

Aga Khan University- FHS-PhD Programme
List of funded projects for potential PhD Candidates -2019 (Cycle-II)

Biological Sciences

Sr. No.	Name, Email address and Department of Primary Supervisor	Supervisory Team	Title of Project	Research Funding available	Duration of funding	Key Objectives of research project
1	Dr. Zahra Hasan Zahra.hasan@aku.edu Pathology & Laboratory Medicine	Drs. Martin Rottenberg; Kiran Iqbal	Transcriptional profiling of immune regulatory pathways in Tuberculosis patients with diabetes	USD 50,000/-	2020	Tuberculosis infection results in immune dysfunction and susceptibility to other diseases. In diabetes separately, immune impairment increases susceptibility to tuberculosis. We will dissect the immune regulatory pathways that link this communicable and non-communicable diseases. The project will involve clinical and immune pathway dissection using RNA transcriptional profiling, granuloma studies. This will lead to identification of novel drug targets to block infections and improve treatment outcomes in TB.
2.	Dr. Najeeha Talat Iqbal Najeeha.iqbal@aku.edu Pediatrics & Child Health/ Biological & Biomedical Sciences	Dr. Junaid Iqbal, Farah Qamar, Tania Thomas	Exploration of TB biomarkers in Pakistani children	PKR 3939982/-	2020	<ul style="list-style-type: none"> • Compare the performance of ALS in Gene Xpert positive cases and define a diagnostic cutoff for children with active pulmonary TB. • To enhance the sensitivity of ALS test using a modified protocol that utilizes the enrichment of CD19+B cells from PBMCs pool. • Explore the role of catabolites/anabolites from urine and plasma samples for the identification of metabolic profiles of cases and controls (cases: Gene Xpert positive, Controls: Healthy, age and sex matched children).
3	Dr. Syed Hani Abidi syed.abidi@aku.edu Biological and Biomedical Sciences	Dr. Syed Faisal Mahmood	Analysis of Population-Specific Epitope and Drug-resistance Mutations in HIV-1 in Pakistan	PKR 2.15 million	May 2020	<ul style="list-style-type: none"> • Identify population-specific HIV pol mutations conferring ART resistance and immune escape in Pakistani patients. • Determine how the population-specific pol mutations affect processing and generation of pol epitopes via antigen presentation pathway.
4	Dr. Syed Hani Abidi syed.abidi@aku.edu Biological and Biomedical Sciences	Dr. Syed Faisal Mahmood	Immuno-evolution of HIV Gag Protein and Characterization of Gag Epitopes Specific to Pakistani HIV-Infected Cohorts	PKR 7.14 million	December 2020	<ul style="list-style-type: none"> • Identify population-specific mutations in HIV-1 Gag protein from Pakistani HIV-infected patients. • Develop association between population-specific mutations and HLA alleles of Pakistani HIV-infected patients. • To determine how the population-specific mutations affect processing and generation of Gag epitopes via antigen presentation pathway. • To characterize the HIV-1 Gag epitopes unique to Pakistani population.

5.	Dr. S. M. Adnan Ali syed.adnan@aku.edu Surgery	Drs. M. Sohail Awan / Yumna Mirza/ M. Nouman Mughal	Genetic mutations causing hearing loss in the families of Sindh and Baluchistan	PKR 2,556,305	December 2020	<ul style="list-style-type: none"> • To identify genetic mutations in GJB2, MYO15A and SLC26A4 causing hearing loss in the population of Sindh and Baluchistan using PCR and Sanger Sequencing. • To identify novel gene mutations using whole exome sequencing in ten selected patients who show genetic mutations in the above mentioned genes. • To counsel families carrying autosomal recessive genes to not promote consanguineous marriages in their siblings, children and cousins. • To establish the basis for further studies regarding development of screening/therapeutic measures in future
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Population and Public Health

Sr. No.	Name, Email address and Department of Primary Supervisor	Supervisory Team	Title of Project	Research Funding available	Duration of funding	Key Objectives of research project
1.	Dr. Romaina Iqbal romaina.iqbal@aku.edu Community Health Sciences	Dr. Dr. Narjis Rizvi/ Mr. Iqbal Azam	Access to Care in Urban Slums	GBP 250,000	2021	<ul style="list-style-type: none"> To understand the health seeking behavior of vulnerable population groups To understand access to care concerns of vulnerable population groups To design sustainable programs for enhancing the quality of care for vulnerable population groups To understand disease burden in vulnerable population groups
2.	Dr. Romaina Iqbal romaina.iqbal@aku.edu Community Health Sciences	Drs. Narjis Rizvi/ Javed Khan	ASTRA: Addressing Smokeless Tobacco use and building Research capacity in South Asia	GBP 200,000	2021	<ul style="list-style-type: none"> To design and test community based interventions for smokeless tobacco intake cessation To assess the implications of policy on the uptake of tobacco products To understand the role of tobacco sellers in the use of tobacco products
3.	Dr. Romaina Iqbal romaina.iqbal@aku.edu Community Health Sciences	Dr. Khawar Kazmi/Mr. Iqbal Azam	PURE: Prospective Urban and Rural Epidemiological Study	USD 50,000	2025	<ul style="list-style-type: none"> To understand the determinants of Cardiovascular Diseases in an apparently healthy population To contrast the risk factors of NCDs in urban vs. rural populations To design and test community-based interventions for reducing the burden of NCDs.
4.	Dr. Najeeha Talat Iqbal Najeeha.iqbal@aku.edu Pediatrics & Child Health/ Biological & Biomedical Sciences	Drs. Syed Asad Ali Junaid Iqbal	Identification of distinct bacterial community as a feature of healthy gut in a cohort of Pakistani children	USD 185,324/-	2020	<ul style="list-style-type: none"> Identification of healthy microbe as a function of healthy gut To identify distinct proteomics signal in healthy children To correlate above features with gut inflammatory biomarkers.
5	Dr Rozina Karmaliani rozina.karmaliani@aku.edu School of Nursing & Community Health Sciences	Drs Tazeen Ali/ Nargis Asad/ Shireen Shehzad/ Hussain Maqbool	Men Engagement in Women Empowerment through Life Skills Building and Cash Transfer to Improve Maternal Mental Health in Pakistan: Randomized Control Trial	US \$ 853,253	June 2021	To measure the impact of Life Skill Building (LSB) to men and women and BISP Cash Transfer (CT) on maternal depression, domestic violence and women empowerment in Pakistan
6	Dr Rozina Karmaliani rozina.karmaliani@aku.edu School of Nursing & Midwifery	Drs. Sarah Saleem/ Sameen Siddiqi	Human Reproduction Programme (HRP)-research for impact: Alliance for Research Capacity Strengthening	US\$ 321,502 (1ST tranche)	June 2024	Develop institutional capacity in sexual and reproductive health research that would generate evidence to influence relevant policies, programs and practices in countries of the Eastern Mediterranean

7	Dr. Rozina Nuruddin rozina.nuruddin@aku.edu Community Health Sciences	Saleem Sayani/ Dr. Nuruddin Mohammed	Promotion of exclusive breast feeding and young child feeding practices through m-Health: an intervention trial			<p>The project will involve development of m-health application and will have two phases: formative research and intervention trial.</p> <p>The study objectives are:</p> <ol style="list-style-type: none"> i. To assess the effectiveness of m-health coaching in improving rates of exclusive breast feeding and young child feeding practices compared to the standard counseling. ii. To assess the effectiveness of m-health coaching in improving rates of early initiation of breast feeding and continuation of breast feeding till one year of age compared to the standard counseling. iii. To determine the effectiveness of m-health coaching on improvement in anthropometric measurements and on overall health of the child.
8	Dr. Rozina Nuruddin rozina.nuruddin@aku.edu Community Health Sciences	Dr Mohammad Wasay	Prevalence, distribution and determinants of neurological disorders in Pakistan: a Cross Sectional Study	PKR 1, 055,000	2022	<ol style="list-style-type: none"> i. Assessing the frequency, distribution, patterns and risk factors for neurological disorder in Pakistan; a multi-center hospital/outpatients clinical based study ii. Prevalence of neuropsychiatric disorders, its distribution and determinants in Pakistan: a population based cross sectional study.

Nursing

S #	Name, Email address and Department of Primary Supervisor	Supervisory Team	Title of Project	Research Funding available	Duration of funding	Key Objectives of research project
1.	Dr David Arthur david.arthur@aku.edu School of Nursing and Midwifery	Dr. Shahirose Premji	Perinatal mental health psychosocial interventions to improve maternal health and birth outcome	USD 50,000/-	2021	Complete a systematic review of psychosocial interventions for pregnant women in low- and middle-income countries. Use data from this review, pilot study work, and CIHR funded study data to inform and test a psychosocial intervention for pregnant women at the Aga Khan Hospital for Women and Children.
2.	Dr Rozina Karmaliani rozina.karmaliani@aku.edu School of Nursing & Midwifery	Drs Tazeen Ali/ Nargis Asad/ Shireen Shehzad/ Hussain Maqbool	Men Engagement in Women Empowerment through Life Skills Building and Cash Transfer to Improve Maternal Mental Health in Pakistan: Randomized Control Trial	US \$ 853,253	June 2021	To measure the impact of Life Skill Building (LSB) to men and women and BISP Cash Transfer (CT) on maternal depression, domestic violence and women empowerment in Pakistan
3.	Dr Rozina Karmaliani rozina.karmaliani@aku.edu School of Nursing & Midwifery	Hussain Maqbool Dr Nargis Asad	Implementation Research to Test approaches to Rolling Out WHO Guidelines and Tools for the Health Sector Response to Violence against Women: - formative research in districts in Sindh, Pakistan		Dec 2021	<ul style="list-style-type: none"> • To pilot and validate how to roll out the training and service delivery improvement activities based on the clinical handbook and the manual for health managers. • To understand the perceptions of quality of care of women subjected to violence who have received care from trained health care providers. • To develop, validate and refine instruments for measuring health care providers' performance and pilot the health system/service readiness instrument in order to be able to use them to assess effectiveness in the subsequent phase