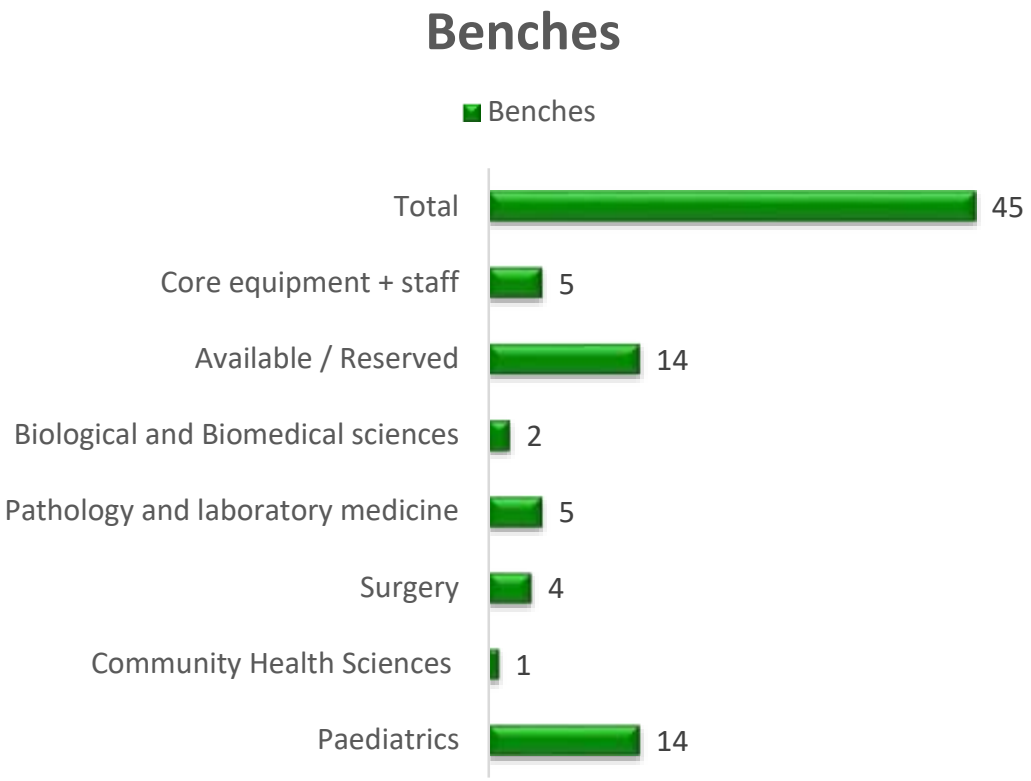
THE AGA KHAN UNIVERSITY

Dashboard for Bench Space
Juma Research Lab (Ground Floor)

January – June, 2020

BSL2- Ground Floor Juma Lab Bench Space Occupancy by each department

Department	Benches	Projects
Paediatrics	14	14
Community Health Sciences	1	1
Surgery	4	5
Pathology and laboratory medicine	5	5
Biological and Biomedical sciences	2	2
Available / Reserved	14	-
Core equipment + staff	5	-
Total	45	27



BSL2- Ground Floor Juma Lab Projects by each department

Paediatrics

1. SEAP II
2. Intusseption
3. SEEM-Ph.D
4. ROTA
5. Azithromycin for improved growth
6. CHAIN
7. SEEM
8. MiEED
9. TB biomarker
10. ABCD- substudy
11. Typhoid - cholecystectomy
12. Intestinal organoid-
13. Adeno Virus- human enteroids
14. SEES

Biological & Biomedical Dept.

1. Neutrophils in SCC
2. AML resistance

Surgery

1. Dental Stem Cells
2. GBM Multiform
3. IHC
4. Hearing Loss.
5. Pancreatic Adeno carcinoma

Pathology & Lab Med.

1. Arboviruses
2. AMR Surveillance
3. Bedaquiline Protocol
4. EFGR Pathway
5. SOCS

Community Health Science

1. PURPOSE

Bench no. A-5

Dr. Farah Qamar

Associate Professor

Paediatrics & Child Health, The Aga Khan University, Pakistan

Aug, 2016 – March, 2022

SEAP II

The Project is a prospective study aiming to generate data to inform policy recommendations on enteric fever prevention and control, as well as to facilitate typhoid vaccine implementation

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Gel documentation System

Bench no. A-6

Dr. S. Asad Ali
Assoc. Dean, Research & Assoc. Prof. Pediatrics & Child Health, The Aga Khan University, Pakistan

Aug, 2017 – Dec, 2020

Intussusception Study

A self controlled Case Series Study, based on Intussusception Monitoring in infants after Introduction of Oral Rotavirus Vaccine: Self-Controlled Case-Series in Pakistan hospitals.

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Taqman Low Density Array (TLDA)
- Bioplex- Luminex Array
- BD- FACS- Celesta
- Bead beater
- Gel documentation System

Bench no. A-7

Dr. S. Asad Ali
Assoc. Dean, Research & Assoc. Prof. Pediatrics & Child Health, The Aga Khan University, Pakistan

Feb, 2019 – Feb, 2020

Interaction of gut micro biome with intestinal epithelium in children with suspected risk of environmental Enteropathy.

(Ph.D. student)

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Vortex
- BD- FACS
- Bioplex- Luminex Array

Bench no. A-8

Dr. S. Asad Ali
Assoc. Dean, Research & Assoc. Prof. Pediatrics & Child Health, The Aga Khan University, Pakistan

Aug, 2018 - Jun, 2020

Rotavirus vaccine

Impact Assessment of Rotavirus Vaccine Introduction in Pakistan's Routine Immunization Program.

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Desktop PC
- Tissue Culture Room
- Inverted Microscope

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Liquid Nitrogen Tank

Bench no. A-9

Dr. Tashfeen Ahmed
Assistant Professor,
Department of Surgery & BBS
The Aga Khan University, Pakistan

April, 2015 – Dec, 2020

DENTAL STEM CELLS

This study is about Human Dental Pulp Stem Cells of Permanent Teeth (DPSC) & Stem Cells from Exfoliated Deciduous Teeth (SHED): A Comparison of Dental Tissue Regeneration

Core Equipment

Tissue Culture Room	Carbon dioxide Incubator
Biosafety Cabinets	Inverted Microscope
Refrigerated Centrifuges	Fluorescence Microscope
Non Refrigerated Centrifuge	Liquid Nitrogen Tank
Water Bath	Desktop PC
Vortex	
Under counter & Walk- In Fridge	
Ultra Low Temp. Freezers	

Bench no. A-12

Dr. Sohail Awan
Associate Professor
Department of Surgery MC The Aga Khan University, Pakistan

March, 2018 – March, 2020

Genetic Mutations Causing Hearing Loss in the Families of Sindh and Baluchistan

Core Equipment

- PCR
- Microscope
- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Microtome
- IHC bench
- Desktop PC
- Fume Hood

Bench no. A-13

Dr. Kulsoom Ghias
Associate Professor
Biological & Biomedical Sciences
The Aga Khan University, Pakistan

Jun, 2018– Dec, 2020

Head & Neck Cancer

This study will be characterizing role of neutrophils in progression of head and neck squamous cell carcinoma

Core Equipment

- Tissue Culture Room
- Biosafety Cabinets
- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Carbon dioxide Incubator
- Inverted Microscope
- Fluorescence Microscope
- Liquid Nitrogen Tank
- Desktop PC

Bench no. A-14

Dr. Fareena Bilwani
Assistant Professor
Biological & Biomedical Sciences
The Aga Khan University, Pakistan

May, 2018 – May, 2021

Acute Myeloid Leukemia

This study will be characterizing determinants of acute myeloid leukemia resistance to ex-vivo expanded allogeneic natural cell-mediated killing

Core Equipment

- Tissue Culture Room
- Biosafety Cabinets
- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Carbon dioxide Incubator
- Inverted Microscope
- Fluorescence Microscope
- Liquid Nitrogen Tank
- Desktop PC

Bench no. A-15

Dr. Najeeha Iqbal
Associate Professor Paediatrics & Child Health, The Aga Khan University, Pakistan

Sep, 2017 – June, 2020

Project 1: Exploration of TB Biomarkers in Pakistani Children.

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Taqman Low Density Array (TLDA)
- Thermal Cyclers
- Gel Documentation System
- Real Time PCRs

Bench no. A-15

Dr. Najeeha Iqbal
Associate Professor Paediatrics & Child Health, The Aga Khan University, Pakistan

Aug, 2017 – March, 2020

Project 2: MiEED

This Study covers the aspect of Microbiota, Inflammation & Environmental Enteric dysfunction

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk-In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Taqman Low Density Array (TLDA)
- Thermal Cyclers
- Gel Documentation System
- Real Time PCRs

Bench no. A-19

Dr. Farah Qamar
Associate Professor
Paediatrics & Child Health, The Aga Khan University, Pakistan

Oct, 2019 – Oct, 2021

Sero-epidemiology and environmental surveillance (SEES) in SEAP sites.

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Gel documentation System

Bench no. A-21

Dr. Erum Khan
Professor
Pathology & Lab Medicine, The Aga Khan University, Pakistan

Mar, 2014 – Dec, 2019*

Role of Arboviruses-cause of undifferentiated fever

The primary objective of this study is to determine the burden of Arboviruses as a cause of unexplained fever in the Sind province of Pakistan. The study will be covering epidemiology and prevalence of *Dengue Virus, Chikunguniya Virus, west Nile Virus* and *Japanese B Encephalitis Virus.*

Core Equipment

- Centrifuges
- Real Time PCRs
- Water bath
- Vortex
- PCR enclosure
- Fridge & Freezers
- BSL3 virology room
- Desktop PC

Grant Equipment

- Inverted Microscope
- Carbon dioxide Incubator

* ext. in process

Bench no. A-22

Dr. Rumina Hasan
Professor
Pathology & Lab Medicine, The Aga Khan University, Pakistan

Core Equipment

- Biosafety Cabinets- BSL2
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Vortex
- TB Lab, BSL 3
- Biosafety Cabinets- BSL3
- 37oC Incubator
- Carbon dioxide Incubator
- Autoclave

April, 2017 – Dec, 2019*

AMR Surveillance

This grant is designed to work towards strengthening lab capacity for antimicrobial testing in three phases; capacity for drug sensitivity testing, investigating AMR in specific community and hospital based organisms and Identifying gaps to support AMR training and research

* ext. in process

Bench no. A-25

Dr. Farah Qamar
Associate Professor
Paediatrics & Child Health, The Aga Khan University, Pakistan

Oct, 2019 – Oct, 2021

Sero-epidemiology and environmental surveillance (SEES) in SEAP sites.

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Gel documentation System

Bench no. A-26

Dr. Farah Qamar
Associate Professor
Paediatrics & Child Health, The Aga Khan University, Pakistan

July, 2019 – March, 2020

Frequency of typhoid carrier in patients undergoing cholecystectomy for gall bladder.

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Centrifuge
- Thermal Cycler

Bench no. A-27

Dr. Farah Qamar
Associate Professor
Paediatrics & Child Health, The Aga Khan University, Pakistan

Sep, 2018 – Aug, 2020

ABCD sub study

Diarrhea etiologies and their impact on the efficacy of azithromycin for treatment of severe diarrhea

Core Equipment

- Walk In Fridge
- Incubator

Bench no. A-28

Dr. Rumina Hasan
Professor
Pathology & Lab Medicine, The Aga Khan University, Pakistan

Dec, 2015 – Dec, 2019*

Bedaquiline MIC on Agar

This is a protocol optimization project where the TB organism is grown in specialized agar medium known as 7H11 and 7H10. The method determines to find out minimal inhibitory concentration at which organisms causing TB can be sensitive.

Core Equipment

- Biosafety Cabinets- BSL2
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Vortex
- TB Lab, BSL 3
- Biosafety Cabinets- BSL3
- 37C Incubator
- Carbon dioxide Incubator
- Autoclave

Shared with Clinical Lab in BSL -3

- Densitometer
- Compound Microscope
- MGIT System

* ext. in process

Bench no. A-29

Dr. Syed Adnan
Assistant Professor,
Department of Surgery
The Aga Khan University, Pakistan

Apr, 2019 – Apr, 2021

Correlation of Molecular Markers expression and overall survival in Pancreatic Adeno Carcinoma Patients.

Core Equipment

- Thermal Cycler
- Microtome
- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Microscope
- Desktop PC

Bench no. A-30

Dr. Shahzad Shamim, Associate Professor, Department of Surgery. The Aga Khan University, Pakistan

Dr. Syed Adnan Assistant Professor, Dapartment of Surgery. The Aga Khan University, Pakistan

March, 2018 – March, 2020

Project 1: mmunohistochemical detection of p53, Epidermal Growth Factor Receptor (EGFR), Isocitrate Dehydrogenase(IDH1) and Murine Double Minute(MDM2) in Glioblastoma. (GBM)

Core Equipment

- Microtome
- Microscope
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Desktop PC

Bench no. A-30

Dr. Ather Enam
Professor,
Department of Surgery. The Aga Khan University, Pakistan

Dr. Syed Adnan
Associate Professor,
Dapartment of Surgery. The Aga Khan University, Pakistan

June, 2018 – June, 2020

Project 2:Gene expression of cancer stem cell markers in Glioblastoma multiforme.

Core Equipment

- Microtome
- Microscope
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Desktop PC

Bench no. B-4

Dr. Sarah Saleem
Professor, Community Health Sciences.
The Aga Khan University, Pakistan

Jan, 2019 - June, 2020

Project to understand and Research Preterm pregnancy outcomes (PURPOSE): South Asia

Grant Equipment

ULT freezer

Bench no. B-9

Dr. Junaid Iqbal.
Assistant Professor, Pediatrics & Child Health .
The Aga Khan University, Pakistan

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Desktop PC
- Tissue Culture Room (BSL2) & Virology (BSL3)
- Inverted Microscope

Jan, 2018 – Jan 2020*

Development of Intestinal Organoids from Environmental Enteropathy Patient's Gut

July, 2019– Oct, 2019

Replication of intussusception associated adenovirus in human enteroid.

* ext. in process

Bench no. B-10

Dr. Ali Faisal Saleem
Assistant Professor, Paediatrics & Child Health, The Aga Khan University, Pakistan

Oct, 2016 – June, 2020

CHAIN PROTOCOL

This is a cohort study, aiming towards evidence based care of acutely ill, undernourished children in limited resource settings – cohort study

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Desktop PC
- Tissue Culture Room
- Inverted Microscope

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Liquid Nitrogen Tank

Bench no. B-11 & 12

Dr. S. Asad Ali
Assoc. Dean, Research & Assoc. Prof. Pediatrics & Child Health, The Aga Khan University, Pakistan

Nov, 2015 – Jan, 2020*

SEEM Pakistan

This Study covers the aspect of Environmental Enteropathy & malnutrition in Pakistan

Core Equipment

- Refrigerated Centrifuges
- Non Refrigerated Centrifuge
- Water Bath
- Vortex
- Under counter & Walk- In Fridge
- pH meter
- Thermal Cyclers
- Real Time PCRs
- Desktop PCs

Grant Equipment

- Biosafety Cabinet
- Water Bath
- Vortex
- Taqman Low Density Array (TLDA)
- Bioplex- Luminex Array
- BD- FACS- Celesta (to be arrived & installed)
- Bead beater
- Gel documentation System

* ext. in process

Bench no. B-13

Dr. Fyezah Jehan.
Associate Professor Paediatrics & Child Health, The Aga Khan University, Pakistan

Feb, 2020 – Oct, 2022

Nutritional support for lactating women and Azithromycin for infants to improve growth outcomes in the peri-urban slums of Karachi, Pakistan – a Randomized Controlled Trial

Core Equipment

- Refrigerated Centrifuge
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Vortex
- Water Bath
- Thermal Cycler
- Gel Documentation System
- Desktop PC

Bench no. B-14

Dr. Shahid Pervez
Professor
Pathology & Lab Medicine, The Aga Khan University, Pakistan

Dec, 2015 – Sep, 2020

EFGR Signalling Pathway Analysis:

in Oral Squamous Cell Carcinoma

Core Equipment

- Refrigerated Centrifuge
- Under counter & Walk- In Fridge
- Ultra Low Temp. Freezers
- Vortex
- Water Bath
- Thermal Cycler
- Gel Documentation System
- Desktop PC

Bench no. B-15

Dr. Zahra Hasan
Professor
Pathology & Lab Medicine, The Aga Khan University, Pakistan

April, 2018 – Jan, 2020*

From latent tuberculosis to active TB:

It will help understanding the mechanism of disease progression in Diabetes with reference to suppressor of cytokine signaling molecules (SOCS).

Grant Equipment

- **Bench Top PC**
- **External Hard Drive**
- **External UPS**

* ext. in process