Aga Khan University- FHS-PhD Programme
List of funded projects for potential PhD Candidates

Population & Public Health Stream						
Sr. No.	Name, Email address and Department of Primary Supervisor	Supervisory Team	Title of Project/ Source of funding	Research Funding available	Funds available until	Key Objectives of research project
1	Dr Andrew Prendergast andrew.prendergast@aku.edu Visiting Faculty, Department of Peads	Drs Fyezah Jehan, Imran Nisar and Waqasuddin Khan	Nutritional support and prophylaxis of azithromycin for pregnant and lactating women to improve birth outcomes in peri-urban slums of Karachi, Pakistan (Mumta Pregnant Women and Lactating Women Trials)	USD 50,000	December 2026	The key objectives are: • To investigate inflammatory biomarkers and immune dysregulation in malnourished mothers and their infants, examining their role in gut permeability, systemic inflammation, and growth outcomes. • 2. To characterize the relationship between malnutrition and infection by analyzing pathogen load, antimicrobial resistance patterns, and immune responses in pregnant and lactating women, and their infants. • 3. To explore disruptions in key nutrient absorption and metabolic pathways in malnutrition, assessing biomarkers of micronutrient status, intestinal function, and energy homeostasis
Pre-requisites of PhD candidate applicants (graduate qualification requirement): • Minimum two years relevant experience (Public Health) • Strong background with hands-on research on topics related to epidemiology, biostatistics, biological systems, community health, nutrition • Some experience in the following is preferred: stakeholder engagement, study design, data analysis, project management						
2	Dr Zahra Hoodbhoy zahra.hoodbhoy@aku.edu Associate Professor, Department of Peads	Drs Emily Smith, Imran Nisar and Fyezah Jehan	Pregnancy Risk, Infant Surveillance, and Measurement Alliance (PRISMA)	USD 3.6 million	Dec 2025 (There is an extension underway which will be finalized by June 2025)	The key objectives are: • To improve the global understanding of key risk factors or vulnerabilities for morbidity and mortality among pregnant women and mother-infant pairs during antenatal care and postnatal care (up to one year). • To provide population-based baseline estimates of key maternal and child health outcomes. This may inform future interventions and randomized trial study designs. • To collect data to enable the application of novel analytical techniques (i.e., machine learning) to create risk prediction tools.

Pre-requisites of PhD candidate applicants (graduate qualification requirement): Some experience of MNCH work would be helpful						
3	Dr Bilal Ahmed Usmani bilal.usmani@aku.edu Assistant Professor, Department of CHS	Drs Zafar Fatmi, Asad Ali, Saqib ur Rehman and Farah Khalid	Malaria in a Changing Landscape: Modeling Transmission, Land Use, and Socioeconomic Factors in Sindh using ML	USD 1.4 million	December 2025	The key objectives are to: • To construct and validate mathematical and ML models that accurately forecast malaria transmission dynamics in Sindh, integrating epidemiological data, geospatial land use information, and socioeconomic variables. • To determine and quantify the significant environmental (e.g., land use changes, climate variability) and socioeconomic (e.g., population density, access to healthcare) factors that influence malaria outbreaks and persistence in the region. • To utilize the developed ML models to assess the potential effectiveness of various malaria intervention strategies, and to generate evidence-based recommendations for optimizing targeted control programs in Sindh.
Pre-requisites of PhD candidate applicants (graduate qualification requirement): Prospective PhD applicants should possess a strong foundation in quantitative disciplines such as epidemiology, biostatistics, or data science, coupled with basic knowledge in programming languages like Python or R. Some Experience with machine learning, geospatial analysis using GIS software, and handling large datasets is highly desirable. Candidates should exhibit a keen interest in global health, particularly malaria mitigation, and demonstrate the ability to work collaboratively in an interdisciplinary environment.						
4	Dr Romaina Iqbal romaina.iqbal@aku.edu Assistant Professor, Department of CHS	Drs Rubina Barolia, Fayyaz Ashraf and Gerardo A Zavala	Sugar-sweetened Beverages Packaging and Labelling Interventions: Bridging Policy, Perception, and Co-Creation	CAD 149,300	June 2026	The key objectives are to: • Analyse current policies and laws on nutrient profiling and labeling of SSB and identify gaps in existing Pakistani regulations in comparison with international standards. • Conduct an integrated assessment of SSB product labeling and adolescent/stakeholder perceptions in Pakistan. • Co-create culturally relevant, understandable SSB package labels with stakeholders.
Pre-requisites of PhD candidate applicants (graduate qualification requirement): Master's degree in public health or equivalent (MPH; MSc Epidemiology and Biostatistics) and preferably a background in Public Health Nutrition.						