

Ahmed Yaqinuddin

College of Medicine, Alfaisal University • Riyadh, KSA, 11533
Phone: +966-535050381 • E-Mail: ayaqinuddin@alfaisal.edu



Objective

My main objective is to develop myself as an internationally acclaimed medical educator/scientist. Towards this end, I have tried to achieve excellence in educational research & practice, basic science research, teaching, and administration. The following aspects of my curriculum vitae will demonstrate my progress towards the stated objective.

Experience

Vice Dean Graduate Studies and Research

Jan 2019-todate

- At this position I am responsible for academic management of all the 25 graduate programs of College of Medicine. I am also the program director of the graduate program in biomedical sciences and clinical anatomy.

Program Director PhD Biomedical Science Program

May 2024-todate

Chair of Graduate Programs

May 2018-to-date

Chair, Department of Medical Education

NOV 2014-to-2016

- At this position, I am responsible for supervising the activities of Curriculum and Assessment Committees of the College. In addition, one of the major thrusts of this department is to initiate and run Faculty development programs including a master's program in Health Professional Education.

Professor of Anatomy and Cell Biology

2023-to-date

Associate Professor of Anatomy and Cell Biology

2015-to-Feb 2023

Assistant Professor of Anatomy and Cell biology

OCT-2009-to-NOV-2015

- At this position, I have taught all aspects of Anatomy including Gross Anatomy, Microanatomy, Neuroanatomy, and developmental Anatomy. I was the key faculty to teach and set up the anatomy content of several multidisciplinary organ system-based courses at Alfaisal University.
- I have also taught graduate level courses in Master of Biomedical Science Program and Master's of Genetic Counseling.
- I have served as the **Chair of the Curriculum Committee** from 2010-2013 and was involved in developing state of art modern medical curriculum at Alfaisal University. During this period, I was also responsible for managing all the curricular affairs of the school of medicine from basic science to clinical years. I was heavily involved in faculty development programs with Partners Harvard International (PHMI). I introduced and developed innovative teaching methodologies at the college of Medicine, Alfaisal University including "Problem Based Learning (PBL)" and "Team Based Learning (TBL)".
- I have served as the **Chair of the Students Admission Committee** from 2011-to-date. I have worked closely with the Students Affairs and Admission Office of the University to set up criteria for admission of medical student. The role of the admission committee is to perform the essential function of evaluating candidates for admission to the Alfaisal, School of Medicine. The Admissions Committee was heavily involved in interviewing prospective candidates to assure that our medical school selects those students with academic qualities that will allow for success in their medical studies, as well as attributes and

experiences that will result in a skilled and empathic physician with a high degree of professionalism and strong communication skills.

- I have served as the **Chair of the Curriculum Review Committee** from 2014-to-date. This committee has been recently constituted by the Dean in-order to conduct continuous internal audit of the medical school curriculum.
- I have served as the **Member of College Research Committee** from 2010-to-date. The main aim of the research committee was to promote research activities at the college. Towards this end, I participated in setting up a small grant program for the faculty. I was involved in reviewing grant applications and helping my juniors in writing grant applications.
- I have served as the **Member of International Accreditation Committee** from 2011-to-date. The main task of this committee was to advise the Dean on matters related to the international accreditation of medical schools. I have closely with members of the committee to enlist the medical school in the *International Medical Education Directory* (IMED) and World Directory of Medical schools (AVICENNA Directory for Medicine). I was one of the founding members who were involved in setting up the National Board of Medical Examiners (NBME) shelf examination at the College of Medicine.
- I have served as a **Member of the National Accreditation Committee**. The main aim of this committee was to work with the Office of Quality Assurance and Accreditation and to ensure that accreditation requirements of The National Organization for Assessment and Accreditation (NCAAA) are adequately met.

Adjunct Scientist King Faisal Specialist Hospital and Research Center 2010-to-date

- I have worked with the Department of Molecular Oncology at the Research Center. In the last 4 years, we were able to secure the three King Abdul Aziz City of Science and Technology (KACST) grants under the National, Science and Technology Plan. A total of SAR 3.7 million has been awarded to our laboratory. Among these grants, I am the Principal Investigator on two such grants and Co-investigator on another. We were able to publish several publications in peer reviewed indexed journals.

Assistant Professor (Anatomy) in the Department of Biological and Biomedical Sciences, Aga Khan University, Karachi. Jan 2008-Sep 2009

- Teach all aspects of anatomy in different organ system-based modules.
- Manage all the activities of Anatomy discipline in multidisciplinary department as a **Point Person**.
- Participate in the modification and delivery of the MBBS curriculum and its assessment methods.
- Represent the discipline of Anatomy in different module committees.
- Facilitate PBL student's group sessions.
- Organize and lead question review sessions.
- Contribute to the making of integrated examination questions with all participating members.
- **Coordinator of AKU-MERCK Biomedical Training Course** (2008)
- **Co-Chair of Head and Neck and Special Senses Module Committee** (2008)
- **Co-Chair Year I Curriculum Committee** (2009)
- **Coordinator of Neuroscience Module** (2007)
- **Member of Departmental Search Committee** (2008)
- **Member of Year-II Curriculum Committee** (2008)
- **Alternate member of Academic Council of the Aga Khan University** (2009)

Instructor Anatomy in the Department of Biological and Biomedical Sciences, Aga Khan University, Karachi. 2006-to-2009

Doctoral fellow, in the Department of Biological and Biomedical Sciences, Aga Khan University, Karachi 2002-to-2006

Instructor (Anatomy) at Basic Medical Department, Shifa College of Medicine, Islamabad 2000-to-2002

Teach all aspects of regional anatomy in a discipline-based curriculum.

- Participate in modification, delivery and assessment of integrated MBBS curriculum.
- Prosect cadavers and teach regional anatomy on cadavers.
- Train and assist junior colleagues to perform their academic activities.

Demonstrator of Anatomy, at Department of Anatomy, Islamabad Medical and Dental College, Islamabad 1998-to-2000

- Teach all aspects of regional anatomy in a discipline-based curriculum.
- Participate in modification, delivery and assessment of integrated MBBS curriculum.
- Prosect cadavers and teach regional anatomy on cadavers.
- Train and assist junior colleagues to perform their academic activities.

Senior House Officer in Surgery, Pakistan Institute of Medical Sciences, Islamabad. Feb 1998-to- July 1998

- Perform preoperative and postoperative management of surgical patients.
- Perform minor surgical procedures including appendectomies.
- Assist the consultant surgeon in major surgical procedures.

House Officer in Surgery, Pakistan institute of Medical Sciences, Islamabad.

Aug 1997-to-Jan 1998

- Assist in preoperative and postoperative management of surgical patients.
- Assist seniors in major and minor surgical procedures.

House Officer in Medicine, Pakistan institute of Medical Sciences, Islamabad.

Feb 1997-to-Jul 1997

- Assist in the management of patients suffering from medical ailments.

Education

Bachelor of Medicine and Bachelor of Surgery (MBBS)

1991-1996

- I completed my basic medical degree from University of Karachi (Baqai Medical College) with distinction in **Surgery** and **Community Medicine**

Doctor of Philosophy in Health Sciences (PhD Anatomy and Cell biology) 2002-2008

- I completed my PhD in Anatomy from Aga Khan University, Karachi, Pakistan.

Master's in medical education

2023

- I am in process of completing my master's in medical education from University of Ambrosiana, Italy (International medical education program). I have completed the course requirements of the program.

Fellow of Royal College of Physicians, Edinburgh

2017

USMLE Step-2 Score: 230

2018

Plab-1

June 2018

Plab-2

March 2019

I currently hold full registration from GMC and license to practice.

Research Interest

I have two distinct research interests 1) epigenetics of cancers 2) medical education. I have been studying epigenetic changes in cancers since 2002. I am particularly interested in using these specific epigenetic modifications in cancers as biomarkers to diagnose and prognosticate different cancers. I have studied epigenetic modifications including changes in DNA methylation patterns and microRNA profiles in different cancers.

In medical education research, I am particularly interested in curriculum design, teaching methodologies and assessment tools.

Research Publications

PhD thesis

"Influence of DNA methylation in determining cellular phenotype and its usefulness as a diagnostic biomarker for detecting prostate cancer."

Publications in Indexed Journals

- 2008

1. **Yaqinuddin A**, Abbas F, Naqvi Z, Bashir MU, Qazi R, Qureshi SA, "Silencing of MBD1 and MeCP2 in prostate cancer derived PC3 cells produces differential gene expression profiles and cellular phenotypes" **Bioscience Reports** 28 (6):319-326 2008.
2. **Yaqinuddin A**, Abbas F, Qazi R, Qureshi SA "Down regulation of DNMT3b in PC3 cells, effects locus specific DNA methylation and represses cellular growth and migration" **Cancer Cell International** 8:13 2008

- 2009

3. **Yaqinuddin A**, Abbas F, farooq S, Qazi R, Qureshi SA "DNMT1 silencing effects locus specific DNA methylation and increases Invasiveness of Prostate Cancer Derived PC3 cells. **Journal of Urology** 182: 760-765 2009 **2010**
4. Qureshi SA, Bashir MU **Yaqinuddin A**," Utility of DNA Methylation markers in diagnosis of Cancer" **International Journal of Surgery** 8: 194-198 2010

- **2012**

5. **Yaqinuddin A**, Kvietys P, Ganguly PK, Ikram F, Yaeesh S, Kattan W "PBL correlates with content acquisition assessment: a study at hybrid PBL program at Alfaisal University **Med Teach**. 2012; 34(1):83
6. **Yaqinuddin A** "An innovative approach to inculcate analytical and non-analytical clinical reasoning among medical students" **Med Teach** 2012; 34(6): 511-2
7. **Yaqinuddin A**, Zafar M, Ihram F, Ganguly PK "What is an Objective Structured Practical Examination (OSPE) in Anatomy?" **Anat Sci Educ** 2012 Epub doi: 10.1002/ase.1305
8. Anindo M, **Yaqinuddin A** Insights into the potential use of microRNAs as biomarker in cancer **International Journal of Surgery** 2012; 10 (9):443-9

- **2013**

9. Mohammed N, **Yaqinuddin A**, Fatima Kakal, Somani M," Frequent hypomethylation of PTGS2 in human term placentas" **Italian Journal of Anatomy and Embryology** Vol. 118, n 2: 211-216 2013.
10. **Yaqinuddin A**, Qureshi SA, Pervez S, Bashir MU, Nazir R, Abbas F "Frequent DNA hypermethylation at RASSF1A and APC gene loci in prostate cancer patients of Pakistani origin" **ISRN Urol**. 2013;2013:627249. doi: 10.1155/2013/627249
11. **Yaqinuddin** Problem based learning as an instructional method" **Journal of College of Physician and Surgeon, Pakistan** Jan;23(1): 83-5.doi: 01.2013/JCPSP.

- **2014**

12. Awad A, AlAmodi AA, Shareef MA, Alsheikh AJ, Mahmoud AI, Daghistany AO, Hijazi M, Abu-Zaid A, Alsadoon M, Shablout M, Rasool A, **Yaqinuddin A** The Summer Pre-Med Program (SPP) for Matriculating Medical Students: A Student-Led Initiative. **Adv Physiol Educ**. 2014 Mar; 38(1):56-61.
13. Al Amodi AA, Abu-Zaid A, Anwer LA, Khan TA, Shareef MA, Shamia AA, Nazmi S, AlShammari AM, Rahmatullah H, AlSheikh A J, Chamseddin RA, Dwek LM, **Yaqinuddin**

A Undergraduate Research: An Innovative Student-Centered Committee from the Kingdom of Saudi Arabia **Medical Teacher** (2014) Apr;36 Suppl 1:S36-42.

14. Hashmi A, **Yaqinuddin A**, Ahmed T Pharmacological effects of Ibuprofen on learning and memory, Muscarinic receptors genes expression and APP isoforms levels in Pre-frontal cortex of AICl3-induced mice model **Int J Neurosci.** (2014) Jun 19 Epub

15. Nader M, **Yaqinuddin A**, Kviety P Cardiac Angiogenesis: Role of Cardiomyocytes and Macrophages and Possible Therapeutic Approaches. **Current Angiogenesis** (2014) Epub

- 2015

16. Syed H, Ikram M, **Yaqinuddin A**, Ahmed T Cyclooxygenase I and II inhibitors distinctly enhance hippocampus and cortex dependent cognitive functions in mice (2015) **Molecular Medicine Reports** accepted.

- 2016

17. **Yaqinuddin A**, Ikram M, Zafar M, Eldin NS, Mazhar MA, Qazi S, Shaikh AA, Obeidat A, Alkattan K, Ganguly PK (2016) Integrated Clinical Anatomy Program (ICAP) at Alfaisal University: An innovative model of teaching clinically applied functional anatomy in a Hybrid **Advances in Physiology Education** accepted

18. Obad A, Peeran AA, Shareef AA, Alsheikh WJ, Kalagi D, AlAmodi AA, Khan TA, Shaikh AA, Ganguly P, **Yaqinuddin A** (2016) Assessment of First Year Medical Students' Perception of Teaching and Learning through Team-Based Learning (TBL) Sessions **Advances in Physiology Education** accepted

- 2017

19. Shaikh AA, Sajid MR, Husseni H **Yaqinuddin A** (2017) An audience response system (ARS) increases effectiveness and efficiency of team based learning in undergraduate medical education submitted to **Austin Journal of Anatomy**

20. Mustafa O, Daghistany A, Madkhali S, Nofal A, Bin Amer S, **Yaqinuddin A** (2017) Aberrant Methylation of RASSF1A, DKK3, PTPRO, and NDRG2 in Breast Cancer Tissues submitted to **Molecular and Clinical Oncology**

• 2019

21. Chinnappan R, Mohammed R, **Yaqinuddin A**, Abu-Salah K, Zourob M. Highly sensitive multiplex detection of microRNA by competitive DNA strand displacement fluorescence assay. **Talanta**. 2019 Aug 1; 200:487-493. doi: 10.1016/j.talanta.2019.03.061. Epub 2019 Mar 18
22. Ganguly P, **Yaqinuddin A**, Al-Kattan W, Kemahli S, AlKattan K. Medical education dilemma: How can we best accommodate basic sciences in a curriculum for 21st century medical students? **Can J Physiol Pharmacol**. 2019 Apr;97(4):293-296. doi: 10.1139/cjpp-2018-0428. Epub 2018 Nov 6
23. AlHarthi F, Sayed M Al, **Yaqinuddin A**, Karbani GA, Blobaid AS, Wahi MM, Agreement within couples on choosing preimplantation genetic diagnosis versus pre-natal diagnosis: perspective from Saudi population. **Journal of Biochemical and Clinical Genetics** 2019 2 (1), 18-27

• 2020

24. Kashir J, **Yaqinuddin A**. Loop mediated isothermal amplification (LAMP) assays as a rapid diagnostic for COVID-19. **Med Hypotheses**. 2020 Aug; 141:109786. doi: 10.1016/j.mehy.2020.109786. Epub 2020 Apr 25
25. **Yaqinuddin A**, Kashir J. Innate immunity in COVID-19 patients mediated by NKG2A receptors, and potential treatment using Monalizumab, Chloroquine, and antiviral agents. **Med Hypotheses**. 2020 Apr 22; 140:109777. doi: 10.1016/j.mehy.2020.109777. Online ahead of print
26. **Yaqinuddin A**, Kashir J Novel therapeutic targets for SARS-CoV-2-induced acute lung injury: Targeting a potential IL-1 β /neutrophil extracellular traps feedback loop. **Med Hypotheses**. 2020 Oct; 143:109906. doi: 10.1016/j.mehy.2020.109906. Epub 2020 May 30
27. **Yaqinuddin A**, Kvietys P, Kashir J. COVID-19: Role of neutrophil extracellular traps in acute lung injury. **Respir Investig**. 2020 Sep;58(5):419-420. doi: 10.1016/j.resinv.2020.06.001. Epub 2020 Jun 26.
28. **Yaqinuddin A** Cross-immunity between respiratory coronaviruses may limit COVID-19 fatalities. **Med Hypotheses**. 2020 Nov; 144:110049. doi: 10.1016/j.mehy.2020.110049. Epub 2020 Jun 30.
29. Arain SA, Kumar S, **Yaqinuddin A**, Meo SA Vertical integration of head, neck, and special senses module in undergraduate medical curriculum. **Adv Physiol Educ**. 2020 Sep 1;44(3):344-349. doi: 10.1152/advan.00173.2019
30. Sajid M, Shaikh AA, Ikram MF, Cahusac P, **Yaqinuddin A**, AlKattan W, Rohra D Comparative Analysis of Effectiveness Between Flipped Classroom and Lecture-Based

Classroom in Undergraduate Medical Education at Alfaisal University. **Cureus**. 2020 Nov 9;12(11):e11408. doi: 10.7759/cureus.11408.

31. Ikram MF, Farhat SM, Mahboob A, Baig S, **Yaqinuddin A**, Ahmed T Expression of DnMTs and MBDs in AIC13-Induced Neurotoxicity Mouse Model. **Biol Trace Elem Res**. 2020 Nov 11. doi: 10.1007/s12011-020-02474-4. Online ahead of print
32. Anwar K, Kashir J, Sajid MR, Rasool AJ, Shaikh AA, Ikram MF, **Yaqinuddin A**, Alshedoukhy A, Ganguly PK. Implementation of structured team-based review enhances knowledge consolidation and academic performance of undergraduate medical students studying neuroscience. **Adv Physiol Educ**. 2020 Jun 1;44(2):232-238. doi: 10.1152/advan.00162.2019
33. **Yaqinuddin A**, Kashir J, AlKattan W, AlKattan K Applying integrated video assisted learning approaches for medical clerkship - potential adaptations in the post-COVID-19 era. **J Med Educ Curric Dev**. 2020 Oct 26; 7:2382120520963043. doi: 10.1177/2382120520963043. eCollection
34. **Yaqinuddin A**, Kashir J, The central role of neutrophil extracellular traps in SARS-CoV-2-induced thrombogenesis and vasculitis. **African Journal of Respiratory Medicine** Vol 15 No 2 Oct 2020

- **2021**

35. **Yaqinuddin A**, Ambia AR, Elgazzar TA, Case fatalities due to COVID-19: Why there is a difference between the East and West? **AIMS Allergy and Immunology** 2021 5 (1), 56-63
36. Kashir J, AlKattan K, **Yaqinuddin A**, COVID-19: cross-immunity of viral epitopes may influence severity of infection and immune response **Signal Transduction and Targeted Therapy** 2021 6 (1), 1-2
37. **Yaqinuddin A**, Ambia AR, Kazkaz H, AlSaud M bint Mishari, Alkattan K, Advantageous non-specific effects of live-attenuated vaccines in COVID-19 treatment **African Journal of Respiratory Medicine** 2021 Vol 16 (1)
38. **Yaqinuddin A**, Ambia AR, Elgazzar TA, AlSaud M bint Mishari, Kashir J, Application of intravenous immunoglobulin (IVIG) to modulate inflammation in critical COVID-19-A theoretical perspective 2021 **Medical Hypotheses**, 110592
39. Alotaibi FM, Hassan AA, Serhan OO, Aldossary A, **Yaqinuddin A**, Aljulaifi KZ, Alghamdi AA, Alsomali YM, The Role of Computed Tomography in the Diagnosis of Acute and Chronic Pulmonary Embolism (CTPA) in Multi Centers at Riyadh Region. **International Journal of Medical Research & Health Sciences**, 2021, 10(3): 62-69
40. **Yaqinuddin A**, Neutrophil Extracellular traps and thrombogenesis in COVID-19 patients. **J Res Med Sci** 2021, 26;96

41. **Yaqinuddin A**, Siddiqui AA, Aberrant DNA methylation in bladder cancer among Saudi Arabia population. **Journal of Health and Allied Sciences NU** 2021 (In Press)
42. **Yaqinuddin A**, Ambia AR, Alaujan RA, Immunomodulatory Effects of Vitamin D and Vitamin C to Improve Immunity in COVID-19 Patients Type. **Journal of Health and Allied Sciences NU** 2021 (Early online)
43. **Yaqinuddin A**, Ikram MF, Ambia AR, Alaujan RA, Kashir J, 3-D Models as an Adjunct for Models in Studying Alzheimer's Disease. **Journal of Health and Allied Sciences NU** 2021 (Early online)
44. Kashir J, Ambia A, Shafqat A, Sajid M, AlKattan K, **Yaqinuddin A**, Scientific premise for the involvement of neutrophil extracellular traps (NETs) in vaccine-induced thrombotic thrombocytopenia (VITT.) **Journal of Leukocyte Biology** 2021;1–10
45. **Yaqinuddin A**, Siddiqui AS, Ambia AR, DNA methylation profile of multiple genes involved in bladder cancer among Saudi population–A pilot study. **Advancements in Life Sciences** 2021 8 (3), 293-299
46. **Yaqinuddin A**, Shafqat A, Kashir J, Alkattan K, Effect of SARS-CoV-2 Mutations on the Efficacy of Antibody Therapy and Response to Vaccines. **Vaccines** 2021 9 (8), 914
47. **Yaqinuddin A**, Differential DNA Methylation of RASSF1A, DKK3, PTPRO, and NRDG2 in Breast Cancer Tissues. **South Asian Journal of Cancer** 2021 (In press)
48. **Yaqinuddin A**, Almakadma AH, Kashir J, Kawasaki like disease in SARS-CoV-2 infected children–a key role for neutrophil and macrophage extracellular traps. **AIMS Molecular Science** 8 (3), 174-183
49. Farouk AF, Shafqat A, Shafqat S, Kashir J, Alkattan K, **Yaqinuddin A**, COVID-19 associated cardiac disease: Is there a role of neutrophil extracellular traps in pathogenesis? **AIMS Molecular Science** 8 (4), 275-290
50. Kvietys PR, Fakhoury H, Kadan S, **Yaqinuddin A**, Al-Mutairy E, Al-Kattan K COVID-19: Lung-Centric Immunothrombosis. **Frontiers in Cellular and Infection Microbiology** 11, 534
51. **Yaqinuddin A**, Ikram MF, Ambia AR, Alaujan R, Kashir J 3D Models as an Adjunct for Models in Studying Alzheimer's Disease. **Journal of Health and Allied Sciences NU** (Early online)

- **2022**

52. Alkattan W, **Yaqinuddin A**, Shafqat A, Kashir J, NET-Mediated Pathogenesis of COVID-19: The Role of NETs in Hepatic Manifestations. **Journal of Health and Allied Sciences NU** (Early online)
53. Shafqat A, Kashir J, Alsalameh S, Alkattan K and Yaqinuddin A, Fertilization, Oocyte Activation, Epigenetic remodelling and potential release of calcium: lessons from cancer models. **Frontiers in Cell and Developmental Biology, Molecular and Cellular Reproduction** **10:781953**. doi: **10.3389/fcell.2022.781953**
54. Shafqat A, Shafqat S , Alsalameh S, Kashir J, Alkattan K and **Yaqinuddin A**, Mechanistic Insights into the Immune Pathophysiology of COVID-19; an in-depth review. **Frontiers in Immunology, Viral Immunology** **13: 835104**. **10.3389/fimmu.2022.835104**
55. Shafqat A, Arabi TZ, Sabbah BN, Abdulkader HS, Shafqat S, Razak A, Kashir J, Alkattan K and **Yaqinuddin A**, Understanding COVID-19 Vaccines Today: Are T-cells Key Players? **Vaccines** **2022, 10, 904**. <https://doi.org/10.3390/vaccines10060904>
56. Shafqat A, Abdul Rab S, Ammar O, Alsalameh S, Kashir J, Alkattan K and **Yaqinuddin A**, Emerging Role of Neutrophil Extracellular Traps in the Complications of Diabetes Mellitus **Frontiers in Medicine-Hematology (in press)**
57. Alsalameh S, Alnajjar K, Makhzoum T, Al Eman N, Shakir I, Mir TA, Alkattan K, Chinnapan R, **Yaqinuddin A** Advances in Biosensing Technologies for Diagnosis of COVID-19 **Biosensors** **12 (10), 898**
58. Shafqat A, Omer MH, Ahmad O, Niaz M, Abdulkader HS, Shafqat S, Mushtaq AH, Shaikh A, Elshaer AN, Kashir J, Alkattan K, **Yaqinuddin A**, SARS-CoV-2 Epitopes Inform Future Vaccination Strategies. **Frontiers in Immunology, 7205**
59. Meo SA, Shafi KM, Al-Masri AA, Al-Khlaiwi T, Alshahrani AN, Ejaz S, **Yaqinuddin A** Public health in Global South: effect of environmental pollutant PM_{2.5} on the incidence and mortality of SARS-CoV-2 in Karachi, Lahore, and Islamabad **Eur Rev Med Pharmacol Sci** **26 (23), 9054-9060**.

- **2023**

60. Mahri SA, Okla M, Rashid M, Malik SS, Iqbal J, Al Ibrahim M, Dairi M, Mahmood A, n Muthurangan M, **Yaqinuddin A**, Mohammad S, Profiling of G-protein Coupled Receptors in Adipose Tissue and Differentiating Adipocytes Offers a Translational Resource for Obesity/Metabolic Research. **Cells** **12 (3), 377**.

61. Shafqat A, Noor Eddin A, Adi G, Al-Rimawi M, Abdul Rab S, Abu-Shaar M, Adi K , Alkattan K, **Yaqinuddin A**, Neutrophil Extracellular Traps in Central Nervous System Pathologies. **Frontiers in Medicine 10, 263**
62. Chinnappan R, Mir TA, Alsalameh S, Makhzoum T, Alzhrani A, Alhajjar K Adeeb S, Al Eman N, Ahmed Z, Shakir I, Al-Kattan K, **Yaqinuddin A**, Emerging Biosensing Methods to Monitor Lung Cancer Biomarkers in Biological Samples: A Comprehensive Review. **Cancers 15 (13), 3414**
63. Chinnappan R, Mir TA, Alsalameh S, Makhzoum T, Adeeb S, Al-Kattan K, **Yaqinuddin A** Aptasensors Are Conjectured as Promising ALT and AST Diagnostic Tools for the Early Diagnosis of Acute Liver Injury. **Life 13 (6), 1273**
64. Shafqat A, Albalkhi I, Magableh HM, Saleh T, Alkattan K, **Yaqinuddin A**, Tackling the glial scar in spinal cord regeneration: new discoveries and future directions. **Frontiers in Cellular Neuroscience 17, 1180825.**
65. Eddin AN, Hamsho K, Adi G, Al-Rimawi M, Alfuwais M, Rab SA, Alkattan K, **Yaqinuddin A**, Cerebrospinal fluid microRNAs as potential biomarkers in Alzheimer's disease **Frontiers in Aging Neuroscience 15.**
66. Shafqat A, Omer MH, Ahmed EN, Mushtaq A, Ijaz E, Ahmed Z, Alkattan K, **Yaqinuddin A**, Reprogramming the immunosuppressive tumor microenvironment: exploiting angiogenesis and thrombosis to enhance immunotherapy. **Frontiers in Immunology 14, 1200941**
67. Arabi TZ, Fawzy NA, Rab SA, Razzak GA, Sabbah BN, Alkattan K, Tleyjeh I, **Yaqinuddin A**, NETs, Infection and Antimicrobials: A complex interplay. **Eur Rev med Pharmacol sci 27 (20)**
68. Chinnappan R, Mir TA, Alsalameh S, Makhzoum T, Alzhrani A, Al-Kattan K, **Yaqinuddin A**, Low-Cost Point-of-Care Monitoring of ALT and AST Is Promising for Faster Decision Making and Diagnosis of Acute Liver Injury. **Diagnostics 13 (18), 2967**
69. Shafqat A, Omer MH, Albalkhi I, Razzak GA, Abdulkader H, Rab SA, Sabbah BN, Alkattan K, **Yaqinuddin A**. Neutrophil extracellular traps and long COVID. **Frontiers in Immunology 14.**
70. Shafqat A, Khan S, Omer MH, Niaz M, Albalkhi I, AlKattan K, **Yaqinuddin A**, Tchkonja T, Kirkland JL, Hashmi SK. Cellular senescence in brain aging and cognitive decline. **Frontiers in Immunology 15.**
71. Shacfe G, Turko R, Syed HH, Masoud I, Tahmaz Y, Samhan L M, Alkattan K, Shafqat A, **Yaqinuddin A**. A DNA Methylation Perspective on Infertility. **Genes. 14 (12), 2132.**

72. Shafqat A, Khan JA, Alkachem AY, Sabur H, Alkattan K, Yaqinuddin A, Sing GK. How neutrophils shape the immune response: reassessing their multifaceted role in health and disease **International Journal of Molecular Sciences** 24 (24), 17583.

• **2024**

73. Adeeb S , Arabi TZ, Shah H, Alsalameh S, Abu-Shaar M, El-Sibai AM, Alkattan K, Yaqinuddin A. Unveiling the Web: Exploring the Multifaceted Role of Neutrophil Extracellular Traps in Ocular Health and Disease. **Journal of Clinical Medicine** 13 (2), 512.

74. Jazieh C, Arabi TZ, Asim Z, Sabbah BN, Alsaud AW, Alkattan K, Yaqinuddin A. Unraveling the epigenetic fabric of type 2 diabetes mellitus: pathogenic mechanisms and therapeutic implications. **Frontiers in Endocrinology** 15, 1295967

75. Noor Eddin A, Alfuwais M, Noor Eddin R, Alkattan K, Yaqinuddin A Gut-Modulating Agents and Amyotrophic Lateral Sclerosis: Current Evidence and Future Perspectives. **Nutrients** 16 (5), 590.

76. Jabri A, Khan J, Taftafa B, Alsharif M, Mhannayeh A, Chinnappan R, Alzhrani A, Kazmi S, Mir MS, Alsaud AW, Yaqinuddin A, Assiri AM, AlKattan K, Vashist YK, Broering DC, Mir TA. Bioengineered Organoids Offer New Possibilities for Liver Cancer Studies: A Review of Key Milestones and Challenges. **Bioengineering** 11 (4), 346

77. Omer MH, Shafqat A, Ahmad O, Nadri J, AlKattan k, Yaqinuddin A. Urinary biomarkers for lupus nephritis: a systems biology approach. **Journal of Clinical Medicine** 13 (8), 2339.

78. Ramachandran L, Abul Rub F, Hajja A, Alodhaibi I, Arai M, Alfuwais M, Makhzoum T, Yaqinuddin A, Al-Kattan K, Assiri AM, Broering DC, Chinnappan R, Mir TA, Mani NK. Biosensing of Alpha-Fetoprotein: A Key Direction toward the Early Detection and Management of Hepatocellular Carcinoma. **Biosensors** 14 (5), 235.

79. El Hayek T, Alnaser-Almusa AO, Alsalameh S, Alhalabi MT, Sabbah AN, Alshehri EA, Mir TA, Mani NK, Al-Kattan K, Chinnappan R, Yaqinuddin A. Emerging role of exosomal microRNA in liver cancer in the era of precision medicine; potential and challenges. **Frontiers in Molecular Biosciences** 11, 1381789

80. Chinnappan R, Makhzoum T, Arai M, Hajja A, Abul Rub F, Alodhaibi I, Alfuwais M, Elahi MA, Alshehri EA, Ramachandran L, Mani NK, Abraham S, Mir MS, Al-Kattan K, Mir TA, Yaqinuddin A. Recent Advances in Biosensor Technology for Early-Stage Detection of Hepatocellular Carcinoma-Specific Biomarkers: An Overview. **Diagnostics**, 14, 1519.

81. Munshi FM, Desai PP, Azizi B, Alabdulkarim SO, Mujlli GA, Alaskary HA, McIntire CR, Alhegelan RS, Yaqinuddin A, Izquierdo JP. The imperative of the child life profession in

KSA in transforming the quality of pediatric healthcare. **Journal of Taibah University Medical Sciences**, **19 (4), 790-799**.

82. Wani SI, Mir TA, Nakamura M, Tsuchiya T, Alzhrani A, Iwanaga S, Arai K, Alshehri EA, Shamma T, Obeid DA, Chinnappan R, Assiri AM, **Yaqinuddin A**, Vashist YK, Broering DC. A review of current state-of-the-art materiobiology and technological approaches for liver tissue engineering. **Bioprinting**, e00355

Published Abstracts in Indexed Journals

1. **Yaqinuddin A**, Abbas F, Qureshi SA, "Distinct role of DNA methyltransferases and methyl-CpG binding proteins on apoptosis, invasion, proliferation and migration of Prostate cancer cell-an invitro study" **Urology** 2007;70 (Supplement 3A) 134
2. Mohammed N, **Yaqinuddin A**, Waheed M "RASSF1A, APC, RAR-Beta Tumor suppressor genes hypermethylation in normal term placentas: implications for pathophysiology of preeclampsia **J Perinat Med** 2007 Suppl II S 80
3. Naqvi ZA, Mushtaq S, **Yaqinuddin A**, Siddiqui AA, Ahmed N Proteomic response of epithelial cells to mechanical abrasion. **Molecular & Cellular Proteomics** (supplement). 01/2007; HA 1189:425.
4. Siddiqui A, **Yaqinuddin A**, Alshehri FA, DNA Methylation of Multiple Genes involved in Bladder Cancer among Saudi Population **The FASEB Journal** 2018 32, 787.4-787.4
5. AlHennawi H, Bux A, Khan T, Yousuf F, Rayes A, Kazmi S Anwer, LA **Yaqinuddin A**, MicroRNAs in Breast Cancer; Growing Understanding of their Role in Metastasis and Invasion. **The FASEB Journal** 2017 31, 721.8-721.8
6. Siddiqui A, **Yaqinuddin A**, Alshehri FA, DNA Methylation of Multiple Genes involved in Bladder Cancer among Saudi Population. **The FASEB Journal** 2018 32, 787.4-787.4

Posters, Presentations, Conference papers and Abstracts:

1. Tenawi H, Anwer L, Bux A, Khan T, Yousuf F, Rayes A, Kazmi S, Nurhussen A, Shareef MA, **Yaqinuddin A** MicroRNAs in Breast Cancer; Growing Understanding of their Role in Metastasis and Invasion. **EXPERIMENTAL BIOLOGY**, Chicago. (2017)
2. Almasry M, Kayali Z, Alasad R, Alhayaza G, Sharique M, **Yaqinuddin A** Perception and involvement of medical students in Extracurricular activities, **AMEE**, Barcelona. (2016)

3. Almasry M, Kayali Z, Alasad R, Alhayaza G, Sharique M, **Yaqinuddin A** Future Speciality Preferences and the factors that shape them: A Saudi Arabian Perspective. **AMEE**, Barcelona. (2016)
4. Sharique M, Alikishi A, Motaja S, Neamatullah S, Alghamdi F, **Yaqinuddin A** Undiagnosed ADHD in medical students: a call for solutions and interventions. **AMEE**, Barcelona. (2016)
5. Neimatullah S, Aldarye H, Sharique M, Alghamdi F, Montana S, **Yaqinuddin A** Secondary education achievement: A reliable method to predict early medical school performance. **AMEE**, Barcelona. (2016).
6. Javed K, Sheikh A, Anwar A, Zafar F, **Yaqinuddin A** Summer premedical program at Alfaisal University: Outcomes of Peer assisted learning. **AMEE**, Barcelona. (2016).
7. Siddiqui AS, Ikram M, **Yaqinuddin A** Clinical Scenario as Anatomy Lab Tool for Teaching Human Neuroanatomy – Students Perspective. **AMEE**, Barcelona. (2016).
8. Siddiqui AS, Ikram M, **Yaqinuddin A** Impact of a Semester-long Course on the Knowledge, Attitude, and Practice of Communication Skills on First Year Medical Students. **AMEE**, Barcelona. (2016).
9. Alazmah M, Dabbagh M, Shareef M, Alkahteb L, **Yaqinuddin A** TBL as a Continuous Assessment Tool in Neurosciences Block in a Hybrid PBL System. **APMEC**, Singapore. (2016)
10. Barhoush E, Intabli H, Eltabache C, Eldali A, Tulbah A, Al Twegieri T, Qattan A, **Yaqinuddin A**, Bin Amer S Determination of methylation status of RASSF1A, APC and ITH5 as a diagnostic and prognostic biomarker in tissue samples of breast cancer patients from Saudi population, Amsterdam, Netherland, (2016)
11. Arian SA, **Yaqinuddin A**, Kumar S Vertical Integration of Head, Neck and Special Senses with Otolaryngology and Ophthalmology in Second Year of Undergraduate Medical Curriculum – Perception and Performance. **AMEE**, Glasgow, (2015)
12. **Yaqinuddin A**, Kattan W, Kattan K, A Model for program evaluation in a student centered Undergraduate MBBS program at Alfaisal University, **Proceedings of higher education international conference**, Beirut, Lebanon, Pp 247-261 (2011)
13. **Yaqinuddin A**, Qureshi SA, Abbas F, Frequent hypermethylation of RASSF1A and APC in Prostate cancer of Pakistani origin. **Congress of the Société Internationale d’Urologie SIU**, Shanghai, China (2009)
14. Mohammed N, **Yaqinuddin A**, Kakal F, Qureshi R, Sheikh L “Introduction of uterine artery doppler screening program in the second trimester for prediction of preeclampsia in Pakistan” invited for oral talk **at the 8th International Congress of IDSSG**, (2008)

15. Mohammed N, Kakal F, **Yaqinuddin A**, Somani M, Sheikh L, Qureshi R “Hypermethylation of APC and RASSF1A tumour suppressor genes in normal placentas at term using Real-Time PCR: potential predictive marker of Preeclampsia?” abstract and poster presented at **The 16th World Congress of International Society for the Study of Hypertension in Pregnancy (ISSHP)** (2008)
16. Mohammed N, Kakal F, **Yaqinuddin A**, Somani M, Khan Y, Sheikh L, Qureshi, R “Quantification of cell-free fetal DNA from maternal plasma: Implications for non-invasive prenatal diagnosis of genetic disorders in Pakistan” [abstract](#) and poster presented at **International Congress of Fetal Medicine** (2008)
17. Siddiqui N, Naqvi Z, Mushtaq S, **Yaqinuddin A**, Siddiqui A “Proteomic Response of epithelial cells to mechanical abrasion” abstract and poster presented at **HUPO** (2007)
18. **Yaqinuddin A**, Abbas F, Qureshi SA” Effects of demethylation on Proliferation, migration, Invasion of metastatic Prostate Cancer” abstract and poster presented at **Faculty Research Assembly AKU** (2007)
19. **Yaqinuddin A**, Abbas F, Qureshi SA, Qazi R, “Effects of blocking DNA methylation on invasiveness of Prostate cancer cell lines” abstract and poster presented at **Faculty Research Assembly AKU** (2006)
20. **Yaqinuddin A**, Abbas F, Qureshi SA, “Prostate cancer: Role of molecular markers in diagnosis and prognosis” abstract and poster presented at **Faculty Research Assembly AKU** (2005)

Research Grants

1. **Point-of-care paper-based alanine aminotransferase (ALT) diagnosis for monitoring the liver damage** SAR 50,000 Internal Research Grant Number: 23312 2022 (Principal Investigator)
2. **Determining the role of homocysteinemia in Non-Alcoholic Fatty Liver Disease and its association with methylenetetrahydrofolate reductase (MTHFR) C677T/A1298C polymorphism** SAR 50,000 Internal Research Grant 2021 (Co-investigator)
3. **Screening immune responses against COVID-19 as a rapid diagnostic measure and a pathway to a potential cure.** SAR 70,000 Ministry of Health CoVID-19 Initiative 2020 (Co-investigator).

4. **Expression of NKG2A on CD8+ Cell and NK cell counts in COVID-19 patients and its correlation with disease severity** SAR 75,000 Alfaisal University COVID-19 initiative 2020 (Co-investigator)
5. **SARS-COV-2 infection and inflammasome NLRP3 activation: A pathway for Acute Lung Injury**
SAR 25,000 Alfaisal University COVID-19 initiative 2020 (Primary-investigator)
6. **To determine the role of DNA methylation at RASFF1, TP73, WIF1, E2F1, ERBB2, HIC1 loci as biomarker to detect bladder cancer in serum of cancer patient's** SAR 50,000 Internal Research Grant 2018(Co-investigator).
7. **Comparison of pathological process of human AD and AlCl₃ and D-Galactose treated human** SAR 50,000 Internal Research Grant Alfaisal 2018 (Co-investigator)
8. **Using Micro-RNAs as Biomarkers for Diagnosing Prostate Cancers (Primary Investigator** SR 1.63 million KACST Primary investigator (2014)
9. **Identification of novel diagnostic and prognostic markers for bladder cancer through whole genome methylation profiling** (Primary investigator) SAR 1.36 million KACST (2013)
10. **Use of DNA methylation as a biomarker to predict graft rejection in kidney and liver organ transplants** SR 1.41 million Co-investigator (Submitted to KACST 2013)
11. **Determination of DNA methylation profile of breast cancer patients to develop diagnostic and prognostic biomarkers** SR 1.2 million Co-investigator (KACST 2013)
12. **DNA methylation status of specific genes in Azospermia** SR 50,000, Co-investigator Alfaisal University (2014)
13. **Determination of DNA methylation markers in early prediction of preeclampsia in KSA** SR 50,000 Co-investigator Alfaisal University (2014)
14. **Expression different epigenetic factors in AlCl₃ induced mouse model of Alzheimer's disease** SR 80,312 Co-Investigator Alfaisal University (2012)
15. **T315I BCR-ABL Kinase Domain Mutation: Frequency and Clinical outcome in patients with Chronic Myeloid Leukemia** SR 37,000 Co-investigator, Alfaisal University (2012)
16. **Using Micro-RNAs as biomarker for Diagnosing Breast Cancer**
(Primary investigator) US\$ 136,000 Alfaisal University (2009)
17. **Prevalence of fragile X syndrome in mentally retarded population of Pakistan** (Co-Investigator)(PMRC) RS. 200,000/- (2008)

18. **A novel approach to non-invasive prenatal diagnosis of foetal rhesus D status in Pakistan by isolating cell free foetal DNA from maternal plasma** (Collabrator)
US\$ 11,500 (Higher Education Commission) (2006)
19. **Prostate Cancer: Role of molecular markers in diagnosis and prognosis**
Principal Investigator) US\$ 23,500 (University Research Council, AKU) (2004)

Book Chapters

Yaqinuddin A Anatomical Education-Neuroanatomy: an evolving curriculum caters towards patient care **Education in Anatomical Science, NOVA SCIENCE PUBLISHERS NY, USA**, Edited by Paul Ganguly (2013).

Zafar M, **Yaqinuddin A**, Ikram M PRACTICAL EXAMINATIONS - OSPE, OSCE AND SPOT **Education in Anatomical Sciences, NOVA SCIENCE PUBLISHERS NY, USA**, Edited by Paul Ganguly (2013).

Yaqinuddin A, AlKattan W, AlKattan K State-of-the Art Curriculum for the 21st Century Medical Students **Health and Disease: Curriculum for 21st Century Medical Students, NOVA SCIENCE PUBLISHERS NY, USA**, Edited by Paul Ganguly (2014).

Authored Book

Gastrointestinal Mucosal Defense System, **Morgan and Claypool Publishers, Philadelphia, USA**, Edited by Kvietys P, **Yaqinuddin A** and Alkattan W (2014).

PhD Students

- Muhammed Faisal Ikram, thesis title "**Expression differences in epigenetic factors in AIC13 induced mouse model of Alzheimer's disease**". (Completion due in 2016)
- Ambreen Usmani, thesis title "**Role of Micro RNAs as a biomarker in diagnosing and prognosticating Breast cancer**" (completion due in 2016)

Master's and MPhil Students

- NS Al-AISheikh, ***The Mechanism of Over Reading Frame 4a and 4b on Cytokine Aberrations in Mers-Cov.*** (2020)
- NM Al Saiari, ***The Rate of AIP Gene Mutations in Pituitary Adenomas in Saudi Arabia.*** (2019)
- AS Siddiqui, ***DNA Hypermethylation Profile of Multiple Genes involved in Bladder Cancer among Saudi Population*** (2016)
- Aisha Nasir Hashmi, thesis title "***Pharmacological Role of IBUPROFEN in AICl₃-induced toxicity Mouse Model***" (2013)
- Huma Syed, thesis title "***Cyclooxygenase I and II inhibitors distinctly enhance hippocampus and cortex dependent cognitive functions in mice***" (2013)

Workshops facilitated

- **"Fundamentals of Tissue Engineering"** Aug 28-30, 2008 at Juma Research Laboratory, Aga Khan University, Karachi, Pakistan
- **"Invivo and invitro assays for study of pain mechanisms"** Sep 7-9, 2006 at Juma Research Laboratory, Aga Khan University, Karachi, Pakistan
- **"Genetic and biochemical aspects of inheritable metabolic disorders"** 2005 at Juma Research Laboratory, Aga Khan University, Karachi, Pakistan
- **"Molecular and Analytical Techniques in research and diagnosis of reproductive disorders"** 2004 at Juma Research Laboratory, Aga Khan University, Karachi, Pakistan

Technical expertise

- Cell culture, propagation of cancer cell lines and the development of cancer cell lines from primary cultures.
- Performing functional studies using cancer cell lines as model systems to evaluate cellular proliferation, apoptosis, angiogenesis, invasion and migration using invitro-assays.
- Engineering changes in gene expression profile of cancer cells by transfecting cells with expression plasmids, siRNAs and retrovirus-based vectors.

- Studying the expression profiles using semi-quantitative RT-PCR, Q-RTPCR, Microarrays, Western Blots Immunohistochemistry and Immunofluorescence microscopy.
- Performing methylation studies to analyze the methylation status of gene promoters by performing Methylation-Specific PCR, Methylation sensitive restriction and Methyl-Light PCR.

Teaching

Courses taught to undergraduate medical students at Alfaisal University

I have taught different aspects of anatomy in the following multidisciplinary courses:

- **INT 111 Introductory Block**

This course is offered in Year -1, fall semester. It is a multidisciplinary course (block) integrating topics in basic and applied clinical anatomy, histology, embryology, and physiology. The main aim of this course is to introduce concepts of Homeostasis, Feedback, Cell Function and Cellular Transport

- **MSK 112 Musculoskeletal Block**

This course is offered in Year -1, fall semester. It is a multidisciplinary course (block) integrating topics in basic and applied clinical anatomy, histology, embryology and physiology. The aim of this course is to 1) describe bones & joints of upper and lower extremities, muscles of upper and lower extremities on the basis of their attachments, innervations and actions 2) Describe embryological development of limbs and spine 3) describe sliding mechanism of contraction and cross bridge cycling with the arrangement of various of myofilament bands and 4) role of calcium, vitamin D and bisphosphonates with enhancing bone strength/fracture healing.

- **CVS 121 Cardiovascular Block**

T This course is offered in Year -1, fall semester .It is a multidisciplinary course with main aim to relate structural organization of cardiovascular system with its function and its most common abnormalities. In-addition students are required to understand the mechanics and hemodynamics of the heart, blood vessels, and the central nervous system and renal mechanisms that contribute to the regulation of blood pressure acutely and chronically. Learn fundamental concepts relating to the relationship between blood pressure, cardiac output, and total peripheral resistance. Moreover, learn the basic fluid mechanics and dynamics of the control of venous return, cardiac output, and blood pressure.

- **RES 123 Respiratory Block**

This course is offered in Year -1, spring semester The main aim of this block is to relate the basic structural and developmental organization of the respiratory system and its most common abnormalities. The course relates the basic microscopic structure and function with common clinical problems / diseases of respiratory system. It describes the mechanics, the muscles involved, and the central nervous system mechanisms that contribute to inspiration and expiration. It emphasizes on fundamental concepts relating to gas exchange and transport from the atmosphere to the cells and from the cells to the lungs and then to the atmosphere.

- **GIT 113 Gastrointestinal Block**

This course is offered in Year -1, spring semester The overall objective is to stress structural/functional correlates of the different organs within the GIT and how they contribute to the digestion and absorption of ingested nutrients.

- **REN 124 Renal Block**

This course is offered in Year -1, spring semester The overall objective of this course is to stress structure / function correlation in primary function of kidney dealing with Excretion, Fluid Homeostasis & Acid Base balance. In addition the course discusses the normal renal development and renal control systems.

- **END 231 Endocrine Block**

This course is offered in Year -2, fall semester. The course discusses the normal development, structure function correlation, and control systems of endocrine glands and relevant organs and tissues.

- **REP 232 Reproductive Block**

T This course is offered in Year -2, fall semester. The course discusses the normal development, structure function correlation, and control systems of male and female reproductive organs and accessory reproductive glands and tissues.

- **NEU 241 Neuroscience Block**

This course is offered in Year -2, spring semester The courses discusses 1) the structure and function of neuron 2) development of the nervous system 3) the structure and function of motor and sensory systems 4) the modulation of motor system by basal ganglia and cerebellum 4) sleep, consciousness and homeostatic function of reticular formation, thalamus and hypothalamus and 5) higher cortical functions of the brain.

- **HNS 242 Head & Neck and Special Senses Block**

T This course is offered in Year -2, spring semester. The main of this course is to discuss the normal structure and function as well as integrating disease processes and pharmacotherapy of the diseases related to otolaryngology and ophthalmology.

- **MSK 351 Musculoskeletal Block**

This course is offered in Year -3, fall semester The main aims of this course are 1) describe the etiology, epidemiology, predisposing factors, pathophysiology and classification of common major musculoskeletal diseases of the joints; bones; connective tissue; and muscles 2) relate clinical signs and symptoms, result of laboratory diagnostic test, and radiological changes with underlying pathogenesis of common major musculoskeletal diseases of the joints; bones; connective tissue; and muscles 3) describe the principles of deferential diagnosis and clinical investigations including laboratory and radiological test in the management of common major musculoskeletal diseases of the joints; bones; connective tissue; and muscles and 4) discuss the mechanism of action of drugs used in the management of common major musculoskeletal diseases of the joints; bones; connective tissue; and muscles.

- **GIT 352 Gastrointestinal Block**

This course is offered in Year -3, fall semester The main aims of this course are 1) describe the etiology, epidemiology, predisposing factors, pathophysiology and classification, of common gastrointestinal, liver and pancreatoco-biliary diseases 2) relate clinical signs and symptoms, result of laboratory diagnostic tests, and radiological changes with underlying pathogenesis of common gastrointestinal, hepatic and pancreaticobiliary diseases 3) describe the principles of deferential diagnosis and clinical investigations including laboratory and radiological test in the management of common gastrointestinal, hepatic and pancreaticobiliary diseases and 4) discuss the mechanism of action of drugs used in the management of common gastrointestinal, hepatic and pancreaticobiliary diseases.

- **END 353 Endocrine Block**

This course is offered in Year -3, fall semester. The main aims of this course are to 1) describe the functions and regulation of pituitary, thyroid, parathyroid, pancreatic and adrenal hormones 2) describe the epidemiology, risk factors, pathogenesis and diagnostic workup of disorders of Pituitary, thyroid, parathyroid, pancreatic and adrenal gland 3) discuss the mode of action, pharmacokinetics, pharmacodynamics and adverse reactions of common drugs used in disorders of pituitary, thyroid, parathyroid, pancreatic and adrenal gland and 4) relate clinical sign & symptoms, complications and results of relevant investigations with underlying endocrine disorders.

- **REP 354 Reproductive Block and Breast**

T This course is offered in Year -3, fall semester. The main aims of this course are to 1) describe the etiology, pathophysiology, clinical features and diagnosis of common gynecological and breast-related conditions/ infections 2) discuss the mechanism of action of drugs used in the management of common gynecological conditions and fertility control 3) describe the principles stages of labor and the pathophysiology of abnormal labor and 4) describe the principles and practice of screening programs in women of reproductive age group.

- **CVS 361 Cardiovascular Block**

This course is offered in Year -3, spring semester The main aims of this course are to 1) revisit the anatomical and functional concepts of development of heart, conducting system of heart, coronary circulation and the regulation of blood pressure and cardiac output 2) discuss the pathophysiology, causes (including genetic and environmental factors), laboratory aspects and treatment of cardiovascular disorders 3) describe the clinical features, diagnostic criteria and management of cardiovascular disorders and 4) correlate the radiological findings with the pathophysiology of cardiovascular disorders.

- **RES 362 Respiratory Block**

This course is offered in Year -3, spring semester The main aims of this course are to 1) describe the etiology, epidemiology, predisposing factors, pathophysiology and classification, of common respiratory diseases 2) relate clinical signs and symptoms , result of laboratory diagnostic test , respiratory function tests and radiological changes with underlying pathogenesis of common Respiratory diseases 3) describe the principles of deferential diagnosis and clinical investigations including laboratory and radiological test in the management of common respiratory diseases 4) discuss the mechanism of action of drugs used in the management of common respiratory diseases and 5) describe the principles and practice of prevention of communicable pulmonary diseases, and environmental pulmonary diseases.

- **URN 363 Renal Block**

This course is offered in Year -3, spring semester. The main aims of this course are to 1) revisit the anatomical and functional concepts of the kidney and urogenital system 2) discuss the pathophysiology, causes and laboratory aspects of renal disorders 3) describe the clinical features, diagnostic criteria, treatment and management of renal disorders and 4) correlate the radiological findings with the pathophysiology of renal disorders.

Courses taught to graduate students at Alfaisal University:

- **MBS 501 Cells and Biomolecules I**

This course is offered in the first semester of Masters of Biomedical Sciences program. The main aim of this course is to teach basic aspect of cellular and molecular biology to the students.

- **MBS 502 Cells and Biomolecules II**

This course is offered in the third semester of Masters of Biomedical Sciences program. It has four modules including 1) Cardiovascular sciences 2) infectious diseases 3) gastrointestinal physiology and 4) cancer biology. I teach cancer biology section of this course.

- **MBS 601 Anatomy and Physiology**

- This course is offered in the first semester of Masters of Biomedical Sciences program. The main aim of this course is to teach basic aspects of Anatomy and Physiology to the students.

Medical Education Courses Attended

- COURSES ATTENDED THROUGH UNIVERSITY OF AMBROSIANA, ITALY (INTERNATIONAL GRADUATE MEDICAL EDUCATION PROGRAM)
- MEDICAL SCIENCES 701: Advanced Curriculum Development and Evaluation
COURSE DESCRIPTION: The focus is on the theoretical, pedagogical and philosophical issues of curriculum design and evaluation in medical education. Additionally, there is an emphasis on advanced methods of curriculum and program evaluation.
- MEDICAL SCIENCES 703: Advanced Learning Theories and Cognition
COURSE DESCRIPTION: Advanced study of theories of learning and cognition in medical education. The focus is on cognitive and learning theories of medical decision making, reasoning and clinical diagnoses.
- MEDICAL SCIENCES 705: Advanced Research Methods and Statistics in Medical Education
COURSE DESCRIPTION: Advanced study of research design such as experimental methods, repeated measures, surveys, naturalistic research, factor analysis, multiple regression and qualitative methods.
- MEDICAL SCIENCES 707: Advanced Psychometric Theory and Practice
COURSE DESCRIPTION: Advanced study of psychometric theory and its applications including classical test theory, item response theory, latent trait theory and generalizability theory.

Reviewer of internationally reputed Journals

- Medical Teacher
- Clinical Teacher
- BMC Medical Education

- Lancet Infectious diseases
- Frontiers in immunology

References

Prof. Paul Ganguly, MD

Professor of Anatomy
Chair Department of Anatomy and Genetics
College of Medicine, Alfaisal University, Riyadh, KSA
Phone: +966-1-2157663
E-mail: pganguly@alfaisal.edu

Dr. Mohsin Yakub, MD, PhD

Assistant Dean of Admissions and Students Affairs,
Associate Professor Medical Education: Physiology and Nutrition
California University of Science and Medicine
1501 Violet Street, Colton, CA 92324
Email yakubm@cusm.org
Phone/Fax: (909) 954 0390

Dr. Erik K. Alexander, MD

Director, Medical Student Education, Brigham & Women's Hospital
Associate Professor of Medicine, HARVARD Medical School
BOSTON, MA, USA. Phone: +1.617. 732. 4148
Email: EKALEXANDER@PARTNERS.ORG