenic E6 protein of High Risk Human	University of	2018-2020
	Bueeu	Papillomavirus Type 16	the Punjab	
		Prediction of B cells and T cells epitones for	CEMB,	
53	Ali Hassan	designing of tetravalent Dengue Vaccine	University of	2018-2020
			the Punjab	
		Role of IL-11 and IL-11Ra's Downregulation	CEMB,	
54	Liaba Iobal	in Hepatocellular Carcinoma and Related Liver	University of	2023-2025
5-		Complications: A Diagnostic and Therapeutic	the Punjab	2023-2023
		Approach		

iii. RESEARCH PUBLICATIONS AND CITATIONS

Web of Science ID: K-6032-2012 <u>https://publons.com/onboard/?onboard_type=rid#rid-intro</u>

Dr. Idrees has a **distinguished research and Excellent Publications record** and his contribution in Molecular Biology has been recognized at home and abroad. His research work has been **published in 258 peer reviewed research/review papers** in national/international scientific journals with an **overall impact factor more than 1018** and of **citation of more than 6'400**. Brief and publication list is given below:

- (A) Accumulative Impact Factor: 1018.87; (updated on 20/12/2024)
- (B) Accumulative Citations: 6'444 (Google Scholar)

5'167 (Web of Science)

Total Publications:	258
As Corresponding Author:	88 Publications
✤ As First Author:	19 Publications
✤ As Contributing Author:	151 Publications

Please note: A list of publications is available as a separate file in my profile.

iv. Citation indices & Citations to Dr. Idrees's articles

(Through Web of Science; *updated on 20/12/2024*)

https://www.webofscience.com/wos/author/record/K-6032-2012

MI	Muhammad Idrees "Idrees Khan" Researcher (Academic) - National Centre of Excellence in Molecular Bio Punjab	Web of Science ResearcherID ^⑦ K-6032-2012 blogy (CEMB), University of the

Publications in Web of Science	Sum of times Cited	H-index	Average citations per item	Average citations per year
235	5,087	39	10.3	150.4



Citation Indices (u	pdated on 20/	/12/202	24)
Image: Second	ation indices A ations 64 adex 4 -index 1	All Sin 444 42 14	ace 2019 3249 28 82
jes copied from Google Scl	iolar)	Cited by	<u>Year</u>
TR Beneficial and the second s		<u>419</u>	2010
Oncogenic potential of Human Papillomavirus (HPV) and its relation with cancer R Faridi, A Zahra, K Khan, M Idrees Virology Journal 8 (1), 1-8	<u>h cervical</u>	<u>378</u>	2011
Frequency distribution of hepatitis C virus genotypes in different geograp Pakistan and their possible routes of transmission M Idrees, S Riazuddin BMC infectious diseases 8 (1), 1-9	ohical regions of	<u>344</u>	2008
<u>Global expansion of chikungunya virus: mapping the 64-year history</u> B Wahid, A Ali, S Rafique, M Idrees International Journal of Infectious Diseases 58, 69-76		<u>378</u>	2017
Hepatitis B virus in Pakistan: a systematic review of prevalence, risk fact status and genotypes M Ali, M Idrees, L Ali, A Hussain, I Ur Rehman, S Saleem, S Afzal, S B Virology journal 8 (1), 1-9	ors, awareness utt	<u>253</u>	2011
<u>Hepatitis associated aplastic anemia: a review</u> B Rauff, M Idrees, SAR Shah, S Butt, AM Butt, L Ali, A Hussain, M Ali Virology journal 8 (1), 1-6	i	<u>219</u>	2011
<u>Hepatitis C treatment: current and future perspectives</u> S Munir, S Saleem, M Idrees, A Tariq, S Butt, B Rauff, A Hussain, S Bav Virology journal 7 (1), 1-6	dar,	<u>1</u> 75	2010
Towards peptide vaccines against Zika virus: Immunoinformatics combin molecular dynamics simulations to predict antigenic epitopes of Zika vira M Usman Mirza, S Rafique, A Ali, M Munir, N Ikram, A Manan, Scientific reports 6 (1), 1-17	ned with al proteins	<u>141</u>	2016
High prevalence of hepatitis C virus infection in the largest province of F M Idrees, A Lal, M Naseem, M Khalid Journal of digestive diseases 9 (2), 95-103	P <u>akistan</u>	<u>129</u>	2008
Serotype and genotype analysis of dengue virus by sequencing followed analysis using samples from three mini outbreaks-2007-2009 in Pakistan Z Fatima, M Idrees, MA Bajwa, Z Tahir, O Ullah, MQ Zia, A Hussain,	by phylogenetic	<u>127</u>	2011

Title	Cited by	<u>Year</u>
BMC microbiology 11 (1), 1-8	·	
A study of best positive predictors for sustained virologic response to interferon alpha		
plus ribavirin therapy in naive chronic hepatitis C patients	125	2000
M Idrees, S Riazuddin	123	2007
BMC gastroenterology 9 (1), 1-9		
Hepatitis C virus genotype 3a infection and hepatocellular carcinoma: Pakistan		
experience M Idrees, S Rafique, I Rehman, H Akbar, MZ Yousaf, S Butt, Z Awan,	<u>124</u>	2009
World Journal of Gastroenterology: WJG 15 (40), 5080		
Hepatitis C virus genotype 3a infection and hepatocellular carcinoma: Pakistan		
experience.	99	2009
RS Idrees, M [*] , Rafique S, Rehman I, Butt S World Journal of Costroortanalogy 15 (40), 5080, 5085		
World Journal of Gastroenterology 15 (40), 5080-5085		
New Insights into the Epigenetics of Hepatocellular Carcinoma.	00	2017
INI Walliu B, All A, Rallque S BioMed Research International 1600575 (doi: 10.1155/2017/1600575)	<u>99</u>	2017
Selected heresterities hereal medicines: Evidence from other medicinel applications		
selected nepatoprotective neroal medicines: Evidence from etimomedicinal applications, animal models, and possible mechanism of actions		
M Ali T Khan K Fatima OA Ali M Ovais AT Khalil I Ullah A Raza	<u>89</u>	2018
Phytotherapy research 32 (2), 199-215		
Genomic analysis of codon usage shows influence of mutation pressure, natural		
selection, and host features on Marburg virus evolution	07	2015
I Nasrullah, AM Butt, S Tahir, M Idrees, Y Tong	<u>87</u>	2015
BMC evolutionary biology 15 (1), 1-15		
Avian influenza A (H9N2): computational molecular analysis and phylogenetic		
characterization of viral surface proteins isolated between 1997 and 2009 from the		
human population	<u>85</u>	2010
AM Butt, S Siddique, M Idrees, Y Tong		
Virology journal 7 (1), 1-11		
Determination of HCV genotypes and viral loads in chronic HCV infected patients of		
Hazara Pakistan	<u>77</u>	2011
Virology journal 8 (1) 1-6		
Development of an improved genetuning assay for the detection of henetitis C virus		
genotypes and subtypes in Pakistan		
M Idrees	<u>77</u>	2008
Journal of virological methods 150 (1-2), 50-56		
Molecular epidemiology of Hepatitis C virus genotypes in Khyber Pakhtoonkhaw of		
Pakistan	76	2010
A Ali, H Ahmed, M Idrees	<u>/</u> 0	2010
Virology Journal 7 (1), 1-7		
Note: First two pages copied and paste from Google Scholar, Complete Citations are	availab	le at:
https://scholar.google.com.pk/citations?user=MZuiNDIAAAAJ&hl=en		

v. EXECUTION OF RESEARCH PROJECTS/RESEARCH GRANTS WON AS PI/CO-PI

Dr. Idrees possesses strong expertise in securing financial resources from national and international funding agencies. He has successfully led and executed major research projects as a principal or coprincipal investigator, with funding from prominent organizations such as the Ministry of Science & Technology, Higher Education Commission (HEC), EMRO-WHO, the U.S. State Department (Pak-USA), and the Planning Commission of Pakistan. During his tenure at Hazara University, Dr. Idrees demonstrated exceptional leadership by guiding his team in preparing and submitting a PC-1 proposal titled "Uplifting of Academic and Infrastructure Facilities of Hazara University." This proposal, approved by the Planning Commission of Pakistan during his second year in 2018, secured funding of Rs. 1,702 million, significantly enhancing the university's academic and infrastructural capabilities.

a. PROJECTS COMPLETED

- Establishment of Molecular (PCR-based) Diagnosis of infectious & genetic diseases Laboratory at Centre for Applied Molecular Biology (2001-2004, Ministry of Science & Technology PC1 PKR 39.46 Million). PI
- 2. Identification and transcriptome profiling of novel microRNAs in hepatitis C virus induced liver diseases by next generation sequencing (NGS) of small RNA cDNA libraries. (2013-2016; NRGPU PKR 3.37 Million). Project No. 20-2098. PI
- Studies on Streamlined Molecular Approaches to Hepatitis C: Implications for Patient Management and Public Health. -(8/9/2015-2018; NRGPU PKR 4'520'288). Project No. 20-3708. PI
- **4.** Development of Dengue Assays based on ELISA and PCR Diagnosis Systems for reproduceable and early detection of Dengue Virus. Lumpus Provision for Research, University of the Punjab, Lahore. 2016-17; PKR 10'00'000. **PI**
- Streamlined Analysis of Dengue Virus Genome, Serotypes, Genotypes & Heterogeneity: Application to Molecular Epidemiology and Clinical Studies. University of the Punjab, Lahore. 2015; PKR 2'00'000. PI
- 6. Development of a single chimeric Dengue Virus DNA Vaccine and study of its immunogenicity and response against local Dengue Serotypes." at total cost of Rs.7561256/-Date: 02-06-2018; **Project No. 8458**. **Co-PI**
- Robust production of recombinant collagen and elastin proteins in serum-free adapted 293T cell line using Ubiquitionous Chromatin Opening Elements containing lintiviral Vectors-(2017-2020; NRGPU, PKR 4195324) Project No. 6741. Co-PI.
- Studies on the levels of Serum IL-8 and mutational analysis in the E2-PePD and NS5a-PKR-BD in Interferon-α responsive and non-responsive HCV patients (29/9/2003-30/9/2005, Pak-US co-operation on Science & Technology USD 11.72 Million PKR 11'720'000). Co-PI & Principal Researcher (Pr. Res)
- Role of IL-8 and mutations in E2 & NS5A genes of Hepatitis C Virus in resistance to anti-viral therapy (04/03/2004-11/12/2005, EMRO-COMSTECH, WHO.USD 15,00. Co-PI & Principal Researcher (Pr. Res).
- 10. Prevalence of bovine tuberculosis in human, animal population and animal food products (HEC, 2004-2006; PKR 2.573 Million) **Co-PI**
- **11.** Modifier Chemical Cocktail' and Its Role in Skin Tissue Regeneration in Mammals (2010; Higher Education Commission PKR 0.50 Million). Dr. Sherkhli (PI); Dr. M. Idrees- (**Co-PI**)

- 12. Isolation, amplification and characterization of the complete Envelope gene sequences of all the four serotypes of Dengue virus, prevalent in Pakistan; a first step towards tetravalent vaccine development against dengue. Higher Education Commission. PKR 0.50 Million; Project Start Date: 04-01-2014. Dr. Amjad Ali (PI); Dr. Muhammad Idrees (**Co-PI**).
- **13.** Expression and mutational analysis of p53 gene in breat cancer patients of Pakistan. Higher Education Commission. PKR 0.50 Million; Project Start Date: 25-06-2016 Dr. Haleema Sadia (PI); Dr. Muhammad Idrees (**Co-PI**).
- Studies on the efficiency of newly developed direct acting antiviral drugs (DAAs)in chronic HCV patients. Higher Education Commission. PKR 0.50 Million; Project Start Date: 30-03-2016 Dr. Sajjad Ullah (PI); Dr. Muhammad Idrees (Co-PI).
- 15. Identification and characterization of novel fusion transcripts in neuroblastoma cell lines using transcriptome sequencing data. Higher Education Commission. PKR 0.50 Million; Project Start Date: 04-03-2016. Dr. Hafiza Fakhera Ikram (PI); Dr. Muhammad Idrees (**Co-PI**).
- 16. Expression of different Immunoreactive forms of the hepatitis C Virus NS5A recombinant protein and their use for development of ELISA assay. Higher Education Commission. PKR 0.50 Million; Project Start Date: 02-02-2016. Dr. Amjad Ali (PI); Dr. M. Idrees (**Co-PI**).

b. PROJECTS IN PROGRESS/PROCESS:

- 17. Application of Streamlined Molecular Approaches to Hepatitis C: Implications for Public Health and Patient Management. (PAK US JOINT COMMITTEE ON SCIENCE &TECHNOLOGY COOPERATION). PKR 53 Million. PI. Awarded
- 18. Development of HCV Vaccines and Experimental Animal Model for Chronic HCV patients. (2008-2013; PC1; PKR 37.49 Million). PI. Accepted for Award
- **19.** Development of Real-time PCR Methods/Kits for the diagnosis of dengue Virus infection. University of the Punjab, Lahore. 2024; PKR 3'00'000. **PI**

c. DEVELOPMENTAL PROJECTS COMPLETED:

- 20. Uplifting of Academic and Infrastructure facilities of Hazara University that was approved at a cost of **Rs. 1702 Million by Planning Commission of Pakistan**. 19-03-2018 to18-03-2021
- 21. Construction of two Academic Blocks at Hazara University by Provincial Government at a cost of 65.0 Million
- 22. Completion of Left-over work of eight academic blocks (each one with a covered area of about 49,000 square feet) below the approved cost of 662.45 Million (HEC Grant) within a record time of one and a half year.
- 23. Establishment of Volleyball Academy at University of Peshawar under PM's Kamyab Jawan Prgram that was approved at a cost of **Rs. 132 Million**.

d. DEVELOPMENT PROJECTS SUBMITTED TO EXTERNAL AGENCIES

- 24. Establishment of National Centre for Mathematical Sciences at University of Peshawar, Rs.994.710 million, HEC
- 25. Up-gradation of Department of Art and Design as College of Art and Design, University of Peshawar, Rs.619.09 million, Provincial Government
- 26. Solarization of Main Administration and Sheikh Taimur Academic Block-1 and 2, University of Peshawar (Phase-I), Rs.100.387 million, Provincial Government
- 27. Beautification Schemes of the University of Peshawar under the Provincial Government approved project "Peshawar Uplift Programme", Rs.138.137 million, Provincial Government

28. Provision of basic allied facilities to special students/ faculty at University of Peshawar, Rs.45.101 million, HEC

e. INTERNAL PROJECTS COMPLETED:

- 29. The Dilemma of Zoo prophylaxis: Cattle ownership can increase rather than reduce prevalence of malaria in Pakistan (1994-96, University of Peshawar). **PI-Internal**
- 30. Molecular studies of Multiple Drug Resistant Genes: Testing of *Mycobacterium tuberculosis* to commonly used anti-TB drugs and Detection of Rifampicin Resistant Mutants by PCR-SSCP (1996-1999, CEMB). **PI-Internal**
- 31. Establishment of Molecular Diagnostic Laboratory in Private Sector (1999-2000, The Medical Laboratories Lahore). **PI-Internal**
- 32. To find out the common genotypes of HCV present in Pakistan (1999-2000, The Medical Laboratories Lahore). **PI-Internal**
- 33. Comparison of various Genotyping & Serotyping assays for the accurate detection of HCV Genotypes (1999-2000, The Medical Laboratories Lahore). **PI-Internal**
- 34. Evaluation of various Commercial procedures/kits/systems for the quantification of HCV Virus. (1999-2000, The Medical Laboratories Lahore). **PI-Internal**
- 35. Influence of HCV Genotypes on Viral load and Disease outcome. (1999-2000, The Medical Laboratories Lahore). **PI-Internal**
- 36. Total 41 Ph. D Research Projects/Proposals. Supervisor-Internal
- 37. Total 53 M. Phil Research Projects/Proposals. Supervisor-Internal

vi. INTERNATIONAL COLABORATIONS

Dr. Idrees collaborates with leading virologists working in the best World research Organizations/Institutions including:

- Dr. Saleem Kamili, Branch Chief, Division of Viral Hepatitis, CDC, Atlanta GA, USA.
- Dr. Yury Khudaakov, Chief, Epidemiology Group, CDC, Atlanta GA, USA.
- Dr Jane Tao, Rice University, Texas USA.
- Dr Troy Querec, lead of HPV DNA team at CDC-USA
- Outi Salo-Ahen, Åbo Akademi University,Finland
- Patrice Marche, Grenoble University-France
- Dr. Muy Teck, Queen Merry University-London

vii. COUNTRIES VISITED AS PART OF SCIENTIFIC RESEARCH

Dr. Idrees has traveled extensively to various countries as part of his scientific research endeavors, including:

- United State of America (USA)- In years 2006 & 2007
- United Kingdom (UK)- In years 2006, 2015
- France-In year 2005
- Italy- In year 2013
- Denmark- In year 2015
- Singapore- In year 2009
- Turkey- 2013
- United Arab Emirates (UAE)- 2014 & 2015
viii. EXPERIENCE OF WORKING WITH INTERNATIONAL BODIES:

Dr. Idrees has over 20 years of experience in teaching, research, and management, including collaborations with Foreign international organizations such as:

a. Higher Education System Strengthening Activity (HESSA) (2021-2023):

As Vice Chancellor of the University of Peshawar, Dr. Idrees successfully secured the university's inclusion in the USAID-funded "Higher Education System Strengthening Activity (HESSA)," a \$19 million initiative aimed at capacity building in governance, student facilitation, and teaching and research. Launched in 2021, the HESSA project seeks to address Pakistan's workforce supply-demand gap by equipping higher education institutions with the tools to enhance global rankings, graduate employability, and institutional reforms. Over its five-year span, HESSA focuses on improving graduate capacity, relevance, adequacy, and inclusivity through targeted trainings. Under this project, the University of Peshawar benefited from the following key initiatives:

- Conducted a baseline study to assess growth potential, challenges, and opportunities.
- Established stakeholder engagement offices.
- Strengthened strategic business planning with five-year implementation targets.
- Advanced equity, diversity, and inclusion (EDI) goals.
- Delivered leadership training workshops for key personnel, including the Vice Chancellor, Deans, Treasurer, Registrar, and faculty.
- Fostered partnerships for resource mobilization.
- Designed a sustainable, market-driven higher education policy framework.

This collaboration has positioned the University of Peshawar as a leader in educational transformation and workforce development in Pakistan.

b. Centers for Diseases Control & Prevention (CDC) Atlanta GA-USA (2006-2012):

After obtaining Ph. D. in Molecular Biology/Virology and in keeping with his bright academic record, Dr. Idrees subsequently worked for his post-doctoral research from September 2006 to March 2007 After earning his Ph.D. in Molecular Virology, Dr. Idrees, building on his outstanding academic achievements, pursued post-doctoral research from September 2006 to March 2007 at one of the world's leading research institutions—the Division of Viral Hepatitis (DVH), Coordinating Centers for Infectious Diseases, Centers for Disease Control and Prevention (CDC), Atlanta, GA, USA. He worked under the supervision of Dr. Yury Khudyakov (Deputy Branch Chief) and Dr. Saleem Kamili (Branch Chief).

The DVH, in collaboration with U.S. and global partners, plays a pivotal role in providing scientific leadership and implementing programs for the prevention and control of viral hepatitis infections. During his tenure, Dr. Idrees actively contributed to various domestic and international initiatives, including outbreak investigations, surveillance programs, and studies on cost-effectiveness, vaccination strategies, and behavioral patterns. His work also extended to the prevention and control of blood-borne, enteric, sexual, and chronic diseases.

Upon returning to Pakistan, Dr. Idrees collaborated with Dr. Yury Khudyakov of the CDC to draft and submit a joint research proposal to the U.S. State Department for funding. The proposed project aimed to develop innovative techniques for the rapid evaluation of HCV genome heterogeneity and to investigate its variations in diverse epidemiological and clinical settings.

c. Royal College of Pathologists (2008-2015)

In recognition of his outstanding contributions to the field of Molecular Biology and Virology, Dr. Idrees was awarded the prestigious Fellowship of the Royal College of Pathologists (FRCPath), London, UK, on September 18, 2015, based on his publications. Dr. Idrees' virology research encompasses six key areas:

- Development of assays and methodologies for studying viruses.
- Characterization of virus genomes, including variability, genotypes, and serotypes.
- Investigation of viral and host genes/proteins and their roles in disease outcomes and vaccine development.
- Studies on virus prevalence, molecular epidemiology, and outbreak investigations.
- Examination of the role of viral and host factors in treatment response rates.
- Analysis of virus associations with other abnormal conditions and diseases.

These contributions highlight Dr. Idrees' pivotal role in advancing virology research and its applications.

ix. INTERNATIONAL EXPOSURE THROUGH PARTICIPATION IN WORKSHOPS, SEMINARS, CONFERENCES HELD OUTSIDE OF THE COUNTRY:

Dr. Idrees has extensive experience collaborating with international organizations and has gained significant global exposure by participating in workshops, seminars, and conferences both domestically and abroad. Below is a detailed list of Dr. Idrees' participation in international (overseas) conferences, seminars, workshops, and training programs:

- Participated in 25th ECCMID European Congress of Clinical Microbiology & Infectious Diseases organized by European Society of Clinical Microbiology & Infectious Diseases at Bella Center Copenhagen, Denmark from 25-28 April 2015.
- The Royal College of Pathologists Meeting and New Fellow Admission Ceremony Organized by The Royal College of Pathologists, London at Middle Temple, London EC4Y 9AT from 16-18 March 2016.
- 3. European association for the study of Liver Diseases-EASLs-50th International liver Congress. Vienna (Austria), 22-26 April 2015.
- Public Health Conference (ARAB HEALTH), 26 30 January 2015; Dubai International Convention & Exhibition Centre, United Arab Emirates. My Unique Reference Number was (URN): 236750 - Dubai UAE.
- 5. **ARAB HEALTH**, 27 30 January 2014; Dubai International Convention & Exhibition Centre, United Arab Emirates. My Unique Reference Number was (URN): 196527. Dubai UAE.
- 6. Software & hardware training on SaCycler newly developed State-of-the-art Real-Time PCR-April 11-15, 2013-**Como-Italy**

- 7. Technical training on Automated Nucleic Acid Extraction System-Magnesia® Real-time PCR System-April 09-10, 2013 Anatolia Geneworks **Istanbul-Turkey**.
- 8. Hands-on training on GoldenGate BeadExpress Microarray training program arranged by Illumina Singapore August 17-22, 2009; Singapore.
- September 15, 2006; Certificate of Course Mastery recognized by the OFFICE OF HEALTH & SAFETY, CDC, USA for demonstrating a thorough understanding and ability to apply the principles of "SAFETY SURVIVAL SKILLS PT-1: GENERAL RESPONSIBILITIES". Atlanta-USA
- 10. September 18, 2006; **Certificate of Course Mastery** recognized by the Office of Health & Safety, CDC, for demonstrating a thorough understanding and ability to apply the principles of "SAFETY SURVIVAL SKILLS PT-2: LABORATORY SAFETY". Atlanta-USA
- 11. November 04, 2006; **Certificate of Course Mastery** recognized by the Office of Health & Safety, CDC, USA for demonstrating a thorough understanding and ability to apply the principles of "SUPERVISORY SKILLS". Atlanta-USA
- 12. November 08, 2006; **Certificate of Course Mastery** recognized by the Office of Health & Safety, CDC, USA for demonstrating a thorough understanding and ability to apply the principles of "ACCIDENT INVESTIGATION". Atlanta-USA
- 13. November 08, 2006; **Certificate of Course Mastery** recognized by the Office of Health & Safety, CDC, USA for demonstrating a thorough understanding and ability to apply the principles of **"OCCUPATIONAL EMERGENCY PROGRAM"**. Atlanta-US
- 14. Training on Biosafety level 1 (BSL1), BSL2, BSL3 and BSL 4, CDC USA, 2006.
- 15. Training on Real-time PCR Kit/procedure principle-ITALY in the year 2013.

X. EXPERIENCE OF ORGANIZING EVENTS SUCH AS WORKSHOPS, SEMINARS, CONFERENCES AT INTERNATIONAL LEVEL WITHIN THE COUNTRY IN THE FIELD OF HIGHER EDUCATION

- 1. Organized 'Hands-on training workshop on Mammalian Cell Culture Techniques' **at Centre of Excellence in Molecular Biology**, University of the Punjab in collaboration to Pakistan Science Foundation, World-Wide Scientific & Ayyan Molecular Products from 11-12 September 2024.
- Organized a Seminar and hands-on training on Cepheid (USA) next generation PCR "Realtime PCR (GenXpert solution) results for Real-time Patient Managements" Wednesday 28th October at 9:30 am to 1:00 PM at CAMB, University of the Punjab in collaboration to Cepheid Middle East & GMS.
- 3. Organized a Seminar on BSL-1 Design, Budget and Working: A competition sponsored by Biosafety & Bio-resource Committee, University of the Punjab on 25 October, 2017.
- 4. Patron-in-Chief of 2nd National Conference on Emerging Trends in Bio-informatics and Bio-Sciences sponsored by Hazara University, Mansehra from 9-11 August 2018.
- 5. Patron-in-Chief of First International Conference on Mental Health: Gender Issues, Challenges and Outcomes sponsored by Department of Psychology, Hazara University from 16-17 February, 2018.
- 6. Organize/Conduct "Evaluation & Progress in Research of Molecular Virology Lab" –From 2001-continue each year.

- 7. "**DNA Strategy Symposium**" organized by British High Commission in collaboration to Punjab Forensic Science Agency held from 18th 19th January 2016 in PC-Lahore-Pakistan.
- 8. "5th Invention to Innovation Summit-2016" March 02-04, 2016 organized by Office of Research Innovation & Commercialization (ORIC), University of the Punjab.
- 9. Workshop on Dengue Management sponsored by the Higher Education Commission & organized by Institute of Agricultural Sciences University of the Punjab Lahore December 21, 2015.
- 10. Dengue Seminar Dengue Research Group, University of the Punjab Wednesday, 4th November 2015.
- 11. Dengue Seminar organized by Dengue Research Group, University of the Punjab Wednesday, March 2015.
- 12. Training workshop on "New Trends in Biomedical Research-Grant writing" at Centre of Excellence in Molecular Biology, University of the Punjab. December 22, 2014.
- 13. Lahore Biotech Cluster Meeting: August 18, 2014. Department of Biological Sciences Forman Christian College University Lahore.
- 14. Participated in 37th Annual Conference of Pakistan Association of Pathologist/2nd Joint Conference of Societies of Pathology held at PC Hotel, Lahore from 20th-22nd Dec, 2013.
- 15. The 37th annual conference of the Pakistan Association of Pathologists/2nd Joint Conference of the Societies of Pathology is being held in Lahore from the 20th to the 22nd of Dec 2013.
- 11th Biennial Conference Molecular Biosciences Challenges and Opportunities November 25– 28, 2013. University of the Punjab Lahore-Pakistan.
- 17. International Conference on Dengue & its Control [Post DF/DHF Otbreak] Lahore-Pakistan. 27-29 February 2012 Organized by World Health Organization & Government of the Punjab.
- 36th Annual Conference of Pakistan Association of Pathologist/1st Joint Conference of Societies of Pathology held at Islamabad from 21st-23rd December, 2012.
- 19. OIC Thematic Workshops on "DNA/Emerging Vaccine & Production Challenges" from Sep 03-09, 2007, Islamabad Pakistan Organized by US Embassy & US Department of HSS.
- **20.** "Training workshop on Bio-security and Biosafty", Islamabad, June 18-19, 2007 Organized by US Department of HHS and US Embassy in collaboration to NARC.
- 21. Got Special training on Biosafty and Bio-security, CDC, USA 2007.
- 22. 2nd National Conference on Infectious Diseases from March 25-27, 2005, Lahore.
- 23. Participated in 7th International Symposium Workshop on the application of Molecular Biology Research in Agriculture and Health, March 27-31, 2004, held at CEMB, Lahore, Pakistan and presented paper on "Genome variability studies in HCV".
- 24. **7th Biennial Conference** on "Trends in Biochemistry & Molecular Biology, April 2-5, 2003 Institute of Biochemistry & Biotechnology, University of the Punjab.
- 25. **Nineteen Annual Congress** of Pakistan Society of Gastroenterology and GI endoscopies. February 28 to March 02, 2003. Lahore, Pakistan.
- 26. **Fifth International Symposium** on Typhoid Fever & Other Salmonellae's February 6-7 (2002). Department of Pediatrics, The Agha Khan University Hospital Karachi, Pakistan.
- 27. **Workshop** on Molecular Methods in the Epidemiology & Diagnosis of Typhoid, February 4-5, 2002, Department of Pediatrics, The Agha Khan University Hospital Karachi, Pakistan.
- 28. 2nd International Science Conference, 26-28 October 2000, Institute of Chemical Engineering & Technology University of the Punjab, Lahore.
- 29. **20th Pakistan Congress of Zoology**, March 29-31, 2000 University of Sindth, Jamshoro, Pakistan and presented a paper on comparison of serotyping genotyping systems.
- 30. **Third International Biennial Conference of Pakistan Society for Microbiology**, March 28-30, 2000, Lahore, Pakistan, and presented a paper on HCV genotyping.

- 31. **19th Pakistan Congress of Zoology**, April 19-21, 1999, held at the premises of NARC Islamabad and presented a paper on "PCR-SSCP:
- **32.** National Conference on Tuberculosis Update November 8, 1998, organized by Pakistan Chest Society Faisalabad Chapter and delivered a lecture on "Detection and Identification of M. tuberculosis by DNA amplification & conventional culture methods in local samples".
- **33.** 18th Pakistan Congress of Zoology April 20-22, 1998, held at Dept. of Zoology, University of the Punjab and presented a paper on "Testing of M. tuberculosis susceptibility to first-line anti-TB drugs in Lahore, Pakistan.
- 34. International Symposium Workshop on Genomics and Computational Analysis, October 16-18, 1997 at CAMB, University of the Punjab.
- **35.** 16th International Conference on Tuberculosis and Chest Diseases, March 8-11, 1998, organized by Pakistan anti-TB Association and Institute of Chest Medicine King Edward Medical College, Lahore, Pakistan and delivered a lecture on "A comparative study to understand the usefulness of conventional culture method and PCR based diagnosis of tuberculosis in local samples".
- 36. 5th International Symposium Workshop on the application of Molecular Biology Research in Agriculture, Health and Environment, October 14-15, 1997, held at CEMB, Lahore, Pakistan and presented paper on "The Dilemma of Zoo prophylaxis:"

xi. OTHER NATIONAL/INTERNATIONAL CONFERENCES (Abstracts)

- 1. Imtiaz H, Idrees M. Circulating microRNA expression profiling in HCV infected patients: A novel insight into diagnostic and therapeutic research. In: International Symposium on Advances in Molecular Biology of Plants & Health Sciences. December 29-31, 2015, organized by CEMB, University of the Punjab Lahore-Pakistan. Page-70.
- 2. Shahid M, **Idrees M.** Correlation of clinical markers, viral load with liver fibrosis stages and grades in chronic HCV patients with genotype 3a. In: International Symposium on Advances in Molecular Biology of Plants & Health Sciences. December 29-31, 2015, organized by CEMB, University of the Punjab Lahore-Pakistan. **Page-73.**
- **3.** Amin I, **Idrees M.** *Vertical transmission of dengue by Ades sygepti.* In: International Symposium on Advances in Molecular Biology of Plants & Health Sciences. December 29-31, 2015, organized by CEMB, University of the Punjab Lahore-Pakistan. Page-75
- 4. Afzal S, Idrees M. *Global consensus sequence development of dengue virus for peptide-based vaccine design against local dengue virus*. In: International Symposium on Advances in Molecular Biology of Plants & Health Sciences. December 29-31, 2015, organized by CEMB, University of the Punjab Lahore-Pakistan.
- 5. Samia Afzal, Muhammad Idrees, Iqra Almas, Shazia Rafique, Iram Amin, Muhammad Shahid: *Study of inhibition of interferon inducible genes by dephosphorylation of E2 envelope gene of HCV genotype 1a.* 2017 14th International Bhurban Conference on Applied Sciences and Technology (IBCAST); 01/2017, DOI:10.1109/IBCAST.2017.7868053
- 6. Iqra Almas, Samia Afzal, Muhammad Usman Ashraf, Khadija Zahid, Muhammad Asif, Muhammad Idrees. *Studies on circulating microRNAs: Members of Let-7 family and their correlation with Hepatitis C virus disease pathogenesis and treatment concerns.* 2017, 14th International Bhurban Conference on Applied Sciences and Technology (IBCAST); 01/2017, DOI:10.1109/IBCAST.2017.7868051.
- 7. Khadija Zahid, Zahid Iqbal, Samia Afzal, Iram Amin, Muhammad Shahid, Muhammad Idrees. Development of Global Consensus Sequence & Identification Of Conserved Domains In Hcv

Ns5b Protein. CEMB, 2017, 2nd International Symposium on Advances in Molecular Biology of Plants and Health Sciences.21-23 November, 2017, Lahore-Pakistan.

- 8. Samia Afzal, Muhammad Idrees, Iram Amin, Muhammad Shahid. *Global consensus sequence development of dengue virus for peptide based vaccine design against local Dengue Virus.* CEMB, 2015, 1st International Symposium on Advances in Molecular Biology of Plants and Health Sciences, 29-31 December, 2015, Lahore-Pakistan.
- **9.** Hamna Imtiaz, Muhammad Idrees. *Circulating micro-RNAs expression profiling in HCV infected patients: A novel insight into diagnostic and therapeutic research.* CEMB, 2015, 1st International Symposium on Advances in Molecular Biology of Plants and Health Sciences, 29-31 December, 2015, Lahore-Pakistan.
- 10. Muhammad shahid, Muhammad Idrees, Iram Amin, samia Afzal. Correlation of clinical marker, viral load
- **11.** *with liver fibrosis stages and grades in chronic HCV patients with genotype 3a.* CEMB, 2015, 1st International Symposium on Advances in Molecular Biology of Plants and Health Sciences, 29-31 December, 2015, Lahore-Pakistan.
- 12. Iram Amin, Muhammad Idrees, Muhammad shahid, Samia Afzal. *Vertical Transmission Of Dengue By Aedes aygepti*. CEMB, 2015, 1st International Symposium on Advances in Molecular Biology of Plants and Health Sciences, 29-31 December, 2015, Lahore-Pakistan.

C. TRAININGS IN LEADERSHIP, GOVERNANCE, AND MANAGEMENT

Dr. Idrees has undergone extensive training in leadership, governance, and management, delivered by renowned national and international institutions. His significant training experiences include:

- 1. Leadership for Senior Executives at Lahore University of Management Sciences, 2018 Dr. Idrees successfully completed a six-day residential program at LUMS, focusing on leadership development for senior executives. The immersive training emphasized crafting a personal leadership narrative, fostering collaboration, and building networks to drive organizational growth and innovation.
- 2. Comprehensive Leadership Training through the HESSA Program (2021-2023) As Vice-Chancellor of the University of Peshawar, Dr. Idrees participated in an intensive training series under the USAID-funded Higher Education System Strengthening Activity.
 - **Program Overview**: The HESSA initiative, led by the University of Utah, the University of Alabama, and the Institute of International Education (IIE), is designed to elevate the leadership capacities of higher education administrators in Pakistan.
 - **Key Focus Areas**: Higher education policy reform; Organizational transformation and strategic leadership; University administration and student support services; Research development, curriculum enhancement, and preparing graduates for global competitiveness
 - **Program Goals**: The training aimed to equip university leaders, including Dr. Idrees, with the tools necessary to transform Pakistan's higher education sector and produce graduates who meet international standards of excellence.

These transformative training experiences highlight Dr. Idrees's dedication to advancing leadership and governance practices in higher education, ensuring institutional success and global competitiveness.

D. ACHIEVEMENTS AS A LEADER:

I. ADMINISTRATIVE EXPERIENCE/ACHIEVEMENTS IN THE FIELD OF HIGHER EDUCATION:

Dr. Idrees has a distinguished career marked by leadership roles in higher education institutions and universities, complemented by diverse training and extensive experience. With nearly 20 years of productive service, he has held prominent positions including Vice Chancellor, Director, In-charge of a Public Sector Commercial Diagnostic Laboratory, and Group Leader of a Research Team. These roles underscore his proven credentials and established expertise in academic administration, institutional management, and research leadership.

a. ACHIEVEMENTS AS VICE CHANCELLOR, UNIVERSITY OF PESHAWAR (FROM 12-12-2020 TO 11-12-2023):

Financial Stabilization: Upon assuming office as Vice Chancellor of the University of Peshawar in December 2020, Dr. Idrees inherited an institution in severe financial distress, grappling with persistent shortfalls for nearly eight years. Through the enforcement of strict financial discipline, he successfully stabilized the university's finances, closing the financial years 2020–21 and 2021–22 with a surplus. This turnaround created a financial cushion of approximately Rs. 860 million. Recognizing these efforts, both the federal and provincial governments extended support with a grant of Rs. 1.3 billion. These measures transformed the university's financial outlook, ensuring stability for the first time in nearly a decade. Key Contributions to the University of Peshawar are:

1. Strengthening Academic and Research Facilities:

- Enhanced research infrastructure by equipping labs with state-of-the-art analytical instruments
- Renovated and digitized the Central Library through an HEC-funded project, improving access to resources for students and faculty.
- 2. Fostering Entrepreneurship: Oversaw the completion of the Business Incubation Centre, aimed at promoting entrepreneurial skills and innovation among students.
- 3. Digitization and Institutional Modernization:
 - Partnered with the National IT Board to implement the E-Office system, digitizing administrative processes to improve efficiency and reduce costs.
 - Collaborated with IBA Karachi to revive the Campus Management Solution, streamlining student lifecycle management and ensuring transparency in institutional governance.

4. Securing Financial Support:

- Secured a Technical Supplementary Grant of Rs. 520 million from the Federal Government.
 Obtained a Special Grant of Rs. 770 million from the Government of Khyber Pakhtunkhwa.
- 5. **Capacity Building through International Projects:** Ensured the university's inclusion in the \$19 million Higher Education System Strengthening Activity (HESSA) project to enhance governance, student facilitation, and teaching and research capabilities.

6. Upgrading Research and Academic Facilities:

- Strengthened the Centralized Resource Laboratory with advanced high-tech equipment worth Rs. 450 million.
- o Established a Business Incubation Centre with Rs. 120 million in federal funding.
- o Launched the Department of Criminology with Rs. 180 million in provincial funding.
- Built a state-of-the-art Data Centre at a cost of Rs. 65 million, offering services to other institutions as well.

7. Advancing Infrastructure and Connectivity:

- Implemented the Smart University project to ensure high-speed internet connectivity across the campus.
- Submitted a proposal to establish a Knowledge Park under the Pakistan Software Export Board (PSEB).
- 8. Enhancing Academic Programs:
 - Regularly convened meetings of statutory bodies such as the Senate, Syndicate, ASRB, Academic Council, Finance Committee, and Affiliation Committee to strengthen governance and academic operations.
 - $_{\odot}$ Approved and launched four new academic disciplines.
- 9. **Strategic Asset Utilization:** Reclaimed portions of the Waqf-ur-Rashid Trust property, generating revenue to fund scholarships for students.
- 10. Library Renovation: Automated and modernized the Central Library at a cost of Rs. 100 million, extending its operating hours to better serve students.

These initiatives underscore Dr. Idrees' commitment to financial stability, academic excellence, and institutional modernization at the University of Peshawar.

b. ACHIEVEMENTS AS VICE CHANCELLOR, HAZARA UNIVERSITY MANSEHRA, (FROM 28-7-2016 TO 28-7-2019; 3 YEARS)

During his three-year tenure as Vice Chancellor of Hazara University, Dr. Idrees gained extensive experience in academic planning, program review, and curriculum development. He effectively supervised budget preparation for academic and related programs, strategically allocating and reallocating resources to ensure optimal utilization.

Dr. Idrees provided visionary leadership in establishing and maintaining academic standards and policies while serving as Chair of key university bodies, including the Syndicate, Academic Council, General Board of Faculties, and Finance Committee. He guided both academic and administrative functions across the university, representing Hazara University at national and international platforms. Additionally, he secured a robust financial base to support the university's mission, goals, and objectives.

c. ACHIEVEMENTS AS DIRECTOR, CAMB, UNIVERSITY OF THE PUNJAB LAHORE-(1-7-2015 to 27-7-2016):

In 2015, Dr. Idrees was appointed as the inaugural Director of the Centre for Applied Molecular Biology (CAMB) at the University of the Punjab following its transfer from the Ministry of Science & Technology. Under his leadership, CAMB underwent significant development, with a strong emphasis on establishing high-quality M. Phil and Ph. D teaching and research programs in Applied Molecular Biology and Forensic Sciences. Dr. Idrees, in collaboration with esteemed scientists, successfully designed and implemented these programs, earning international recognition as a leading molecular biologist. As Director CAMB, Dr. Idrees also served as:

- Chairman/Convener, Purchase Committee, Centre for Applied Molecular Biology, University of the Punjab-Lahore. From 2015-July 27, 2016.
- Chairman/Convener, Technical Evaluation Committee, Centre for Applied Molecular Biology, University of the Punjab-Lahore. From 2015- July 27, 2016.

- Convener/Chairman, Board of Studies (BOS), CAMB, University of the Punjab Lahore. From 2015- July 27, 2016.
- Member, Board of Faculty (BOF), University of the Punjab Lahore. From 2015-ongoing.
- Member Board of Studies (BOS) Department of Genetics, Hazara University Garden Campus Mansehra, KPK-From 2011- July 27, 2016.
- Member, Academic Council University of the Punjab Lahore. From 22-8-2015- July 27, 2016.

d. ACHIEVEMENTS AS IN-CHARGE, DISEASE DIAGNOSTIC FACILITY AT CAMB MINISTRY OF SCIENCE & TECHNOLOGY GOVT OF PAKISTAN (2001- 2009)

- Establishment of Commercial Molecular Diagnostic Facility for the detection of infectious & genetic diseases at Centre for Applied Molecular Biology (CAMB), MoST and provided general public with reliable, accurate, rapid and more economical diagnostic service for most prevalent infectious and genetic diseases.
- **Revenue Generation for CAMB:** The diagnostic facility processes over 250 samples daily, the highest volume for any such lab in the country. The laboratory currently generates an income of approximately Rs. 5 million per month (Rs. 60 million annually). In 2013, the facility contributed Rs. 350 million in revenue to the national treasury.
- **Developing Indigenous Molecular Diagnostic Kits:** As part of efforts to foster local technological advancements, Dr. Idrees and his team developed cost-effective molecular diagnostic kits for detecting SARS-CoV-2, hepatitis B virus, hepatitis C virus, *M. tuberculosis* and HCV Genotyping. These kits are produced at one-tenth the cost of comparable international kits, significantly reducing diagnostic expenses.
- Support for the Prime Minister's Program for Prevention & Control of Hepatitis: Dr. Idrees facilitated hepatitis testing under this initiative, performing over 50,000 HCV quantitative/genotyping and HBV quantitative tests free of charge for underprivileged patients. The market value of these tests exceeds Rs. 113 million, representing a substantial contribution to public health.

e. ACHIEVEMENTS AS HEAD DIVISION OF INFECTIOUS DISEASES & MOLECULAR VIROLOGY CEMB, UNIVERSITY OF THE PUNJAB (2000- Continue):

With over 25 years of progressive experience as Head of research, Dr. Idrees has significantly advanced the field of Molecular Virology. His scientific and clinical interests focus on basic and applied research using modern molecular techniques, continuing to shape the landscape of virology and molecular biology in Pakistan and beyond. He has established a state-of-the-art Molecular Virology Division at a public sector university and developed a comprehensive teaching and research program (BS, M.Phil., and Ph.D.) in Applied Molecular Biology and Forensic Sciences, earning international acclaim as an eminent Molecular Biologist. D\r. Idrees's groundbreaking work has earned numerous accolades, including the **TWAS Best Young Scientist of the Year (2009)** award, the **PAS Gold Medal (2016)** in Emerging Technologies from the Pakistan Academy of Sciences, and the **Research Productivity Awards** (2011–2015). He has supervised 37 Ph.D. and 53 M.Phil. students, contributing significantly to capacity building in molecular sciences. His research is widely recognized, with over 250 peer-reviewed publications in national and international scientific journals, amassing a cumulative impact factor exceeding 1000 and over 10,000 citations. Dr. Idrees has served as principal or co-principal investigator on several high-impact research projects funded by leading national and international agencies.

II. FINANCIAL MANAGEMENT:

Dr. Idrees is a distinguished academic leader, accomplished researcher, and higher education executive with over 20 years of proven experience in leadership and administration within higher education institutions. His diverse career includes serving as Vice Chancellor, Director, Associate Professor, In-Charge of a Public Sector Commercial Diagnostic Laboratory, and Group Leader of a Research Team. As Vice Chancellor of Hazara University for nearly three years (July 28, 2016 – July 27, 2019), Dr. Idrees demonstrated exceptional financial management skills and institutional governance. His key achievements include:

- **Strategic Budget Oversight:** Supervised the preparation of budgets for academic and related programs, ensuring optimal allocation and reallocation of financial resources to meet institutional priorities.
- **Financial Stabilization:** Implemented measures to secure a sustainable financial base, enabling the university to fulfill its mission, strategic objectives, and academic goals.
- **Governance and Accountability:** Chaired key statutory bodies such as the Syndicate, Academic Council, General Board of Faculties, and Finance Committee, ensuring transparency and fiscal responsibility in all financial matters.
- Leadership in Resource Optimization: Provided leadership to streamline resources, strengthen institutional governance, and promote financial efficiency across the university.
- **External Representation:** Represented the university nationally and internationally, securing partnerships and collaborations to enhance financial sustainability.

Dr. Idrees' post-doctoral research experience in the United States and his Fellowship of the Royal College of Pathologists (FRCPath) in the United Kingdom further highlight his academic and leadership credentials. These qualifications, combined with his extensive experience in financial management and institutional development, position him as a strong candidate for Vice Chancellor of Mirpur University. The highlights of Dr. Idrees' financial management performance during his tenure as Vice Chancellor (July 28, 2016 – July 27, 2019) are summarized below:

i. STRATEGIC AND ADMINISTRATIVE PLANNING

During his tenure as Vice Chancellor of Hazara University (July 28, 2016 – July 27, 2019), the institution excelled across key administrative and academic domains, demonstrating significant progress in areas such as governance, research, teaching, finance, student engagement, technological development, and campus facilities. Below is a summary of the strategic and administrative initiatives and achievements during this period:

- **Compliance and Governance:** The university's administrative affairs were conducted in strict compliance with the Khyber Pakhtunkhwa Universities Act 2012 (Amended 2016), ensuring effective and transparent governance. Under my leadership, the University's Statutes of 2016 were formulated and approved by the Senate in a timely manner. Hazara University became one of the first two universities in the province to complete this process in alignment with the legal framework.
- **Institutional Leadership:** He chaired and convened regular meetings of all statutory bodies, including the Senate, Syndicate, Finance & Planning Committee, Academic Council, ASRB, Selection Board, and Affiliation Committee. This ensured timely decision-making and

governance in administrative, academic, and financial matters. A total of 61 meetings of these statutory bodies were held during my tenure, facilitating effective decision-making and transparency.

- **Infrastructure and Campus Development:** Under his leadership, the long-pending completion of 10 academic blocks funded by the Higher Education Commission (HEC) was successfully achieved, totaling Rs. 662 million. This development addressed critical infrastructure needs, including classrooms, seminar halls, science laboratories, faculty offices, and emergency exits, greatly enhancing the university's academic capabilities. Additionally, the Directorate of IT developed and launched an updated website, making important announcements accessible to the public.
- Automation and Transparency: To bring greater transparency to the university's operations, he spearheaded the automation of all manual processes, including admissions and recruitment. A comprehensive strategy was implemented to ensure a transparent recruitment and admission process. This included:
 - Automation of Admissions and Recruitment: Key processes were automated with the establishment of a dedicated committee, ensuring streamlined and online admissions for Spring 2019 and online recruitment.
 - **Third-Party Validation:** A high-level scrutiny committee and collaboration with National Testing Services (NTS) ensured the integrity and transparency of the process.
 - **Right to Information (RTI) Compliance:** In adherence to the RTI Act 2013, all admission and recruitment processes were publicly available on the university website.
- Strategic Planning and Vision 2030: The university adopted a long-term strategic plan, Vision 2030, which has guided institutional policies and decisions. This plan set clear goals, ensuring the alignment of university policies with the mission and vision. The implementation of policies derived from Vision 2030 helped create an environment conducive to research, creativity, and innovation, fostering a culture of collaboration.
- Academic and Research Excellence: Hazara University made substantial strides in fostering academic excellence by aligning curricula with the National Curriculum Review Committee (NCRC) model. The Boards of Studies and Academic Council continuously ensured the integration of modern and innovative teaching practices. The university also focused on increasing research output, collaboration, and innovation, resulting in the establishment of fully functional offices like the Office of Research, Innovation, and Commercialization (ORIC).
- **Training and Internships:** The Hazara University Training Centre (HUTC) trained around 2,300 individuals in various fields. Additionally, approximately 300 internships were provided to students, promoting hands-on experience and employability. Seven academic programs were accredited, with two more programs in the process of accreditation.
- Student Engagement and Campus Life: Under his leadership, Hazara University created a supportive environment for students through various initiatives:
 - A Career Development and Counseling Office was established to guide students professionally.
 - A physical fitness center equipped with state-of-the-art equipment was introduced.
 - Active participation in national and international sports and co-curricular activities was encouraged.
 - National and international days were celebrated on campus to raise awareness and foster student involvement.
 - A Basic Health Unit (BHU) was established, providing 24/7 healthcare services, with a full-time ambulance service available.

- Information Technology and Campus Infrastructure: A robust IT infrastructure was put in place, including more than a dozen high-tech computer labs, a data center, and upgraded internet connectivity. The university's internet bandwidth increased from 8MB in 2016 to 424MB by 2019, supporting the Smart University Project. Furthermore, a biometric attendance system for staff was successfully implemented, ensuring accountability and transparency across the campus.
- Environmental and Aesthetic Initiatives: In line with the "Clean and Green Pakistan" initiative, over 20,000 plants and flowers were planted, enhancing the university's campus landscape and promoting environmental consciousness.
- Security and Safety: A comprehensive security framework was established with the help of the University Proctorial Board and Security Committee. The administrative staff worked closely with security personnel to maintain a safe and secure campus environment.
- Administrative Efficiency and Grievance Redressal: A dispute resolution mechanism was implemented to address any grievances in an efficient and transparent manner. Additionally, all required administrative and legal communications were responded to in a timely manner.
- Sustainability and Merit-Based Practices: Merit and transparency were maintained in all recruitment and appointments, with all procedures conducted as per university statutes. Efforts were made to ensure the fair treatment of all stakeholders, creating a collaborative and effective work environment.
- Administrative Integrity: Adhered strictly to statutory requirements, refraining from using emergency powers during his tenure.

Dr. Idrees' exceptional leadership, strategic planning, and commitment to institutional development positioned Hazara University as a progressive and well-functioning academic institution, achieving significant milestones in administration, infrastructure, technology, and student engagement

ii. ACADEMIC PLANNING AND MANAGMENT:

During Dr. Idrees's tenure as Vice Chancellor, Hazara University achieved remarkable advancements in academic planning, program diversification, faculty development, and student support. Key accomplishments include:

- Expansion of Academic Programs and Infrastructure:
 - The number of post-secondary academic degree programs was expanded through the addition of five new market-oriented academic departments.
 - o 29 new degree programs and diploma/certificate programs were launched across multiple departments, facilitated by the completion of the Turkish Academic Blocks. These newly constructed academic blocks—spanning a covered area of 337,785 sq. ft—are equipped with modern furniture, state-of-the-art instructional tools, and research facilities, offering students and faculty an exceptional learning environment.
 - Ten modern and market-oriented academic disciplines were approved & successfully launched.
 - Programs such as Architecture Engineering, Telecommunication, and Agriculture received formal accreditation during this period.
- Faculty Strength and Development: The university's faculty grew to 312 highly qualified and experienced members, including 101 PhD degree holders. A Faculty Development Program worth over Rs. 50 million was set to launch as part of a mega project in 2019-20 to

further strengthen teaching capabilities. Over the last three years: **20 faculty members** obtained PhD/MS/MPhil degrees through personal efforts; **15 faculty members** gained valuable international exposure by participating in international conferences and research initiatives. The university now offers **113 academic programs** across various disciplines.

• Student Enrollment and Growth: Over the last three years, Hazara University received 28,086 applications for admission and successfully enrolled 9,335 students, reflecting growing demand for its academic programs. Student enrollment increased by 35%, rising from 7,000 to 9,235 students during Dr. Idrees's tenure. The teacher-to-student ratio was maintained as per HEC requirements: Undergraduate programs: 1:25; Postgraduate programs: 1:30

• Quality Assurance and Evaluation:

- Ensuring high-quality education remained a core priority. The Directorate of Quality Enhancement achieved the following milestones: Conducted evaluations for 19 academic programs; Performed 917 thesis plagiarism tests to ensure academic integrity; Carried out course and teacher evaluations every 6 months to maintain teaching and program standards.
- Several awareness seminars were organized to educate faculty and students about quality education standards.
- The Quality Enhancement Cell received quantifiable recognition from HEC for its efforts.
- Research, Collaboration, and Innovation: The Office of Research Innovation and Commercialization (ORIC) became fully operational and actively fostered collaboration and research opportunities. ORIC signed 6 MoUs with international organizations and 14 MoUs with national organizations to enhance academic partnerships, research initiatives, and student exchange programs.
- Training and Professional Development:
 - The Hazara University Training Center (HUTC) was further strengthened to enhance the skills and performance of faculty and staff.
 - HUTC provided specialized training programs, organized seminars on emerging issues, and promoted an environment conducive to effective teaching and learning.
 - \circ The center has become a critical resource for human resource development at the university.
- **Student Support and Scholarships:** Financial accessibility was ensured through the provision of scholarships worth over Rs. 64 million, benefitting 1,819 students across various academic programs.
- Library and Research Resources:
 - The central library was further developed to serve both faculty and students, offering a rich collection of **72,000 books**, **489 journals**, and over **1,400 theses**.
 - The library provided seamless access to **digital academic and research resources**, enabling students and faculty to stay updated with the latest global knowledge.

Through these initiatives, Hazara University made substantial strides in expanding academic opportunities, ensuring quality education, fostering research, and enhancing student support—all under the leadership of Dr. Idrees.

iii. RESEARCH OUTPUT:

Under Dr. Idrees's leadership as Vice Chancellor, Hazara University achieved unprecedented milestones in research productivity, infrastructure development, and academic collaborations. Key achievements include:

- **Research Achievements and Innovations:** The university's faculty registered one patent and introduced a new, high-yield variety of brassica seeds, marking a significant breakthrough in agricultural research. Over 100 PhD scholars and 1,500 MPhil graduates were successfully produced during Dr. Idrees's tenure.
- **Research Publications and Recognition:** Faculty members published over 900 research articles in recognized scientific journals, with an impressive average of 2 publications per faculty member over the last three years. Dedicated funding and resources were allocated to encourage faculty research, leading to significant achievements: Faculty members received Best Research Awards & Best Teacher Awards from prestigious institutions such as HEC, PSF, and the Directorate of Science & Technology (DOST).
- **Research Collaboration and Multidisciplinary Focus:** Multidisciplinary research was actively promoted across departments such as Information Technology, Bioinformatics, Archaeology, Physics, Chemistry, Botany, Zoology, and Genetics, fostering innovation and cross-disciplinary partnerships. A total of 23 National and International MoUs were signed with universities and organizations to promote academic and research collaborations.
- **Conferences, Workshops, and Seminars:** The university organized numerous national and international workshops, conferences, and seminars, with over 100 research workshops conducted and faculty actively participating in key academic forums. The Directorate of Quality Enhancement (DQE) played a key role by conducting evaluations of 19 academic programs and performing 917 thesis plagiarism tests, ensuring the highest standards of research integrity.
- **Research Infrastructure and Funding:** A **mega project** for the enhancement of academic, research, and infrastructure facilities at Hazara University was approved by the Planning Commission at a cost of **Rs. 1,702 million**. Externally funded projects worth **Rs. 194 million** were secured over the last three years, significantly boosting the university's research capabilities.
- Smart University Project: The Smart University Project, sponsored by HEC, was completed in a record 6 months. This project provided Wi-Fi carpet coverage across the entire campus, with a high-speed bandwidth of 424 MB. Researchers now enjoy seamless access to digital resources at exceptional speeds across campus, enhancing research efficiency and productivity. Extended this project further, introducing SAFE Campus & SMART Classrooms within the next year.

Through strategic leadership and dedicated support, Hazara University experienced a transformative phase in research output, collaborations, and infrastructure development, positioning itself as a leading institution in quality research and academic excellence.

iv. FINANCIAL MANAGEMENT AT HAZARA UNIVERSITY

Under Dr. Idrees's leadership, Hazara University achieved significant progress in financial management, ensuring fiscal stability, effective resource utilization, and strategic development. Key accomplishments include:

- Strengthened Financial Stability: During Dr. Idrees's tenure, Hazara University's financial standing was strengthened. Out of the last three budgets, two were surplus and the third budget recorded no deficit. Financial assets, including the Pension Fund and Staff Welfare Funds, were strategically and judiciously invested in scheduled banks at competitive rates despite prevailing economic challenges.
- Efficient Budget Management: The process of annual budget preparation, processing, and approval was completed before June 30th of every year, ensuring timely financial operations. A practical and effective Internal Control Mechanism, including a robust system of internal financial audits, was successfully implemented.
- Funding and Revenue Generation: Over the last three years, the university secured projects worth PKR 194 million from external sources, significantly contributing to its financial health. Revenue totaling PKR 1,623.574 million was generated from internal sources alongside government grants. Investments were prudently secured in scheduled financial institutions such as the National Bank of Pakistan, National Saving Centre, and Bank of Khyber.
- Scholarships and Resource Allocation: On average, 18% of the total student body received scholarships, ensuring financial support for deserving students. More than 16% of the total budget was allocated to curricular and co-curricular activities, including students' indoor and outdoor research endeavors.
- Strategic Development Projects: A comprehensive Strategic Plan for the university's mediumand long-term development was devised and implemented. Key projects include:
 - **Completed Projects:** Development projects worth over PKR 1,000 million were completed.
 - Ongoing Projects: Projects currently under implementation are valued at over PKR 4,312M.
 - **Proposed Projects:** New development projects worth over **PKR 2,420 million** were submitted to external funding agencies for funding.
 - A mega project for the enhancement of academic and infrastructure facilities was approved by the Planning Commission of Pakistan at a total cost of PKR 1,702 million.
- **Transparent Financial Governance:** All procurement processes adhered strictly to **KPPRA rules** and the financial regulations of Hazara University. For the **first time in the history** of public sector universities, a **third-party financial audit** was conducted in compliance with the Hazara University Act, promoting transparency and accountability.

Through meticulous planning, prudent investments, and strategic project execution, Hazara University achieved remarkable financial resilience and sustainable growth, laying a strong foundation for long-term financial sustainability. Recognizing it, the HEC shared Hazara University's financial model with universities across the country as a benchmark for implementing similar systems in their institutions.

v. SECURITY AND LAW & ORDER SITUATION ON CAMPUS

During Dr. Idrees's tenure, the law and order situation at Hazara University remained exemplary. All semesters commenced and concluded in alignment with the academic calendar, with no incidents of unrest among students, staff, or faculty. Educational, sports, cultural, and recreational activities were conducted without any internal or external threats. The following measures ensured a secure and disciplined environment:

• CCTV Surveillance Network:

A state-of-the-art CCTV system was established, consisting of over 90 high-tech cameras connected via optical fiber, providing 30-day video storage and 24/7 monitoring with 99.9% uptime. The system includes emergency sirens and communication devices for swift responses to any security breaches.

• Campus Environment and Discipline Management:

The administration prioritized fostering a friendly and supportive campus environment while maintaining discipline through a two-fold system:

- Proctorial Board: Strengthened to uphold discipline among students. Cases of misconduct were addressed by the University Discipline Committee, constituted under Section 14 of the Hazara University Statutes 2016.
- **Security Committee:** Formed to ensure overall campus discipline and monitor activities for immediate corrective action when required.

• Security Personnel Recruitment and Training:

A well-trained and adequately armed security team was deployed 24/7. The team includes 105 personnel, led by:

- Director Administration (BPS-19) Overall In-Charge
- Deputy Director Administration (BPS-18)
- Three Assistant Directors (BPS-17)
- Proper training on small arms handling, usage, and firing was conducted at the Pak Army's Junior Leader Academy (JLA), Shinkari, Mansehra.

• Acquisition of Weapons and Equipment:

To enhance campus security, the following items were procured from Pakistan Ordnance Factory (POF), Wah:

- 20 semi-automatic POF-5 weapons (9x19 MM caliber)
- 4,000 rounds of 9x19 mm ammunition
- 500 rounds of 7.62 mm ammunition for SMGs
- Security equipment, including walkthrough gates, bulletproof jackets and helmets, walkietalkies, torches and additional security supplies.

• Enhanced CCTV Surveillance:

Initially, the system comprised 45 cameras. Over three years, the network expanded to 90 advanced surveillance cameras, including 4 PTZ cameras for 360-degree coverage of sensitive areas. Plans are underway to further enhance this system by installing an additional 104 cameras across the campus.

- Tenders have already been floated, and work orders will soon be issued.
- The surveillance system will integrate alarm generation and email notification systems for heightened security under the HEC Safe University Project.
- The system has effectively assisted in recovering stolen items such as bags, bikes, and vehicles while also addressing various social and administrative issues through video evidence.

- Additional Security Measures:
 - **Perimeter Security:** Razor wire was installed along the outer perimeter wall.
 - **Security Towers:** Fourteen towers were built along the perimeter, with an additional five on the rooftops of high-rise buildings to monitor surrounding areas effectively.
 - **Fire Safety:** Eighty fire extinguishers were installed across key university buildings.
 - **Mock Drills:** Semi-annual mock exercises were conducted in collaboration with the District Police to ensure readiness for emergencies.
 - Anti-Drug Awareness: Multiple lectures and awareness campaigns were organized in collaboration with the Anti-Narcotics Force (ANF) to address and prevent drug usage among students.
 - **SOS Systems:** Mobile SOS devices were provided to security guards for immediate communication with local police, ensuring rapid emergency response.

These comprehensive and proactive measures have significantly bolstered the university's security, creating a safe, disciplined, and conducive environment for learning and growth.

III. FUND RAISING FOR DEVELOPMENTAL PROJECTS

In his tenure as VC Hazara University, Prof. Idrees successfully raised over **2.9 billion PKR** from public and private sources to support various developmental initiatives. The details are as follows:

- i. PC1 for the uplifting of Academic and Infrastructure facilities of Hazara University that was approved at a cost of **Rs. 1702 Million by Planning Commission of Pakistan**.
- PC1 for the establishment of Molecular-based Diagnostic laboratory at Center for Applied Molecular Biology (CAMB) approved at a cost of Rs. 39.2 Million by Ministry of Science & Technology
- iii. PC1 for the Establishment of Centre of Excellence in Mathematical Sciences at University of Peshawar that was approved at a cost of Rs. 988.52 Million by Higher Education Commission of Pakistan.
- iV. Establishment of Volleyball Academy at University of Peshawar under PM's Kamyab Jawan Prgram that was approved at a cost of **Rs. 132 Million**.
- V. More than 60 million as Principal/ Co-PI of several research projects funded by national and international funding agencies such as US State Department, WHO, EMRO etc.
- vi. Rs. 520 Million and Appreciation Letter by Higher Education Commission as the Governance and Financial Management of the University was improved in my tenure after 12 years.
- VII.Rs. 450 Million by Finance Department Khyber Pakhtunkhwa and Performance Award by Chancellor/Governor acknowledging the Good Financial Health and Discipline as made on the basis of financial position of Peshawar University under my leadership.

E. AWARDS AND HONORS / ACHIEVEMENTS AND RECOGNITION

Dr. Idrees's groundbreaking work has earned numerous accolades, including:

INTERNATIONAL AWARD:

1. Young Scientist of the year award in Biology 2009 by The World Academy of Science (TWAS) Italy.

NATIONAL AWARDS:

- 2. PAS Gold Medal-2016 in Scientific Discipline "Emerging Technologies, including Biotechnology, nanotechnology, Molecular Biology & Bioinformatics" by Pakistan Academy of Sciences.
- 3. Research Productivity Award (RPA) 2017 by Pakistan Council for Science & Technology (PCST)-Category C
- 4. Research Productivity Award (RPA) 2016 by Pakistan Council for Science & Technology (PCST)-Category B
- 5. Research Productivity Award (RPA) 2015 by Pakistan Council for Science & Technology (PCST)-Category C
- 6. Research Productivity Award (RPA) 2014 by Pakistan Council for Science & Technology (PCST)-Category B
- 7. Research Productivity Award (RPA) 2013 by Pakistan Council for Science & Technology (PCST)-Category B
- 8. Research Productivity Award (RPA) 2012 by Pakistan Council for Science & Technology (PCST)- Category C
- 9. Research Productivity Award (RPA) 2011 by Pakistan Council for Science & Technology (PCST)- Category F
- 10. **Gold Medal for Best Research Paper Presentation** in 21st Annual congress of Pakistan Society of Gastroenterology and GI endoscopes, March 25-27, 2005, Peshawar Pakistan.

INSTITUTIONAL AWARDS:

- 11. **Performance Evaluation Award** for the period of from 1-1-2015 to 31-12-2015 to the PhD teacher by University of the Punjab Lahore-**Obtained numbers 70 (100%)**
- 12. **Performance Evaluation Award** for the period of from 1-1-2014 to 31-12-2014 to the PhD teacher by University of the Punjab Lahore-**Obtained numbers 68.5 (91.3%)**
- 13. **Performance Evaluation Award** for the period of from 1-1-2013 to 31-12-2013 to the PhD teacher by University of the Punjab Lahore-**Obtained numbers 64 (85.33%)**
- 14. Performance Evaluation Award for the period of from 1-1-2012 to 31-12-2012 to the PhD teacher by University of the Punjab Lahore-Obtained numbers 68 (90.67%)

AWARDS AND RECOGNITIONS FOR EXCELLENCE IN FINANCIAL MANAGEMENT:

15. **Performance Award (2021)**: Honored by the Governor of Khyber Pakhtunkhwa for outstanding contributions as Vice-Chancellor of the University of Peshawar. This recognition was based on the successful implementation of financial reforms that significantly improved the university's financial health and discipline, as demonstrated by a comparative analysis of universities across Khyber Pakhtunkhwa.

- 16. **HEC Appreciation Letter**: Received an acknowledgment from the Higher Education Commission for exemplary leadership and exceptional financial management at the University of Peshawar.
- 17. **Recognition for Financial Innovation at Hazara University**: Through meticulous planning, prudent investments, and strategic project execution, Hazara University achieved exceptional financial resilience and sustainable growth. This success laid a solid foundation for long-term financial sustainability. Acknowledging this achievement, the HEC shared Hazara University's financial model as a national benchmark for other institutions to emulate.

ACADEMIC EXCELLENCE AWARDS:

- 18. Academic Excellence Award-2022 for "Phenomenal Services to the Education Sector of Pakistan, contributing towards Quality Education that has uplifted the image of the Country among world Nations" by Association of Private Sector Universities of Pakistan (APSUP) on 17 August 2022.
- 19. Academic Excellence Award-2023 "In Recognition of Unwavering Commitment and Acumen in Serving Pakistan's Academia and Higher Education Sector" by Association of Private Sector Universities of Pakistan (APSUP) on 25 August 2023.

F. CONTRIBUTION TO PUBLIC SERVICE

- 1. Establishment of Molecular Diagnostic Facility for General Public:
 - In May-2000 I established Molecular (PCR-based) Diagnostic Laboratory for the detection of infectious & genetic diseases at Centre for Applied Molecular Biology (CAMB), MoST and provided general public with reliable, accurate, rapid and more economical diagnostic service for most prevalent infectious and genetic diseases. Currently my developed DNA based diagnostic laboratory at CAMB provides for the diagnosis of HCV, HBV, TB, CMV, HSV (type 1&2), TB, typhoid, and HCV genotyping, HCV viral load, MDR-TB.
- 2. Developed Molecular Diagnostic Kits: As a part of these endeavors, to develop indigenous technologies, I have developed Molecular Diagnostic Kits for the qualitative detection of hepatitis B virus, hepatitis C virus, *M. tuberculosis* and HCV Genotyping at 1/10th cost of the same kits manufactured by other companies in USA. This will help to overcome inherent constraints of practicing modern molecular tools for diseases diagnosis and encourage/contribute to the indigenous technologies in the area of Molecular diagnostics. All these kits are ready for marketing.
- **3. Patent:** Idrees M. and Riazuddin S. PCR-based diagnostic kit for the detection of Hepatitis C virus. (2003) Pak#138719.
- **4. Helped in Prime Minister Program for Prevention & Control of Hepatitis:** Recognizing the critical importance of viral testing, the Centre, with noble intent, directed Virology Group to provide comprehensive molecular diagnostic services—including qualitative, quantitative, and genotyping tests—for patients enrolled in the Prime Minister's Program for the Prevention and Control of Hepatitis. These services were extended to patients at 104 sentinel sites, comprising teaching hospitals and district headquarters across the country. Between September 2006 and July 2008, the Virology Diagnostic Group conducted over 50,000 tests, including HCV quantitative, HCV genotyping, and HBV quantitative analyses, entirely free of charge for underprivileged patients. The estimated market value of these services exceeds 120 million PKR.

5. Services during Dengue Virus Outbreaks 2011-2016:

Dr. Idrees was the sole Virologist/scientist of the country who was actively involved in the molecular identification and serotype detection of Dengue outbreak-2011. Till date his group is

providing dengue detection & serotyping facility free of charges to all provinces referred by WHO. Dr. Idrees has been awarded Certificate of appreciation for excellent lab support in detection of dengue fever cases during last outbreak in the year 2011 and shield for his expert opinion for "Lab Services in Case Detection for Dengue Fever" on February 29, 2012 by WHO.

- **6.** Services during Coronavirus SARS-CoV-2 Epidemic 2020: Dr. Idrees established a state-of-theart laboratory for the diagnosis of SARS-CoV-2 causing COVID-19 in the start of the epidemic in Government sector and offered free of charge to general population.
- 7. Developed Multiplex Real-time PCR tests kit for the specific diagnosis of COVID-19 Disease BY DETECTING SARS-CoV-2 CORONAVIRUS RNA: The test detects specific nucleic acid sequences from the genome of the nCoV-19/SARS-CoV-2 RNA dependent RNA polymerase RdRp gene and E-gene. We had already applied to Drug Regulatory Authority of Pakistan for Emergency Use Authorization (EUA) and hopefully will be granted in few weeks. Global Marketing (Pvt Ltd) Islamabad had already requested and collaborated for the marketing of these kits.

G. PROMOTION OF INDUSTRY-ACADEMIA LINKAGES

1. Collaborative Research:

Dr. Idrees's group is the first in the country to conduct studies on viral hepatitis and he is supervising a team of researchers to study the genome variations in hepatitis viruses and *Dengue Virus*. Dr. Idrees has made significant contributions to the field of Molecular Virology research. Specifically, Dr. Idrees's virology work relates to eight main themes which consist of Establishment of assays/methods to study viruses, Studies on Virus Genome characterization, variability, Genotyping/ Serotyping, Studies on viral genes/proteins and their role in disease outcome using Bioinformatics tools, Virus Prevalence and Molecular Epidemiology, Studies on Virus association with other abnormal conditions/Diseases. Dr. Idrees has participated in other studies which include diseases of respiratory system, metabolism, cancer, Stem cells & it's Role in Skin Tissue Regeneration in Mammals, Zoo prophylaxis, etc.

Our research is highly relevant to industries interested in detection of infectious diseases such as HCV, HBV, HGV etc., production of recombinant HBV vaccines, understanding HCV replication, the various functions of HCV proteins and mechanisms of interferon resistance, insulin resistance and type 2 diabetes. With this knowledge, specific detection, prevention and improved therapies may be established for hepatitis viruses.

- 2. Clinical Trails: His laboratory had also been engaged in three clinical trials under his direct supervision on HCV and HBV patients with three pharmaceutical sponsors such as MACTER International, GETZ Pharma and Biocare Pharma.
- 3. Developed Real-time PCR tests kit for the specific diagnosis of COVID-19 Disease: The test detects specific nucleic acid sequences from the genome of the nCoV-19/SARS-CoV-2 RNA dependent RNA polymerase RdRp gene and E-gene. We had already applied to Drug Regulatory Authority of Pakistan for Emergency Use Authorization (EUA) and hopefully will be granted in few weeks. Global Marketing (Pvt Ltd) Islamabad had already requested and collaborated for the marketing of these kits.

H. NEW ORGANIZATIONS, CAMPUS, LABORATORIES, TEACHING AND RESEARCH PROGRAMS ESTABLISHED

i. Establishment of Batagram Campus:

Batagram Campus of Hazara University under HEC Umbrella Project was established under my direct supervision and started academic functioning from the Fall Semester 2018. The purpose of establishing this sub-campus was to provide affordable quality educational opportunities for students of far flung area at door step in order to develop their scientific, socioculture, economic, and political leadership, through learner-centered teaching and research, while strengthening their identity at the Regional, National, and International levels.

ii. Developed an excellent Teaching and Research program in Applied Molecular Biology & Forensic Sciences:

In 2015, Dr. Idrees along with his fellow prominent scientists have developed an excellent teaching and research program in Applied Molecular Biology & Forensic Sciences for which he is internationally recognized as an eminent molecular biologist. Details of his developed teaching & Research Programs are given below:

Sr. No.	DEGREE	DEGREE TITLE	DEVELOPED FOR:
1	Graduate	BS in Applied Molecular Biology and	University & HEC
		Forensic Sciences	
2	M. Phil	M. Phil in Applied Molecular Biology	University & HEC
		and Forensic Sciences	
3	Ph. D	Ph. D. in Applied Molecular Biology	University & HEC
		and Forensic Sciences	

iii. New Programs at Hazara University:

Ten modern and market oriented academic disciplines including Biotechnology, Forensic Sciences, Geology, Environmental Sciences, Pharmacy, Agriculture, Elementary Education, Medical Lab Technologies, were got approved from statutory bodies and launched in HU in my tenure as Vice-Chancellor.

iv. Establishment of Commercial Molecular Diagnostic Facility:

In May 2000, Dr. Idrees established a state-of-the-art molecular diagnostic laboratory at the Centre for Applied Molecular Biology (CAMB), under the Ministry of Science & Technology (MoST), Government of Pakistan. This facility was designed to provide reliable, accurate, rapid, and cost-effective PCR-based diagnostic services for infectious and genetic diseases, catering to the general public. This initiative has not only served as a critical public health resource but also generated significant revenue for Centre. By 2013, the laboratory had contributed over 600 million PKR to the national treasury through revenue generated under the Ministry of Science & Technology.

v. Establishment of Virology Research Lab/Program at CEMB

In Year 2000, Dr. Idrees stabled the Molecular Virology Group is the pioneering research entity in the country dedicated to studying viral hepatitis. The Overall aim of the Group is to conduct Research on both human and animal viruses/microbes in order to advance the understanding the biology of infectious diseases and to use this knowledge to solve public health problems. It is equipped with state-of-the-art facilities and a highly skilled team, enabling comprehensive molecular diagnostics for all types of hepatitis viruses. In addition to diagnostic capabilities, the group comprises scientists and researchers focused on exploring diverse aspects of hepatitis virus biology. Over the years, the group has made significant and impactful contributions to the advancement of molecular virology research. In addition, his Virology Group has participated in other studies which include diseases of tuberculosis, typhoid, malaria, anemia, carcinomas etc.

vi. Infrastructure

- Completion of leftover work of the Turkish NGO by constructing 8 Academic Blocks at HU with the financial sponsorship of HEC, amounting to Rs. 662 Million, (covered area of 4'00'000 Sft), furnished with comfortable furniture and modern equipment for instruction and research.
- Constructed two faculty hostels (one each for male & female faculty) with the financial sponsorship, amounting to Rs. 65.924 Million, of the HED/Provincial Government.
- Completed Smart University Project (sponsored by HEC) just in 6 months record time and now Wi-Fi carpet coverage across the campus is provided with high speed bandwidth of 424 MB. Researchers are now able to access all digital resources at a very high speed anywhere in the campus. In next 1 year the facility will be extended to SAFE Campus and SMART Classroom.
- A mega project for the uplifting of Academic and Infrastructure facilities of Hazara University has recently been approved at a cost of Rs. 1702 Million by Planning Commission of Pakistan.

I. DEVELOPMENT PROJECTS UNDERTAKEN (ABOVE 01 BILLION)

Dr. Idrees has **capabilities for mobilization of financial resources from National and International funding agencies**. He has executed several major development projects beside research projects funded by national funding agencies including Ministry of Science & Technology and Higher Education Commission. Further, under his direct supervision at Hazara University, his team prepared and submitted a PC1 for the "Uplifting of Academic and Infrastructure facilities of Hazara University" that was approved at a cost of **Rs. 1702 Million** by Planning Commission of Pakistan in his second year of tenure as Vice Chancellor (2018). The development projects undertaken by Prof. Idrees are given below:

i. DEVELOPMENTAL PROJECTS (Completed):

- 1. Uplifting of Academic and Infrastructure facilities of Hazara University that was approved at a cost of **Rs. 1702 Million by Planning Commission of Pakistan**. 19-03-2018 to18-03-2021
- 2. Construction of two Academic Blocks at Hazara University by Provincial Government at a cost of 65.0 Million

- 3. Completion of Left-over work of eight academic blocks (each one with a covered area of about 49,000 square feet) below the approved cost of 662.45 Million (HEC Grant) within a record time of one and a half year.
- 4. Establishment of Volleyball Academy at University of Peshawar under PM's Kamyab Jawan Prgram that was approved at a cost of **Rs. 132 Million**.
- 5. Establishment of Molecular (PCR-based) Diagnosis of infectious & genetic diseases Laboratory at Centre for Applied Molecular Biology (2001-2004, Ministry of Science & Technology PC1 PKR 39.46 Million).

ii. DEVELOPMENT PROJECTS SUBMITTED TO EXTERNAL AGENCIES FOR FUNDING

- 6. Establishment of National Centre for Mathematical Sciences at University of Peshawar, Rs.994.710 million, HEC
- 7. Up-gradation of Department of Art and Design as College of Art and Design, University of Peshawar, Rs.619.09 million, Provincial Government
- 8. Solarization of Main Administration and Sheikh Taimur Academic Block-1 and 2, University of Peshawar (Phase-I), Rs.100.387 million, Provincial Government
- 9. Beautification Schemes of the University of Peshawar under the Provincial Government approved project "Peshawar Uplift Programme", Rs.138.137 million, Provincial Government
- 10. Provision of basic allied facilities to special students/ faculty at University of Peshawar, Rs.45.101 million, HEC

J. BOOKS

- HCV Therapy and Baseline IL-8 Levels: A Practical Approach-High levels of Baseline IL-8: A Risk Factor for Low Treatment Response in Chronic HCV Patients. By Haji Akbar, Muhammad Idrees, Khurram Shehzad. ISBN 10: 3639336186 ISBN 13: 9783639336184 Publisher: VDM Verlag Dr. Müller, 2011
- 2. Determination of HCV Genotypes in Khyber Pakhtankhawa: Molecular Epidemiology of Hepatitis C Virus genotypes in Province of Pakistan. By Amjad Ali, Muhammad Idrees, Habib Ahmad-LAMBERT Academic Publishing. ISBN 978-3-8465-8362-3 Publisher: LAMBERT Academic Publishing

K.PATENTS

- 1. **Idrees, M** and Riazuddin, S. PCR-based diagnostic kit for the detection of Hepatitis C virus. (2003); Pak#138719.
- 2. Idrees, M and Riazuddin, S. Diagnostic kit for *Mycobacterium tuberculosis*. (2007), Application #1011/2005.
- 3. Idrees, M and Riazuddin, S. Molecular diagnosis of Hepatitis B virus. (2007); Application #857/2007.

L. RECOGNITION AND MERIT-BASED RECOMMENDATION FOR PRESTIGIOUS LEADERSHIP POSITIONS FROM WHICH I WAS UNJUSTLY DENIED BY HIGHER AUTHORITIES:

I had the distinct honor of being appointed or recommended for prominent positions through meritbased selection processes conducted by highly esteemed Selection Committees. Despite being recognized for my qualifications and leadership abilities, I was unjustly denied these opportunities by higher authorities (political). These positions include:

1. APPOINTMENT AND UNLAWFUL DENIAL OF CHAIRMANSHIP AT PAKISTAN SCIENCE FOUNDATION (PSF):

I had the distinct honor of being appointed Chairman of the Pakistan Science Foundation (PSF) by the President of Pakistan on November 19, 2020. This appointment was based on a merit-based selection process conducted by a high-level Selection Committee (Federal Secretaries) chaired by the Minister of Science & Technology. I was selected from over 100 of the country's leading scientists, recognized for my exceptional leadership qualities and contributions to the scientific community. This appointment was duly notified by the Establishment Division and published in the Gazette of Pakistan. Following this, I formally assumed office on November 20, 2020 and formally reported for duty to the Secretary of the Ministry of Science and Technology. However, my joining was not accepted on deputation, and I was instructed by the then Minister and Secretary to first resign from my regular service before assuming the position that was only for 3 years. This directive was in direct violation of Section 5(ii) of the PSF Act, 1973, which clearly stipulates that the terms and conditions for the position of Chairman, PSF, are determined by the President of Pakistan. Moreover, the status of Chairman PSF was altered from a Grade-22 position to an MP-I Scale under the MP Scale Policy-2020 without obtaining the necessary approval from the President. This change contravened the provisions of the PSF Act and violated a fundamental principle of law, which mandates that only the appointing authority has the jurisdiction to determine the terms and conditions of the officer. As a result of these unlawful actions by the then Minister (Mr. Fawad Chaudhry) and Secretary Ministry of Science & Technology (Capt. Retd. Nasim Nawaz), I was unjustly deprived of my rightful position as Chairman of PSF. These actions not only disregarded the statutory authority of the President but also undermined the rule of law.

2. CANDIDACY FOR VICE-CHANCELLOR AT UNIVERSITY OF NAROWAL: A Merit-Based Process Undermined

The position of Vice-Chancellor for the University of Narowal was advertised by the Government of Punjab, Higher Education Department, with the application deadline set for June 24, 2024. I applied through the proper channel and was shortlisted for an interview based on the merit policy. On August 12, 2024, I was invited by the Higher Education Department to appear before the Search Committee for the interview. During the interview, my extensive leadership experience as Vice-Chancellor of two major universities, my distinguished academic and research credentials, and my strong performance in the interview earned me a place among the top three candidates recommended for appointment to the Chief Minister of Punjab, Maryam Nawaz, from a pool of over 200 applicants. As per the Punjab Universities Act, the Chief Minister was required to forward the recommended panel to the Governor/Chancellor for final approval. However, the Chief Minister opted to personally re-interview me, which took place on October 10, 2024. The interview was

informal and centered on general questions, to which I provided satisfactory answers that were appreciated by the Chief Minister, who expressed her inclination to appoint me as Vice-Chancellor of the University of Narowal. While awaiting my appointment, on December 12, 2024, the Higher Education Department unexpectedly re-advertised the position. Reliable sources revealed that a federal minister and elected Member of the National Assembly from Narowal's constituency influenced the decision, seeking to appoint a Vice-Chancellor of their preference. Consequently, despite fulfilling all the qualifications, excelling in the selection process, and receiving positive background checks and clearances from intelligence agencies, I was unjustly denied the appointment. These agencies had provided favorable reports about me, affirming my suitability for the role of VC, University of Narowal. Unfortunately, political interference overshadowed merit and fairness, leading to the re-advertisement of the position.

3. CANDIDACY FOR VICE-CHANCELLOR AT ISLAMIA UNIVERSITY BAHAWALPUR: A Merit-Based Process Undermined

I was shortlisted for the position of Vice-Chancellor at Islamia University Bahawalpur (IUB) based on merit and eligibility as determined by the Higher Education Department, Government of Punjab. On August 12, 2024, I was invited to appear before the Search Committee for an interview. As outlined in Section 14(5 & 6) of the University of Bahawalpur Act, 1974: "The Search Committee shall recommend to the Government, in alphabetical order without any preference, a panel of three persons who, in its opinion, are suitable for appointment as the Vice-Chancellor. The Chancellor shall appoint the Vice-Chancellor for each term of four years, but he shall serve during the pleasure of the Chancellor." Recognized for my extensive leadership experience in senior academic, research, and management roles, coupled with a distinguished track record of research and publications, I excelled in the interview conducted by the Search Committee, chaired by a former Federal Secretary. From over 200 applicants, I was selected as one of the top three candidates recommended to the Chief Minister for appointment as Vice-Chancellor of IUB. As required by the Act, the Chief Minister was expected to forward the recommended panel to the Chancellor for final approval. However, the Chief Minister opted to conduct a personal reinterview, which took place on October 10, 2024. Despite performing strongly throughout the process, the Higher Education Department of Punjab unexpectedly re-advertised the position. This decision came despite positive reports from intelligence agencies affirming my eligibility and suitability for the role. Unfortunately, the re-advertisement undermined merit and transparency, resulting in an unjust outcome that contradicted the principles of fairness embedded in the selection process.

PART 'B': MEMBER OF NATIONAL LEVEL

POLICY MAKING BODIES/FORUMS

a. Experience of working on the Statutory Authorities of a university such as Board of Studies, Academic Council, Syndicate or Management Council or Executive Council of Board of Management etc.

Dr. Idrees have desirable experience for this post of Vice Chancellor as he brings extensive and proven experience to the position of Vice Chancellor. He has previously served as Vice Chancellor at two prominent institutions: the University of Peshawar, the oldest and largest university in Khyber Pakhtunkhwa, and Hazara University, the second largest in the region by student enrollment. His leadership experience includes active engagement with key statutory authorities of the university system, such as the Board of Studies, Academic Council, Selection Boards, Syndicate, and Senate. Additional details are provided below:

SENATE:

- 1. Member, University of Peshawar Senate- From 12-12-2020 to 11-12-2023
- 2. Member Senate, Hazara University- From 27-7-2016 to 26-07-2019
- 3. Member senate, Women University Mardan- From 2017 to 2020
- 4. Member Senate, University of Baltistan, Gilgit Baltistan-2017-2020
- 5. Member Senate, Bach Khan University Charsada 2021-Continue
- 6. Member Board of Governors, IMSciences, Peshawar. 2020 to 11-12-2023
- 7. Member Board of Governors, Edwards College Peshawar. 2020 to 11-12-2023
- 8. **Member**, Board of Governors, Centre of Excellence for Countering Violent Extremism. From 2022 to 11-12-2023

SYNDICATE:

- 9. Convener/Chairman, University of Peshawar Syndicate- From 12-12-2020 to 11-12-2023
- 10. Convener/Chairman, Hazara University Syndicate- From 27-7-2016 to 26-07-2019
- 11. Member Syndicate, University of Malakand-From 2021-Continue
- 12. Member Syndicate, University of Malakand-From 2018-2020

ACADEMI COUNCIL:

- 13. Convener/Chairman, University of Peshawar Academic Council- From 12-12-2020-Continue.
- 14. Convener/Chairman, Academic Council Hazara University Mansehra-KP- From 27-7-2016 to 26-07-2019.
- 15. Member, Academic Council University of Punjab Lahore. From 22-8-2015-27-07-2016.

ADVANCE STUDIES & RESEARCH BOARD

- 16. Convener, ASRB, University of Peshawar. From 2020 to 11-12-2023
- 17. Convener, ASRB, Hazara University Mansehra. From 2016-2019

BOARD OF FACULTIES:

- 18. **Convener/Chairman**, Board of Faculties (BOF), Hazara University Mansehra-KP-2016-2019 (in the absence of Dean/s)
- 19. **Convener/Chairman**, Board of Faculties (BOF), University of Peshawar-KP-2020-Continue (in the absence of Dean/s)
- 20. Member, Board of Faculty, University of Punjab Lahore. From 01-07-2015 to 27-07-2016.

BOARD OF STUDIES

- 21. Convener/Chairman, Board of Studies (BOS), CAMB, University of the Punjab Lahore. From 01-07-2015 to 27-07-2016.
- 22. **Member** Board of Studies (BOS) CAMB, University of the Punjab Lahore. From 28-08-2016-continue
- 23. Member Board of Studies (BOS) Department of Genetics, Hazara University Garden Campus Mansehra, KPK-From 2011-2015
- **24. Member** Board of Studies (BOS) Department of Molecular Biology, Virtual University of Pakistan M. A. Jinnah Campus Lahore. **From February 2016-continue**

SELECTION BOARS

- 25. Chairman, Selection Board, University of Peshawar. From 2020-Continue
- 26. Chairman, Selection Board, Hazara University Mansehra. From 2016-2019.
- 27. Member Selection Board, University of Malakand-From 2021-Continue
- 28. Member, Selection Board, Centre of Excellence for Countering Violent Extremism
- 29. Member, Search Committee for appointment of Members of Khyber Pakhtunkhwa Public Service Commission. *From 12-12-2020-Continue*
- 30. Chairman, Selection Board, Shaykh Zayed Islamic Centre. *From 12-12-2020* to 11-12-2023
- 31. Chairman, Selection Board, Pakistan Study Centre. From 12-12-2020 to 11-12-2023
- 32. Chairman, Selection Board, Centre of Excellence in Physical Chemistry. *From 12-12-2020* to 11-12-2023
- Chairman, Selection Board, Centre of Excellence in Geology. From 12-12-2020-Continue
- 34. Chairman, Selection Board, Area Study Centre. From 12-12-2020 to 11-12-2023
- 35. Chairman/Member, Promotion Committee, Edwards College Peshawar. *From 12-12-2020* to 11-12-2023

b. Demonstrable experience of handling Quality issues, assessment and accreditation procedures, etc.

Dr. Idrees has demonstrable experience of handling Quality issues, assessment and accreditation procedures etc. He was:

- **1. MEMBER NATIONAL QUALITY ASSURANCE COMMITTEE:** He was member of National Quality Assurance Committee (NQAC) of Higher Education Commission (HEC). The objectives of NQAC are to:
 - i. Facilitate HEC, Program & Institution Reviewers and University Administration in assessing and adopting the Quality criteria
 - ii. Track the effectiveness of the QA programs of HEC and proposing appropriate modifications
 - iii. Update the Quality Assurance indicators, policies and guidelines of HEC in view of global developments & local stakeholders' feedback and proposing SoPs for their adoption
 - iv. Identify future capacity building requirements for institutions to improve the services of institutions towards a growing and more diversified tertiary education sector.
- 2. TRAINING ON QUALITY MANAGEMENT CONSULTANTS: Dr. Idrees has obtained training on "Quality Management Consultants" containing Internal Auditing, Corrective & Preventive Action conducted by QMC Lahore in year 2009.
- **3. TECHNICAL MANAGER MOLECULAR DIAGNOSTIC LABORATORY:** In addition, Dr. Idrees was Technical Manager Molecular Diagnostic Laboratory (MDL) of Centre for Applied Molecular Biology, Ministry of Science & Technology during its ISO certification & accreditation. As a Technical Manager of the MDL-CAMB I was responsible for:
 - i. Direct the systematic actions necessary to demonstrate that a product or service meets the specified requirements for quality as set forth by ISO 9001-2008 & ISO 15189.
 - ii. Establish, implement, and maintain a quality system appropriate to the scope of the laboratory's activities.
 - iii. Reviews, documentation, revision of policies, systems, programs, procedures and instructions to the extent necessary to assure the quality of the test and/or calibration results.
 - iv. Establish a program for the maintenance and calibration of laboratory equipment.
 - v. Establish and maintain an internal/external proficiency testing program to monitor performance and identify areas for improvement.
 - vi. Ensure that quality control measures are performed on critical reagents prior to use.
 - vii. Maintain documentation pertinent to receipt, preparation, and testing of all reagents.
 - viii. Planning and organizing audits as required by the schedule and requested by management.
 - ix. Management of technical operation of Lab and coordination with QMR for QMS
 - x. Evaluating all methods currently employed by the Lab and for proposing new or modified analytical procedures for potential applications.
 - xi. Solving technical problems related to analytical methods and overseeing the training, quality assurance, safety and competency / proficiency testing practices within the Lab.
 - **xii.** Conducting or arranging training for new and existing scientists, Conducting performance reviews and Enforcing safety procedures. This duty is shared with laboratory safety officer and safety personnel.

C. Experience in Handling Developmental Issues at State, National, and International Levels outside the university environment.

Dr. Idrees has significantly contributed to addressing developmental challenges across state, national, and international platforms. His work spans a wide range of socio-economic, health, and educational initiatives, reflecting a strong commitment to sustainable development and global collaboration. Key highlights include:

- 1. **Higher Education System Strengthening Activity (HESSA):** As Vice-Chancellor of the University of Peshawar, Dr. Idrees played a pivotal role in the USAID-funded HESSA project, which aims to address Pakistan's workforce development challenges by enhancing higher education capacity. Major contributions included:
 - Conducting a baseline study to identify growth opportunities and challenges.
 - Establishing stakeholder engagement offices.
 - Developing a five-year strategic business plan with clear implementation goals.
 - Promoting equity, diversity, and inclusion across the university.
 - Organizing leadership training workshops for key university officials.
 - Building partnerships for resource mobilization and devising a market-driven education policy framework.
- 2. International Public Health Initiatives: Served as a Visiting Scientist at the Centers for Disease Control & Prevention (CDC), Atlanta, USA, where he contributed to improving healthcare access, quality of life, and reducing infectious diseases. Participated in CDC-led delegations to Pakistan (2006-2007) to collaborate with public health officials on the Field Epidemiology & Laboratory Training Program (FELTP).
- 3. **Membership in International Scientific Societies:** Fellow and member of eight prestigious organizations, including:
 - Fellow of the Royal College of Pathologists (FRCPath), UK.
 - American Society of Microbiology (ASM) and European Society of Clinical Microbiology and Infectious Diseases (ESCMID).
 - Other memberships in virology, microbiology, and epidemiology societies globally.
- 4. Editorial and Peer Review Roles: Editor for over 10 international scientific journals such as the *World Journal of Virology* and *Hepatoma Research*. Reviewer for more than 20 prestigious journals, including *The Lancet Infectious Diseases* and *Nature*.
- 5. Curriculum Development and Academic Leadership: Member of guidance and examination committees, including the Atta-ur-Rehman School of Applied Biosciences, NUST, and Virtual University of Pakistan. Helped design syllabi for advanced programs like M.Phil. in Biotechnology and Microbiology.
- 6. Policy Development and Advisory Roles: Contributed to public health policy as:
 - Member of the Expert Committee for MERS-CoV guidelines (2014).
 - Member of the Punjab Cabinet Committee on Dengue Control, developing SOPs for eradication and management.
 - Co-opted member of the Technical Expert Committee on Medicine for the Prevention & Control of Hepatitis.
 - Reviewed health and biotechnology grants for the Higher Education Commission (HEC), focusing on renewable energy, sustainable agriculture, water conservation, and climate action.
- 7. Visiting Scientist and Focal Roles: Served as a visiting scientist and advisor at prominent institutions, including Lahore General Hospital, Peshawar Medical College, Dow University of Health Sciences, and Hazara University. Focal person for HEC grants in health biotechnology (2016-2017).

Dr. Idrees's extensive involvement in developmental initiatives showcases his ability to address critical issues with innovative and impactful solutions across diverse domains.

PART 'C': Skills and Competencies

a. Technical Skills ----

i. Openness to Technology and Its Potential Applications in a Knowledge-Based Setting;

Dr. Idrees demonstrates a strong commitment to leveraging technology for advancing knowledge and innovation. His expertise includes:

- **Professional Experience:** With an FRCPath qualification and 19 years of experience in teaching, research, and management at leading national and international institutions, Dr. Idrees has held key positions such as Vice Chancellor, Director of CAMB, Group Leader at CEMB, and Visiting Scientist at the CDC, USA.
- Laboratory Establishment: At Hazara University, he established cutting-edge laboratories equipped with modern technologies. At the Centre for Excellence in Molecular Biology (CEMB) and the Centre for Applied Molecular Biology (CAMB), he founded a PCR-based Diagnostic Lab that provides the public with reliable, rapid, and economical diagnostic services for infectious and genetic diseases.
- **Revenue Generation:** Under his leadership, CAMB generated over PKR 500 million in revenue through its diagnostic services.
- **Indigenous Technology Development:** Dr. Idrees developed molecular diagnostic kits for diseases such as hepatitis B and C, M. tuberculosis, dengue virus (including serotyping), and HCV genotyping at a fraction of the cost of imported alternatives. These advancements promote accessibility to molecular diagnostic tools and contribute to self-reliance in the field.
- **ii. Proficiency in Using Technology:** Dr. Idrees has a high level of competence and familiarity with advanced technological systems. Key contributions include:
 - **ISO-Certified Molecular Diagnostic Laboratory (MDL):** As Technical Manager, he played a pivotal role in maintaining the ISO certification of CAMB's MDL.
 - **Guidelines Development:** He actively contributed to the development of guidelines for managing deadly viruses, such as MERS-CoV, hepatitis B and C, and dengue, as a member of multiple expert and technical committees. Member of the Expert Committee for MERS-CoV guidelines (2014), constituted by the Advisor to the Chief Minister on Health. Member of the Punjab Cabinet Committee on Dengue Control, where he helped create SOPs for dengue eradication and management.
 - **Policy Contributions:** As a Co-opted Member of the Technical Expert Committee on Medicine, he contributed to the Steering Committee on the Prevention and Control of Hepatitis Program.
 - Academic Leadership: Since 2011, he has been a member of the Guidance & Examination Committee at the Atta-ur-Rehman School of Applied Biosciences, NUST Islamabad, where he aids in the integration of advanced molecular technologies into academic and research curricula.

Dr. Idrees's accomplishments reflect his exceptional technical expertise, innovative mindset, and dedication to applying technology for societal benefit.

b. Managerial Skills

i. Strategic Planning and Problem Anticipation: Dr. Idrees possesses exceptional managerial skills, with a proven ability to foresee potential issues and formulate strategic plans in advance. His extensive experience includes serving as the head of key statutory bodies of universities, such as the Academic Council, ASRB, F&P Committee, Selection Board, Syndicate, Senate, and Executive Council of the Board of Management, as Vice-Chancellor, Director, and as a member of prestigious national and international organizations. In 2015, Dr. Idrees led the development and launch of an innovative teaching and research program in Applied Molecular Biology & Forensic Sciences at CAMB, marking its first introduction. Similarly, in 2018, he successfully initiated ten market-oriented academic disciplines at Hazara University through his personal efforts. Under his leadership, the university undertook much-needed construction projects funded by a Federal Government grant of Rs. 662 million, resulting in the completion of eight modern academic blocks equipped with state-of-the-art facilities.

Dr. Idrees's outstanding contributions have earned him several national and international accolades, including:

- The prestigious **PAS Gold Medal 2017 in Emerging Technologies** by the Pakistan Academy of Sciences.
- TWAS Best Young Scientist of the Year-2009 award.
- Multiple **Research Productivity Awards** (2011–2017) for his exemplary work in Molecular Biology.
- Recognition from WHO for his critical role in dengue fever case detection in 2011 and expert contributions to lab services in 2012.
- **ii. Quality Assurance and Accreditation Expertise:** Dr. Idrees has extensive experience in addressing quality assurance and accreditation processes. As a member of the National Quality Assurance Committee (NQAC) of the Higher Education Commission, he plays a key role in:
 - Assisting universities in adopting and implementing quality criteria.
 - Evaluating the effectiveness of QA programs and suggesting improvements.
 - Updating QA indicators and proposing SOPs based on global advancements and stakeholder feedback.

He has also undergone training in Quality Management Consultancy, including internal auditing and corrective action protocols. Notably, as Technical Manager of the Molecular Diagnostic Laboratory at CAMB, he successfully oversaw its ISO certification and accreditation.

iii. Resource Generation and Allocation: Dr. Idrees demonstrates exceptional proficiency in resource generation and efficient allocation. At CAMB, his initiatives generated revenue exceeding Rs. 500 million. Similarly, he secured Rs. 662 million from the Federal Government for Hazara University's infrastructure development, enabling the completion of modern academic blocks.

Furthermore, he prepared a comprehensive PC-1 proposal for enhancing Hazara University's academic and infrastructure facilities, which was approved at a cost of Rs. 1,702 million by the Planning Commission.

- **iv. Working Under Pressure and Meeting Tight Deadlines:** As the head of university statutory bodies, Dr. Idrees has consistently delivered results under tight deadlines, adhering strictly to merit and institutional regulations. His leadership style emphasizes teamwork, fostering an environment of collaboration to achieve targets effectively and efficiently.
- v. Financial Management and Planning: Dr. Idrees has a deep understanding of financial management, revenue generation, planning, and fiscal control. As Chair of Hazara University's Finance & Planning Committee, he implemented measures that transformed the university into one of the most financially secure institutions in the province.

When he joined in 2016, Hazara University faced a budget deficit of Rs. 33 million. Dr. Idrees reversed this trend through strategic initiatives such as:

- 1. Reducing non-plan expenditures.
- 2. Revising service charges to enhance revenue.
- 3. Securing additional budgets from Federal and Provincial Governments.
- 4. Signing over 20 MoUs, including partnerships with the Army School of Physical Training and Army Junior Leaders Academy, generating an annual revenue of Rs. 12 million.

These efforts resulted in achieving a surplus of Rs. 18 million in the 2017–18 fiscal year, with an additional surplus of Rs. 15 million projected for 2018–19.

c. Alignment with Corporate Objectives and National/State-Level Priorities

ii. **Identifying Community Needs in Key Sectors**: Dr. Idrees demonstrates a profound understanding of community needs, particularly in underserved rural areas where access to effective higher education remains limited. He recognizes the urgent need to: Enhance the **General Enrolment Rate (GER)** in higher education by reducing dropout rates and to align education systems to produce graduates equipped with skills demanded by the job market.

To address these challenges, Dr. Idrees advocates for strategic curricular reforms emphasizing **"Education Modules with Enhanced Employability"**—customized modules that cater to students' aptitudes while aligning with societal and technological needs. He envisions fostering a culture of **"Customized Education,"** leveraging global resources to meet the requirements of individuals, industries, and markets. As Vice-Chancellor of Hazara University, he spearheaded the approval and implementation of **20 market-oriented academic disciplines**. This initiative was complemented by completing construction projects worth Rs. 662 million, funded by the Federal Government of Pakistan, resulting in eight state-of-the-art academic blocks equipped with modern instructional and research facilities. Dr. Idrees also excels as a researcher, developing **indigenous molecular diagnostic technologies** for detecting diseases such as hepatitis B and C, tuberculosis, dengue virus (including serotyping), and HCV genotyping. These cost-effective kits—priced at 1/10th the cost of comparable international products—help address healthcare challenges while fostering innovation in molecular diagnostics.

iii. **Responding to National Challenges through Higher Education:** Dr. Idrees understands the critical role of higher education in addressing national developmental challenges, particularly the shortage of skilled human resources. Key initiatives undertaken include:

- a. **Improving equity in higher education**: Introducing 10 market-driven disciplines, establishing well-equipped labs and facilities, and recruiting highly qualified faculty and staff.
- b. **Curriculum innovation**: Regularly updating and introducing new courses aligned with national and global needs through statutory body approvals.
- c. **Stakeholder engagement**: Conducting frequent visits and holding discussions with stakeholders to gain insights into national challenges and design effective strategies.

As a result of these efforts, Hazara University has become a leading institution in higher education, ranked **No. 3 in the province** and **No. 17 nationwide**, significantly contributing to addressing national challenges and developmental goals.

- iii. **Curriculum Development, Widening Participation, and Social Inclusion:** Dr. Idrees has consistently prioritized inclusive and competency-based curriculum development to broaden access and participation in higher education. Key initiatives include:
 - a. **Competency-based curricula**: Implementing this approach across the university and affiliated institutions through regular statutory body meetings.
 - b. **Subject expert inclusion**: Engaging renowned academics as subject matter experts to enhance curriculum quality.
 - c. **Establishing new disciplines**: Leading the establishment of market-driven programs such as Pharmacy, Public Health, Medical Lab Technology, Public Administration, Disaster Management, Geology, Environmental Sciences, Biotechnology, Molecular Biology, Forestry, Veterinary (DVM), Human Nutrition, Eastern Medicine, Criminology & Forensic Science, International Relations, and History & Civilization.

As Chairman of the Academic Council, Dr. Idrees played a pivotal role in approving these programs to address national priorities and societal needs, ensuring Hazara University remains responsive to emerging challenges and developmental demands.

d. Leadership skills

i. Exceptional Ability to Motivate Diverse Stakeholders

Dr. Idrees has demonstrated remarkable ability to motivate a wide range of stakeholders critical to the successful operation of a university. These stakeholders include students, parents, faculty, administrative staff, support staff, the Higher Education Commission (HEC), the Higher Education Department (HED), and provincial and federal governments. Key initiatives under his leadership include:

- Implementing student-centric activities and maintaining regular communication with parents.
- Encouraging faculty to conduct quality research and attend workshops, seminars, and conferences by providing incentives.
- Engaging with administrative staff through frequent interactions and offering governmentbacked incentives such as additional increments.
- Securing funding from the corporate sector and government for university projects.
- Actively collaborating with stakeholders and social organizations to enhance university performance.

During his tenure as Vice-Chancellor, Dr. Idrees ensured the university's operations adhered strictly to the **Khyber Pakhtunkhwa Universities Act 2012** (Amended 2016). The Hazara University **Statutes 2016**, developed under his guidance by a team of experts, were approved by the university's Senate and subsequently notified by the Higher Education Department of Khyber Pakhtunkhwa. Hazara University became one of the first universities in the province to approve service statutes within the stipulated timeframe.

Dr. Idrees has also championed transparency by automating manual processes. Key activities related to admissions and recruitment are now shared with stakeholders via the university's website. Hazara University maintains strong working relationships with the HED, HEC, and district and divisional management in the region.

ii. Commitment to Furthering the Mission and Goals of the Organization

Dr. Idrees's passion for academics and administration has driven his 19-year career in teaching, research, and leadership roles across institutions like the Ministry of Science and Technology (MoST), the University of Punjab, and Hazara University. His vision is rooted in addressing the pressing educational needs of the nation. Highlights of his mission include:

- Ensuring access to **quality education** for all, fostering critical thinking and creative talent.
- Promoting higher education as a means to empower individuals and drive national prosperity.
- Striving to make quality education affordable and accessible to underserved communities.
- Elevating Hazara University became the 2nd-ranked in the province and 27th nationally.
- Achieving excellence in administrative efficiency, including effective fiscal management
- iii. Strategic Thinking, Innovation, and Broad Perspective: Dr. Idrees's career reflects a commitment to strategic innovation and a broad perspective on institutional growth. His journey began with a passion for innovation during his Ph.D. research in Molecular Bacteriology/Virology, culminating in significant academic achievements. Key milestones include:
 - Establishing new, market-oriented disciplines and departments at Hazara University.
 - Procuring advanced equipment for teaching and research, and overseeing the construction of eight new academic blocks.
 - Implementing university-wide administrative reforms and installing a **biometric-based attendance system** to enhance efficiency.

His innovative research efforts have led to the development of **Molecular Diagnostic Kits** for diseases such as hepatitis B and C, tuberculosis, and dengue fever, offering cost-effective solutions at 1/10th the price of comparable kits.

iv. Leading by Example with Openness to New Ideas and a Consultative Approach

Dr. Idrees leads by example, combining his expertise as a highly cited researcher with a consultative approach to leadership. Highlights include:

• Promoting institutional research, including feedback mechanisms from students, trainers, parents, and stakeholders to drive continuous improvement.

- Leveraging technology-driven research to support institutional activities and educational innovation.
- Developing infrastructure to support higher education, benefiting students and faculty alike.
- Participating in the development of national health guidelines for diseases such as hepatitis B, hepatitis C, MERS CoV, and dengue.

As a member of expert committees and cabinet task forces, Dr. Idrees has actively contributed to the preparation of **guidelines and SOPs** for disease management, reflecting his commitment to serving the broader community.

e. Interpersonal communication and collaborative skills

- i. Success in Developing and Executing National and International Collaborative Arrangements With a visionary and futuristic mission, Dr. Idrees has initiated a comprehensive project titled "Goals for 2030". This initiative underscores Hazara University's commitment to fostering knowledge exchange for community service and the holistic development of students, faculty, staff, and society at large. Under his leadership, Hazara University is cultivating a collaborative environment that embraces the free exchange of ideas, promoting research, creativity, innovation, and entrepreneurship. Key components of this initiative include:
 - Strategic Plan (Vision 2030): Approved and under implementation, this plan positions the university to achieve 90% Ph.D. faculty by 2030 and 100% by 2035. The plan also focuses on attracting internationally qualified faculty and fostering interaction between global researchers and Hazara University scholars via web conferencing.
 - International Research Exchange Center: By 2030, Hazara University will establish a fully operational center for international research exchanges, hosting monthly conferences and promoting robust global collaboration.
 - **Modernized Teaching Methodologies:** Transitioning from conventional teaching methods to advanced electronic methods with visual aids, alongside the development of state-of-the-art infrastructure, including academic departments, laboratories, IT labs, e-libraries, boarding facilities, fitness centers, and hospitals.

The university has signed 07 MoUs with international organizations and 14 MoUs with national **organizations** for collaboration in academics, research, and student exchange programs through the fully functional Office of Research Innovation and Commercialization (ORIC). Under Vision 2030, Hazara University plans to expand this network by signing 200 MoUs with national organizations and 100 MoUs with international universities, industries, and professional bodies to advance applied research and collaboration.

ii. Ability to Interact Effectively and Persuasively at All Levels

Dr. Idrees possesses exceptional skills in engaging persuasively and knowledgeably with stakeholders at senior levels, large forums, and on an individual basis. His expertise enables him to communicate complex ideas effectively, whether addressing professional gatherings or one-on-one interactions. Evidence of his capabilities is well-documented in his professional accomplishments and leadership roles.

iii. Active Membership in Professional Bodies and Associations

Dr. Idrees is an active member of several professional bodies and associations relevant to his field. His contributions to these organizations demonstrate his commitment to advancing his discipline and maintaining a strong professional network.

f. KEY ACHIEVEMENTS OF DR. IDREES, AS VICE CHANCELLOR OF HAZARA UNIVERSITY DURING THE PERIOD (28-07-2016-10-04-2019):

After assuming the position of permanent Vice Chancellor on July 28, 2016, Dr. Idrees focused on the development, modernization, and advancement of Hazara University. Below are the significant milestones achieved during his tenure:

A. Administration

- 1. Implemented the Khyber Pakhtunkhwa Universities Act 2012 (Amended 2016) with full compliance.
- 2. Successfully framed and secured approval for the **Hazara University Statutes 2016** within the stipulated time.
- 3. Ensured the completion of all university authorities and statutory bodies.
- 4. Enforced strict adherence to the academic calendar, including admissions, teaching, examinations, and convocations.
- 5. Automated key processes such as recruitment and admissions.
- 6. Gained Senate approval for the Strategic Plan (Vision 2030) to guide long-term development.
- 7. Enhanced operational efficiency through regular promotion/selection boards, improved transportation, and the launch of ten modern academic disciplines. Campus beautification projects were also completed.
- 8. Conducted **61 meetings** of statutory bodies (Senate, Syndicate, Academic Council, etc.) from 2016–2019, setting a precedent in university history.
- 9. Held seven selection board meetings to ensure merit-based appointments and promotions.
- 10. Installed a **Central Biometric Attendance System**, resulting in significant improvements in faculty and staff attendance.

B. Academic

- 1. Introduced ten new, market-oriented academic disciplines.
- 2. Accredited several degree programs, including Agriculture, IT, and Architecture Engineering.
- 3. Increased student enrollment by 45%, from 7,000 to 13,000.
- 4. Disbursed scholarships worth over **Rs. 64 million** to more than 1,800 students.
- 5. Maintained the student-to-teacher ratio per HEC standards.
- 6. Expanded the library with **72,000 new books**, complementing the existing digital library.
- 7. Established a new **Batagram Campus** under an HEC project, operational since Fall Semester 2018.
- 8. Improved university rankings: Provincial level: 12th to 3rd. National level: 64th to 17th (according to 2019 uniRank Tuition Range Matrix[™]).

C. Research

- 1. Registered a **patent** and developed a more productive variety of brassica seeds.
- 2. Published over 1,000 research papers in leading journals.
- 3. Produced over 100 Ph.D. scholars and more than 1,500 M.Phil. graduates.
- 4. Hosted numerous national and international conferences, seminars, and workshops.
- 5. Developed a new rice variety achieving a record yield of 15 tons per hectare, was granted a U.S. patent.
- 6. Made ORIC (Office of Research Innovation and Commercialization) fully functional, signing **06 international** and **14 national MoUs** for academic and research collaborations.
- 7. Generated income of **Rs. 120 million/year** through MoUs with Army schools/institutions.
- 8. Recognized with prestigious awards, including the **PAS Gold Medal in Emerging Technologies** and the **Gallino-Denardo Award** in Laser Technology.
- 9. Strengthened the **Quality Enhancement Cell (QEC)**, attaining membership in the International Network for Quality Assurance Agencies in Higher Education (INQAAHE).

D. Financial Management

- 1. Achieved financial stability, with two surplus budgets and one balanced budget during his tenure.
- 2. Judiciously managed pension and staff welfare funds with high returns.
- 3. Secured approval of **Rs. 512 million** for the Hazara University Faculty Development Program under HEC's umbrella PC-1.
- 4. Initiated efforts to automate the examination system, ensuring transparency and efficiency.

E. Security & Law and Order

- 1. Maintained exemplary law and order on campus, ensuring smooth academic operations without unrest among students, staff, or faculty.
- 2. Installed a comprehensive **CCTV surveillance system** with over 90 cameras, optical fiber connectivity, and advanced emergency response features.
- 3. Planted over **20,000 trees and flowers**, significantly enhancing the university's landscape in line with the "Clean and Green Pakistan" initiative.

F. Infrastructure Development

- 1. Completed the construction of **eight academic blocks** (funded by HEC) at a cost of **Rs. 662 million**, providing modern facilities for instruction and research.
- 2. Built **two faculty hostels** (male and female) with financial sponsorship of **Rs. 65.924 million** from the HED/Provincial Government.
- 3. Implemented the **Smart University Project** within six months, offering campus-wide high-speed Wi-Fi with a bandwidth of **424 MB**. Plans for SMART Classrooms and SAFE Campus are underway.
- 4. Secured a mega-project worth **Rs. 1,702 million** for uplifting academic and infrastructure facilities, approved by the Planning Commission of Pakistan.

G. Funding Highlights

- 1. Maintained a sound financial position with surplus budgets.
- 2. Effectively managed and invested financial assets, including pension and staff welfare funds.

g. KEY ACHIEVEMENTS OF DR. IDREES, AS VICE-CHANCELLOR, UNIVERSITY OF PESHAWAR (12-12-2020 TO 11-12-2023):

1. Financial Stability and Crisis Management

- Successfully brought the University out of a severe financial crisis through the enforcement of strict financial discipline.
- Achieved surplus budgets for two consecutive financial years (2020-21 and 2021-22), creating a financial cushion of approximately **Rs. 860 million**.
- Efforts were recognized and appreciated by both federal and provincial governments, resulting in grants totaling **Rs. 1.3 billion**.

2. Academic and Research Advancement

- Enhanced research infrastructure by upgrading labs with **hi-tech analytical equipment** and rehabilitating/digitizing the Central Library through HEC funding.
- Regularly convened statutory body meetings (Senate, Syndicate, ASRB, Academic Council, Finance Committee, Affiliation Committee) to ensure the smooth functioning of teaching and research activities.
- Introduced four new academic disciplines, enriching the university's academic offerings.

3. Entrepreneurship and Innovation

- Supervised the completion of the **Business Incubation Centre** at a cost of **Rs. 120 million**, funded by the federal government, to promote entrepreneurship among students.
- Submitted a proposal for the establishment of a **Knowledge Park** under the Pakistan Software Export Board (PSEB).

4. Technological Integration and Digital Transformation

- Collaborated with the **National IT Board** to implement the **E-Office System**, digitizing processes, reducing HR and paper costs, and enhancing operational efficiency.
- Revived the **Campus Management Solution** (CMS) in partnership with IBA Karachi, enabling digitization of the student life cycle for greater transparency and equity.
- Established a **state-of-the-art Data Centre** at a cost of **Rs. 65 million**, offering services to external institutions as well.

5. Infrastructure Development

- Strengthened the **Centralized Resource Laboratory** with modern hi-tech equipment, funded with **Rs. 450 million**.
- Established a **Department of Criminology** at a cost of **Rs. 180 million**, funded by the provincial government.
- Implemented the **Smart University Project**, providing high-speed internet connectivity throughout the campus.

6. Strategic Partnerships and Capacity Building

• Secured the University's inclusion in the **USD 19 million HESSA Project** (Higher Education System Strengthening Activity), focused on governance, student facilitation, and teaching & research capacity building.