

# **MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES**



## **ANNUAL REPORT**

**2021/2022**

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## List of abbreviations

AAC	Africa Academy of Science
ABC	Afya Bora Consortium
ACH	Association of Commonwealth Universities
AIDS	Acquired Immunodeficiency Syndrome
AfDB	African Development Bank
AGCT	Alliance for Global Clinical Training
AMR	Antimicrobial Resistance
AOR	Authorized Organization Representative
ASH	America Society of Hematology
ASM	America Society of microbiology
AWV	Adolescent Wellness Visit
BMLS	Bachelor of Medical Laboratory Sciences
BPharm	Bachelor of Pharmacy
BSc	Bachelor of Science
BScN	Bachelor of Science in Nursing
BSc EHS	Bachelor of Science Environmental Health Sciences
BSc RTT	Bachelor of Science in Radiation Therapy Technology
BTU	Bagamoyo Training Unit
CAG	Controller and Auditor General
CBE	College of Business Education
CDC	Centre for Disease Control
HD-CHPE	Haile Debas Centre for Health Professions Education
CEPD	Continuing Education and Professional Development
COTUL	Consortium of Tanzania University and Research Libraries
CIRCLE	Climate Impact Research Capacity and Leadership Enhancement
COSTECH	Tanzania Commission for Science and Technology
CSC	Commonwealth Scholarship Commission
CUGH	Consortium of Universities for Global Health

CUHAS	Catholic University of Health and Allied Sciences
CV	Curriculum Vitae
CVCPT	Committee of Vice Chancellors and Principals in Tanzania
DAAD	Deutscher Akademischer Austausch Dienst
DANIDA	Danish International Development Agency
DDR	Diploma in Diagnostic Radiography
DEHS	Diploma in Environmental Health Sciences
DFID	Department for International Development
DHRMA	Director of Human Resources Management and Administration
DMLS	Diploma in Medical Laboratory Sciences
DMRT	Dartmouth MUHAS Research Ethics Training Programme
DN	Diploma in Nursing
DNA	Deoxyribonucleic acid
DCEPD	Directorate of Continuing Education and Professional Development
DRP	Director of Research and Publication
DDS	Doctor of Dental Surgery
DICT	Directorate of Information and Communication Technology
DLS	Directorate of Library Services
DNS	Domain Name Server
DPS	Diploma in Pharmaceutical Science
DPI	Directorate of Planning and Investment
DOS	Dean of Students
DUE	Director of Undergraduate Education
DVC- ARC	Deputy Vice Chancellor Academic, Research and Consultancy
DVC-PFA	Deputy Vice Chancellor Planning Finance Administration

EPS	Ethiopian Paediatrics Society
ESRF	Economic and Social Research Foundation
FAO	Food and Agricultural Organization
FYRSP	Five Year Rolling Strategic Plan
HIS	Health Information System
HCMIS	Human Capital Management Information System
HEI	Higher Education Institution
GePG	Government electronic Payment Gateway
GEMx	Global Education in Medicine Exchange
GHLO	Global Health Learning Opportunities
HESLB	Higher Education Students Loans Board
HKMU	Hubert Kairuki Memorial University
HIV	Human Immunodeficiency Virus
HCMIS	Human Capital Management Information System
HR	Human Resource
HRH	Human Resource for Health
HRMA	Human Resource Management and Administration
IAHS	Institute of Allied Health Sciences
ICMR	Indian Council of Medical Research
IFMIS	Integrated Financial Management Information System
IRB	Institutional Review Board
ICOH	International Congress on Occupational Health
ICT	Information and Communication Technology
IHI	Institute for Health Improvement
IP	Internet Protocol
IOM	International Office for Immigration
IT	Information and Technologies
ITM	Institute of Traditional Medicine
IPSAS	International Public Sector Accounting Standard
IUCEA	Inter-University Council of East Africa
KCCo	Kilimanjaro Centre for Community Ophthalmology

KCMCo	Kilimanjaro Christian Medical College
KIU	Kampala International University
LSHTM	London School of Hygiene and Tropical Medicine
MCMS	Military College of Medical Sciences
MEST	Ministry of Education, Science and Technology
MD	Doctor of Medicine
MMC	Muhimbili Medical Centre
MMed	Master of Medicine
MoHCDGCE	Ministry of Health Community Development Gender and Elderly
MPharm	Master of Pharmacy
MNH	Muhimbili National Hospital
MPL	Multipurpose Laboratory
MUHAS	Muhimbili University of Health and Allied Sciences
MUHASSO	Muhimbili University of Health and Allied Sciences Student Organization
MUIHC	Muhimbili Investment Holdings Company
MSc	Master of Science
MSc TDC	Master of Science in Tropical Diseases Control
MUST	Mbeya University of Science and Technology
MPH	Master of Public Health
MUCHS	Muhimbili University College of Health Sciences
MOI	Muhimbili Orthopedics Institute
MOU	Memorandum of Understanding
NGOs	Non-Governmental Organization
NHIF	National Health Insurance Fund
NIH	National Institutes of Health
NIMR	National Institute of Medical Research
NHC	National Housing Corporation
NCD	Non-Communicable Disease
OHCEA	One Health Central Eastern Africa

OMS	Oral and Maxillofacial Surgery
OSP	Office of Sponsored Project
OPCD	Orthodontics, Periodontics and Community Dentistry
OPRAS	Open Performance Review and Appraisal
PCCB	Prevention and Combating of Corruption Bureau
PCU	Project Coordinating Unit
PET	Pediatrics Epilepsy Training
PFA	Planning Finance and Administration
PhD	Doctor of Philosophy
PI	Principal Investigator
PMU	Procurement Management Unit
QA	Quality Assurance
QC	Quality Control
SACIDS	South African Centre of Infectious Disease
SARIS	Student Academic Records Information System
Sida	Swedish International Development Agency
SOD	School of Dentistry
SPHSS	School of Public Health and Social Sciences
SOPs	Standard Operating Procedures
SHDC	Senate Higher Degree Committee
SUA	Sokoine University of Tanzania
SUZA	State University of Zanzibar
SON	School of Nursing
APARCO	Sickle pan African Research Consortium
TACAIDS	Tanzania Commission for AIDS
TMA	Tanzania Meteorological Agency
TAMSA	Tanzania Medical Students Association
TANTRADE	Tanzania Trade Development Authority
TBA	Tanzania Building Agency
TERNET	Tanzania Education and Research Network
TCU	Tanzania Commission of Universities



TFDA	Tanzania Food and Drug Authority
THC	Technical Harmonization Committee
THTU	Tanzania Higher Learning Institutions Trade Union
TBS	Tanzania Bureau of Standards
TIB	Tanzania Investment Bank
TANROADS	Tanzania National Roads Agency
TANESCO	Tanzania Electric Supply Company Limited
TEKU	Teofilo Kisanji University
TUSA	Tanzania Universities Sport
TPSC	Tanzania Public Service College
UDOM	University of Dodoma Association
UDSM	University of Dar es Salaam
USA	United State of America
USAID	United States Agency for International Development
UK	United Kingdom
UNC	University of North Carolina
UNESCO	United Nations Educational, Scientific and Cultural Organization
UCSF	University of California at San Francisco
VAT	Value Added Tax
VC	Vice Chancellor
VPN	Virtual Private Network
WHO	World Health Organization

**Table 1: Members of the University Council during the year ended 30th June, 2022.**

No.	Name	Status/Title
1.	Dr. Harrison Mwakyembe	University Council Chairperson
2.	Prof. Andrea B. Pembe	Member, Vice Chancellor
3.	Prof. Evaristo J. Liwa	Member, Representative Committee of Vice Chancellors and Principals of Tanzania (CVCPT)
4.	Dr. Fadhili Lyimo	Member, Appointee of the Minister of Health, Community Development Gender, Elderly and Children
5.	Dr. Zabron Kengera	Member, Appointee of the Minister of Education, Science and Technology
6.	Dr. Jamala A. Taib	Member, Permanent Secretary, Ministry of Health & Social Services, Appointee of the Revolutionary Government of Zanzibar
7.	Mr. Charles Lumaze	Member, Assistant Accountant General, Appointee of the Minister of Finance and Planning
8.	Prof. Lawrence Museru	Member, Executive Director, Muhimbili National Hospital
9.	Prof. Charles Mgone	Member, Representative of the MUHAS Convocation
10.	Prof. Lawrence Museru	Executive Director of the Teaching Hospital – Muhimbili National Hospital (MNH)
11.	Dr. Joseph Otieno	Member, Appointee of the Senate
12.	Dr. Dennis Russa	Member, Representative of the Academic Staff Assembly
13.	Dr. Hawa Mbawala	Member, Representative of the Gender Dimension Committee.
14.	Prof. Kennedy Mwambete	Member, Representative of Workers Union (THTU)
15.	Mr. Ntiga Kalyango	Member, Representative of MUHASSO
16.	Mr. Paschal Misili	Students Representative – MUHASSO President

## MUHAS Milestones

- 1963 The Dar es Salaam School of Medicine established under Ministry of Health
- 1968 The Dar es Salaam School of Medicine becomes the Faculty of Medicine of the University College of Dar es Salaam a constituent College of the University of East Africa.
- 1969 Faculty of Medicine launches an intensive course in biomedical sciences for diploma students. This was meant to convert the diplomas to the Bachelor of Medicine and Bachelor of Surgery (MB; ChB) degree which was being offered by the University of East Africa.
- 1970 The Faculty of Medicine becomes Faculty of Medicine of the University of Dar es Salaam.
- 1974 Faculty of Medicine launches a three-year Bachelor's degree in Pharmacy in the Division of Pharmaceutical Sciences.
- 1974 Traditional Medicine Research Unit is launched within Muhimbili.
- 1976 Faculty of Medicine and Muhimbili Hospital merge to form Muhimbili Medical Centre (MMC).
- 1979 A five-year degree course in Doctor of Dental Surgery starts in the Division of Dentistry.
- 1989 A Bachelor of Science in Nursing degree and Faculty of Nursing established.
- 1991 Faculty of Medicine upgraded into a constituent College of the University of Dar es Salaam and in July of 1991 the Muhimbili University College of Health Sciences becomes established.
- 1991 The Institute of Allied Health Sciences established from the former paramedical schools.
- 1997 Program Management Unit is created to address planning and development issues in the College.

- 2000 Muhimbili Medical Centre is disestablished to create two closely linked but autonomous public institutions known as Muhimbili University College of Health Sciences and Muhimbili National Hospital and the University moves from the Ministry of Health to the Ministry of Science Technology and Higher Education.
- 2001 A Bachelor of Science in Environmental Health starts in the Institute of Public Health predecessor of School of Public Health and Social Sciences.
- 2003 Faculties upgraded into Schools to make them more autonomous.
- 2003 Program Management Unit is upgraded into a Directorate of Planning and Development.
- 2004 University acquires 3800 acres of prime land on the outskirts of Dar es Salaam for future expansion.
- 2004 Two programs, Bachelor of Science Nursing Management and Bachelor of Science in Midwifery, start in the School of Nursing.
- 2005 Establishment of Directorates of Planning and Development for Mloganzila and Muhimbili Campuses
- 2006 Department of Library services is upgraded to a Directorate.
- 2006 Establishment of the Unit of Continuing Education under the Directorate of Postgraduate Studies
- 2007 Established Directorate of Continuing Education and Professional Development
- 2007 The Muhimbili University College of Health Sciences upgraded to a full-fledged University
- 2008 Inauguration of University's Workers Council
- 2009 Establishment of Directorate of Undergraduate Education

- 2010 The Government of the United Republic of Tanzania signed a loan arrangement with the Government of South Korea for construction of the University Medical Centre at Mloganzila campus.
- 2011 The Government of the United Republic of Tanzania signed a loan agreement with the Government of South Korea for supply and installation of the equipment for the University Medical Centre at Mloganzila
- 2014 Construction of MUHAS Academic Medical Centre was initiated and was inaugurated by the fourth President of United Republic of Tanzania Hon Jakaya Mrisho Kikwete in 2015
- 2015 Centre of excellence in Cardiovascular Sciences was officially launched
- 2016 Cconstruction of MUHAS Academic Medical Centre was completed on and was handed over to MUHAS management.
- 2016 MUHAS University Council Approved Establishment of Muhimbili University Investment Holding Company
- 2017 The President of United Republic of Tanzania HE Dr. John Pombe Magufuli inaugurated operationsof the MAMC
- 2018 Construction of MUHAS Academic Facilities and Cardiovascular Centre of Excellency at Mloganzila Initiated.
- 2018 The Management of MAMC was shifted to Muhimbili National Hospital (MNH)
- 2021 On 18<sup>th</sup> August 2021 MUHAS signed project loan arrangement worth USD 45,500,000 for Higher Education for Economic Transformation (HEET)

## **Institutional Leadership 1963 – to date**

<b>Year</b>	<b>Name of the Head of institution</b>	<b>Position Held</b>
1963-1968	Dr. A. M. Rankin	1 <sup>st</sup> Dean, Faculty of Medicine
1968-1969	Prof. Gottlieb L. Monekosso	2 <sup>nd</sup> Dean, Faculty of Medicine
1969-1973	Prof. Aloysius M. Nhonoli	3 <sup>rd</sup> Dean, Faculty of Medicine
1973-1977	Prof. Willim J. Makene	4 <sup>th</sup> Dean, Faculty of Medicine
1977-1981	Prof. Aloysius M. Nhonoli	3 <sup>rd</sup> Dean, Faculty of Medicine
1981-1988	Prof. William J. Makene	4 <sup>th</sup> Dean, Faculty of Medicine
1988-1990	Prof. Gabriel M. P. Mwaluko	5 <sup>th</sup> Dean, Faculty of Medicine
1991-1994	Prof. Samuel Y. Maselle	1 <sup>st</sup> Principal, MUCHS
1994-2003	Prof. Jacob P. Mtabaji	2 <sup>nd</sup> Principal, MUCHS
2003-2007	Prof. Kisali J. Pallangyo	3 <sup>rd</sup> Principal, MUCHS
2007- 2012	Prof. Kisali J. Pallangyo	1 <sup>st</sup> Vice Chancellor MUHAS
2012 - 2018	Prof. Ephata E. Kaaya	2 <sup>nd</sup> Vice Chancellor MUHAS
2018 to date	Prof. Andrew B. Pembe	3 <sup>rd</sup> Vice Chancellor MUHAS

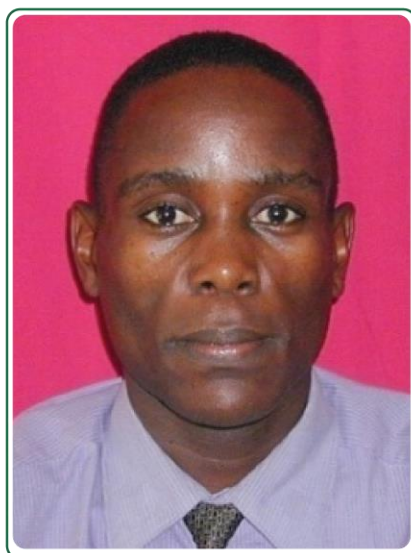
## Current University Management



**Prof. Andrea B. Pembe**  
Vice Chancellor



**Prof. Said Aboud**  
Deputy Vice Chancellor – Planning,  
Finance and Administration



**Prof. Apporinary R. Kamuhabwa**  
Deputy Vice Chancellor – Academic,  
Research and Consultancy

## Statement by the Accounting Officer

MUHAS has grown from offering only one programme, which was Doctor of Medicine to an institution with 102 academic programmes offered in five schools and two institutes. The increase in programmes went hand in hand with gradual increase in student enrolment for both undergraduate and postgraduate students to the current enrolment of 4,775 students of whom 667 are diploma, 2,898 are undergraduates and 1,210 are postgraduates. In the year 2021/2022 the university the University implemented activities stipulated in the Five Year Rolling Strategic plan 2020/2021 to 2024/2025, aiming at improving the core functions of the university. During 2021/2022 a total of 1663 students were admitted in various, diploma, undergraduate and postgraduate programs. During the reporting period 1,124 students of which 441 (39.2% Female) were successfully awarded their diploma, undergraduate and postgraduate degrees during the 145<sup>th</sup> graduation ceremony.

During the 2021/2022, the University continued to build capacity of its academic staff and non-academic staff to ensure quality training and services provided. Until June 30 2022, 17 academic staff are on PhD studies, 46 academic staff are on their Masters training and 1 academic staff is on Super Specialization while 1 Administrative staff and technical staff are on PhD training, 2 Administrative and Technical staff are on Masters training.

During 2021/2022, there were a total of 114 active sponsored research projects in various implementation stages. Among these 9 were new research projects initiated during the reporting period. Alongside research implementation, the university maintained its leading edge in research publication in the country. A total of 265 journal articles were published. This achievement was a result of the University's efforts to promote research and innovation as one of its core functions.

Despite growing demands on its products (human capital, research outputs and services), clear vision, mission and rolling strategic plans, MUHAS has been experiencing sustained challenges and turbulences in the form of inadequate finances; Other Charges (OC) and Capital Development (CD) and/or delayed disbursements. The primary driver of the challenges and turbulences is budgetary inadequacy. During the financial year 2021/2022 the University continued to undertake its mandated activities using the resources available. The approved



budget was **TZS 42,159,065,289** as the University revenue to be collected from the Government and the University's own sources. Personal Emolument (PE) was **TZS 26,357,399,173** and Other Charges (OC) was **TZS 1,311,038,852** and **TZS 3,979,131,700** was for Development Activities at Mloganzila Campus and Muhimbili Campus). The approved revenue collection from own sources was **TZS 13,851,098,035.00**. By 30<sup>th</sup> June 2022, the University had collected a total of **TZS 1,212,711,013.33** as OC and **19,631,964,000**, **98.74%** of the budget from the government as PE. Total collection from internal sources was **TZS 13,851,098,035.00** which is 110% of the annual target. On the other hand, no development fund was received

We request the Government for approval and disbursement of the requested budget for the two campuses as presented.

Prof. Andrea B. Pembe

**Vice Chancellor**

**MUHAS**

## 1.0 Introduction

This is the sixteenth MUHAS Annual report, which describes progress in the implementation of the annual planned activities as described in the MUHAS Medium Term Strategic Plan for the 2020/2021 – 2024/2025. The report shows progress in academic programs, students enrolment, student outputs, examinations and human resource development. The report also shows achievements made by schools, academic institutes and directorates. Research programs, consultancy and public service achievements made by the various units at MUHAS are also reported. In addition, during year 2021/2022, the University made progress towards achievement of its vision and mission through implementation of various development projects, expansion of student intake, improvement of the quality of research and teaching, and improved stakeholder's engagement.

Due to declining government subvention and the increasing demand for financial resources to fund the core functions of the university, during the reporting period, the university initiated various strategies to boost investment and self-generated income.

## **2. Vision, Mission and Functions of the University**

### **2.1. Vision**

A university excelling in quality training of health professionals, research and public services with conducive learning and working environment.

### **2.2. Mission**

To provide quality training, research and services in health and related fields for attainment of equitable socio-economic development for the Tanzanian community and beyond.

### **2.3. The Functions**

The functions and activities of the University are guided by the following components: -

- (i) To provide in Tanzania a place of learning, education, research in health and allied sciences
- (ii) To be the main producer of key policy makers, experts and personnel in the health sector.
- (iii) To be a catalyst in the health sector reforms through conducting relevant research and educating the public in health-related issues
- (iv) To prepare students through regular and professional courses in the fields of health and allied health Sciences for degrees, diplomas, certificates and other awards of the Muhimbili University of Health and Allied Sciences.
- (v) To contribute to the intellectual life of Tanzania, to act as a focal point for its cultural development and to be a center for studies, service, and research pertaining to the interests of the people of Tanzania.

### **2.4. Schools Institutes and Directorates**

The University has five Schools, two Institutes, and Eleven Directorates as follows: -

#### **2.4.1 Schools**

- (i) School of Medicine
- (ii) School of Dentistry
- (iii) School of Pharmacy
- (iv) School of Nursing
- (v) School of Public Health and Social Sciences

### **2.4.2 Institutes**

- (i) Institute of Traditional Medicine

### **2.4.3 Directorates**

- (i) Directorate of Planning and Investment
- (ii) Directorate of Postgraduate Studies
- (iii) Directorate of Research and Publications
- (iv) Directorate of Information and Communication Technology
- (v) Directorate of Library Services
- (vi) Directorate of Continuing Education and Professional Development
- (vii) Directorate of Undergraduate Education
- (viii) Directorate of Quality Assurance
- (ix) Directorate of Finance
- (x) Directorate of Human Resources Management and Administration
- (xi) Directorate of Estates

### **3.0 Teaching and Learning**

Teaching is of the core function of the University. MUHAS offers innovative, relevant and market –driven academic programmes at diploma, undergraduate and postgraduate levels with inbuilt quality control systems. The University also provides an environment and policy framework that allow students to have attractive and healthier teaching and learning environment. This is achieved through improving services in laboratories, library and rehabilitation of classrooms and the surrounding environment.

#### **3.1. Academic Programs**

MUHAS has a wide range of academic programs and the best academic staff profiles in Health and Allied Sciences in Tanzania. The University gives high priority to quality programs’ development, delivery and students outcomes. Currently the University offers 3 Diploma programs, 1 Advanced Diploma, 15 Undergraduate programs and 83 Postgraduate programs, which are offered in the five schools and two institutes.

#### **3.2. Students Admission during from 2016/2017 to 2021/2022**

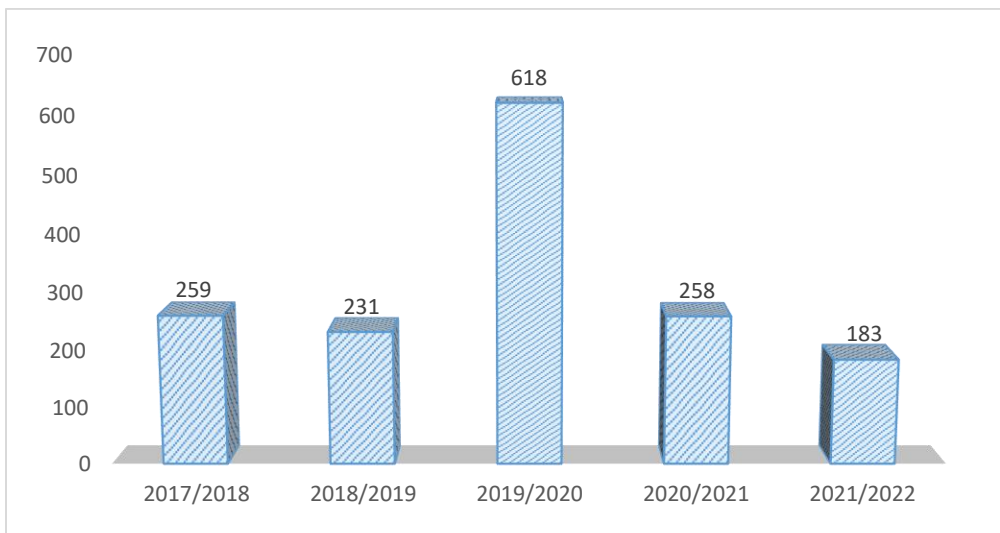
##### **3.3.1 Academic Programs**

MUHAS has a wide range of academic programs and the best academic staff profiles in Health and Allied Sciences in Tanzania. The University gives high priority to quality programs’ development, delivery and students outcomes. Currently the University offers 3 Diploma programs, 1 Advanced Diploma, 15 Undergraduate programs and 83 Postgraduate programs, which are offered in the five schools and two institutes.

##### **3.2.1.1 Diploma Programs**

During the reporting period 183 new students were admitted in the various MUHAS diploma programs. Of the total, 98(53.6%) were males and 85(45.9%) were females. There was a remarkable decrease of students admitted in 2021/2022 (183) compared to 258students admitted in previous year. Reason for the decrease is that, the three programs i.e. Diploma in Nursing, Diploma in Pharmaceutical Sciences and Diploma in Medical Laboratory Sciences are now operating under NACTE. During the reporting period MUHAS established

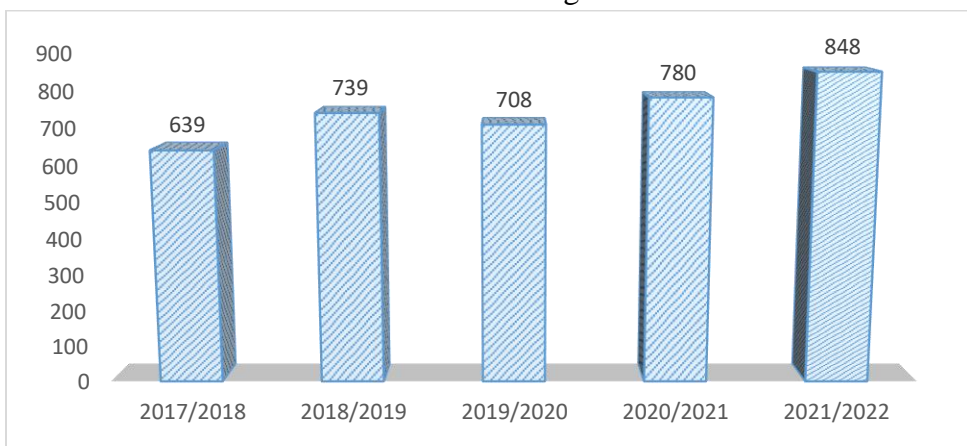
evening programmes which created more slots for admission. Figure 1 shows admission trends for diploma students from 2017/18 to 2021/22.



**Figure 1: Diploma Students Admission- 2017/18 to 2021/2022**

### 3.2.1.2 Undergraduate degree programs

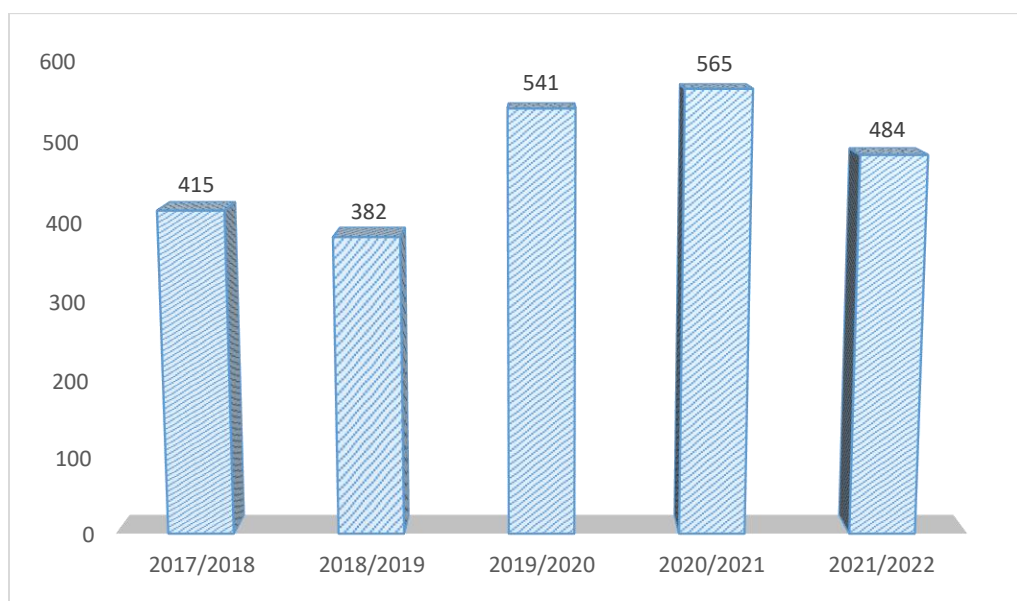
Figure 2 shows admission of undergraduate students during 2021/2022 a total of 848 students were admitted into all undergraduate Bachelor programs, which is a 68(8.7%) increase compared to 780 students admitted during the year 2020/21. Of the total, 630 (80.7%) were males and 218 (27.9%) were females. The female student enrollment in undergraduate programs is still short of the target of 40% aimed in the MUHAS Medium Term Strategic Plan.



**Figure 2: Undergraduate Students Admission - 2017/18 to 2021/22**

### 3.2.1.3 Postgraduate Programs

During the reporting period 484 postgraduate students were selected in various postgraduate programs. Of the total, 283(58.3%) were males and 201(41.5%) were females. However, for the past four years there has been a remarkable increase in number of postgraduate students admitted into various postgraduate programs, for example in 2017/2018, 415 postgraduate students were admitted, this number continued to increase until it reaches to 565 in 2020/2021. During the reporting year there was a slight decrease of about 81 students.



**Figure 3: Postgraduate Students Admission – 2021/2022**

## 3.3. Students Enrollment during from 2017/2018 to 2021/2022

### 3.3.1 Diploma Students

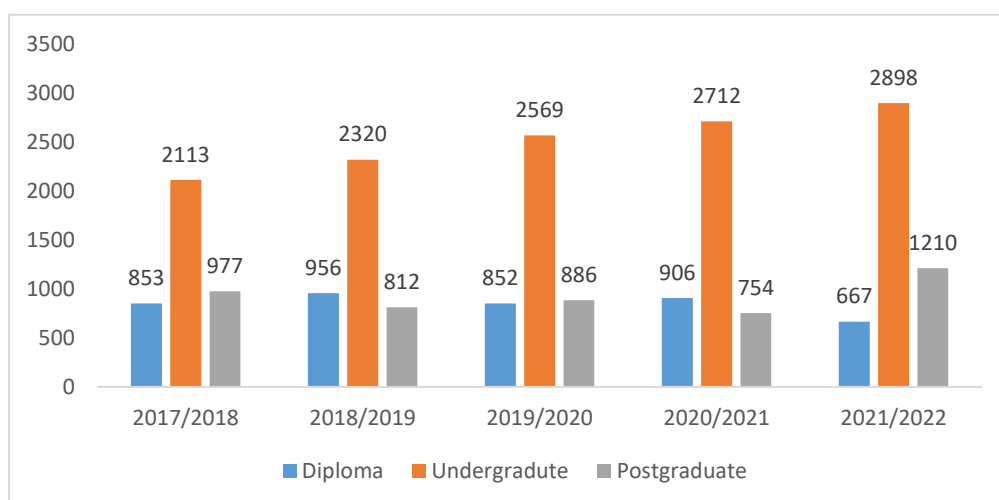
During the year 2021/2022 the Institute enrolled a total number of 667 students, 390(58.5%) male and 277 (41.5%) female students were enrolled in various MUHAS diploma programs. Compared to 754 students enrolled in the year 2020/2021 the number of student enrolment decreased by 87(11.5%) students (Figure 4).

### 3.3.2 Undergraduate Students

The number of students enrolled during 2021/2022 into all undergraduate programs was 2,898, this marked an increase of 186 (7%) students compared to 2,712 students enrolled in 2020/2021 (Figure 4). During the reporting period, 735 (25.3%) of the total students enrolled in undergraduate programs were females and 2163 (74.6%) were males.

### 3.3.3 Postgraduate Students

The number of postgraduate students enrolled in the universities has been consistently increasing from 2016/17 to 2021/2022. During the reporting period, a total of 1,210 was enrolled into various postgraduate programs and the number of students increased by 11.5% compared to 2020/2021 enrollment (1,085). Among students enrolled in Master programs 518 (42.8%) were females. (Figure 4).



**Figure 4: Diploma, Undergraduate and Postgraduate Students Enrolment from 2017/18 to 2021/22**

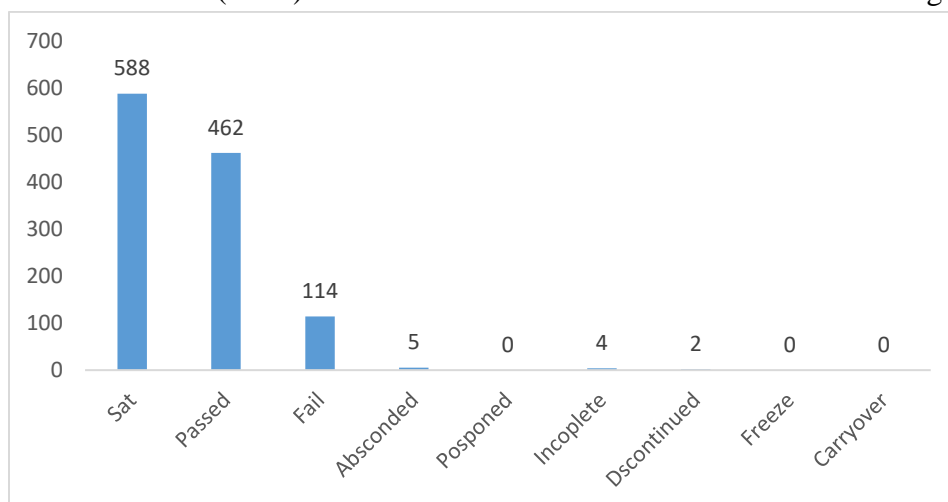
## 3.4. Performance in Examinations during 2021/2022

### 3.3.4 Diploma Programs

A total of 588 students sat for examination during the reporting period and 462 (78.6%) passed at first sitting. A total of 114 (19.4%) failed their examination during the first sitting, five5 (0.8%) students was Absconded from Studies, None



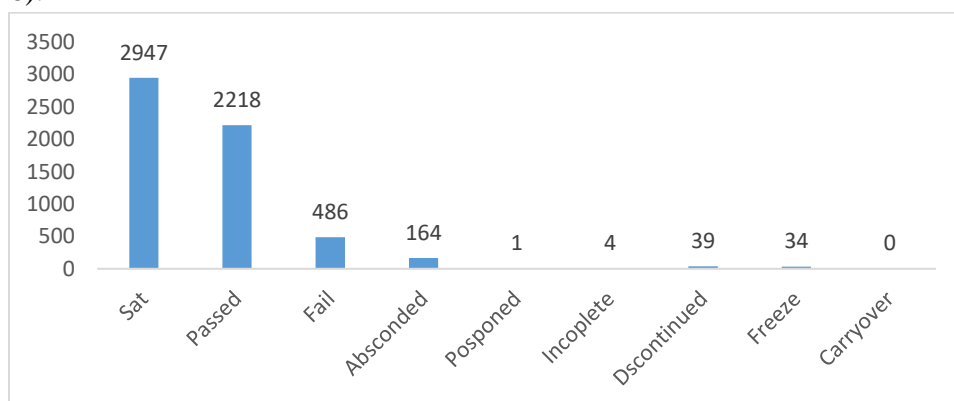
students were discontinued on academic ground, One 4 (0.7%) student was not completed his/her studies, There were no student carried over and frozenhis/her studies and two (0.3%) students were discontinued from their studies Figure 5.



**Figure 5: Performance of Diploma students during the 2021/22 Examinations**

### 3.3.5 Undergraduate Programs

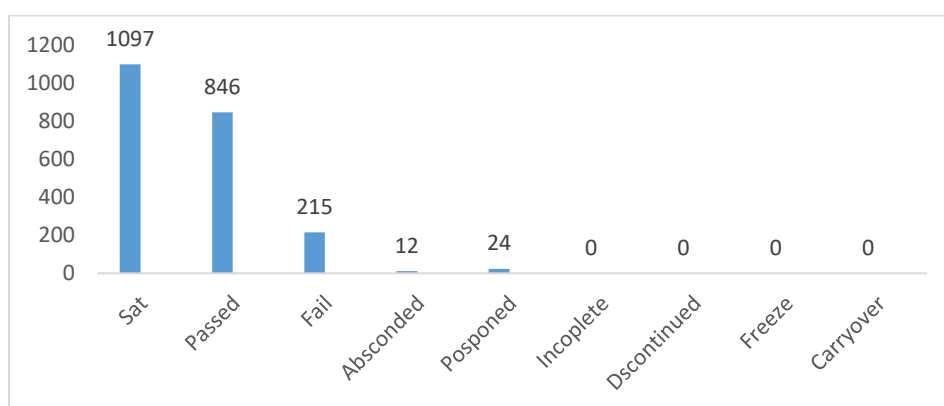
During the reporting period, a total of 2,947 Undergraduate students sat for university examinations and 2,218 (75.3%) passed their examinations. A total of 486 (16.5%) failed their examination, 164 (5.6%) students were Absconded from Studies, two1 (0.03%) Students postponed their studies and 4 (0.12%) students had incomplete results. Thirty-nine 39 (1.3%) Students were discontinued (Figure 6).



**Figure 6: Performance of undergraduates' students during the 2021/2022 Examinations**

### 3.3.6 Postgraduate Programs

During the reporting period, a total of 1,085 postgraduate students sat for University examinations and 858 (79.087%) passed their examinations. Among those who failed during their examinations 193 (17.78%) students were referred to do supplementary examinations, Three3 (0.28%) students were absconded from Studies, Five5 (0.46%) students postponed examination, Two 2 (0.18%) students postponed their studies, and Twenty two22 (2.03%) students were Incomplete their Results, Three3 (0.28%) Students were Carry over, Three3 (0.28%) student were Deceased and Twenty two 22 (2.03%) students had frozen their studies, Seven7(0.65%) students were discontinued (Figure 7).

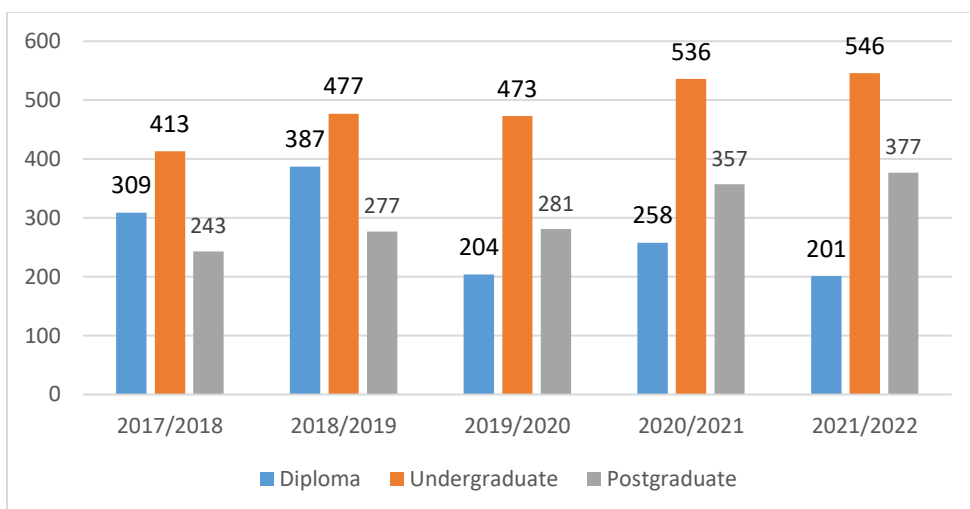


**Figure 7: Performance of Postgraduate students during the 2021/2022 examinations**

## 3.5. Students Output

### 3.5.1 Diploma Programs

During the period under review 201 diploma students completed their studies, the total of 80 (39.8%) were female. During the reporting period the number of qualifying candidates decreased by 57 (22%) compared to the year 2020/21. Figure 8 shows Diploma, undergraduate and postgraduate outputs from 2017/18 to 2021/22 while Figure 9 shows Diploma, Undergraduate and Postgraduate Graduates by Sex (2022 Graduation Ceremony)



**Figure 8: Diploma, Undergraduate and Postgraduate Graduates-2017/18 to 2021/22**

### 3.5.2 Undergraduate Degree Programs

The number of graduates during the reporting period (2021/22) were 546 and the number of qualifying candidates increased by 10(1.9%) compared to 536 students who graduated in the year 2020/2021. Of the total undergraduate students who graduated during the reporting period, 171 (31.9%) were female.

### 3.5.3 Postgraduate Programs

During the reporting period, a total of 377 students graduated at postgraduate programs indicating an increase in number of qualifying candidates by 20(5.6%) compared to 357 students who graduated in 2019/2020. Out of the total postgraduate graduates 190 (53.2%) were females.

## 3.6. Graduation Ceremony December, 2021

During the reporting period the University marked its 15th graduation ceremony on 4<sup>th</sup>, December 2021 during which a total of 1,124 graduates were awarded degrees and diplomas as follows: - two hundred and One (201) Diplomas and Advance Diploma and Five hundred and forty-six (546) first degrees.

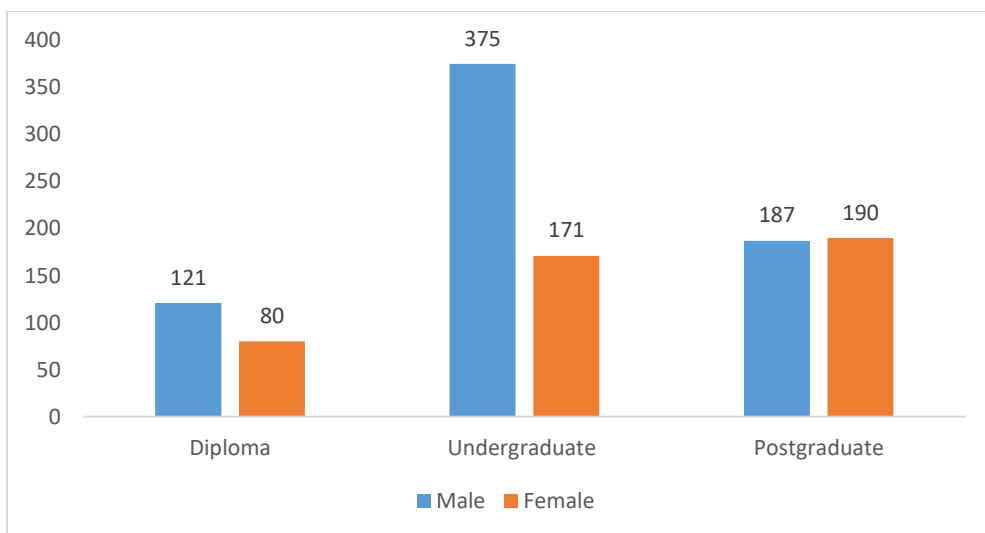
Diploma and Advance Diploma Students were (201), Diploma in Medical Laboratory Sciences (20), Diploma in Environmental Health Sciences (43), Diploma in Diagnostic Radiography (30), Diploma in Orthopedic Technology

(10), Diploma in Pharmaceutical Sciences (24), Diploma in Nursing (51) and Advanced Diploma in Dermatovenereology (11).

First Degree Students were (546), Doctor of Medicine (185), BSc RTT (18), BMLS (95), BPharm (67), DDS (45), Bachelor of Science in Nursing (49) and BSc Environmental Health Sciences (85).

With regards to postgraduate students, 377 were awarded degrees as follows: - Doctor of Philosophy (4), Master of Science Super-Specialties (20), Master of Medicine (146), Master of Dentistry (5), Master of Pharmacy (6), Master of Science (4) Master of Public Health (60), Master of Bioethics Industrial Pharmacy (08), Master of Science (155), Master of Science in Traditional Medicine Development (3), Master of Science by Research and Publication (01)

During the reporting period, the number of female graduates who graduated were 441 (39.2%) compared to the previous year whereby 430 (37%) female students graduated. The total number of students who completed their studies was 1,124 which increased by 74(70%) student completed in the previous year which their total number of students who completed their studies was 1050 for the year 2021/2022.



**Figure 9: Diploma, Undergraduate and Postgraduate Graduates by Sex (2021) Graduation Ceremony)**

## 4.0 Reports from Schools and Directorates

### 4.1 School of Medicine



#### 4.1.1 Introduction

This is the annual report of activities and events in the School of Medicine at MUHAS, from 1<sup>st</sup> July, 2021 to 30<sup>th</sup> June, 2022. The report summarizes activities related to student's registration for undergraduate and postgraduate programmes, provides an overview of teaching, research, consultancy and public services and highlights on governance matters in the school during the reporting period.

**Prof. Pachal Ruggajo**  
**Ag. Dean, School of Medicine**

#### 4.1.1.1 Vision, Mission and Functions of the School

##### Vision of the School

A School of Medicine excelling in quality training of health professionals, research and public services with learning and working environment that is conducive.

##### Mission

To provide quality training, research and services in health and related fields for the attainment of equitable socio-economic development of the Tanzanian community and beyond.

#### 4.1.1.2 Functions of the School

The functions of the School and its activities are guided by core components of its mission and include:

- 1) To be directly engaged in the creation, transmission and evaluation of knowledge in medical sciences, laboratory and radiological treatment technologies in the pursuit of excellence in academic scholarship and intellectual inquiry through teaching, research and provision of advisory and public medical related services.

- 2) To provide a place of learning, education and research in medical sciences, laboratory and radiological treatment technologies and through this provide quality services commensurate with a good medical school.
- 3) To provide the labor market in Tanzania and Eastern Africa, with highly competent medical professionals and technologists able to contribute effectively to prevention, treatment and management of health-related problems in the society. This is to be achieved through the prime principle of integrating research, teaching and advisory services in the immediate subject areas.
- 4) To contribute to the intellectual and professional life of Tanzania and Eastern Africa and to act as a focal point for continuing professional development, research and services that are of interest to the people of Tanzania.
- 5) In terms of output the functions of the School are: -
  - (i) To provide undergraduate education in Medicine, Medical Laboratory Sciences and Radiotherapy technology for degree and non-degree programs.
  - (ii) To provide post-graduate education in different specialties and super specialties of medicine
  - (iii) Teach of students/trainees from other Schools/Institutes at MUHAS as well as from outside the University.
  - (iv) To prepare and publish medical educational materials in various fields of medical sciences.
  - (v) To conduct medical research and disseminate the findings.
  - (vi) To carry out scientific educational, professional and technical consultancy services on behalf of third-party clients under contract.
- 6) To engage in cost containment and income generating ventures for sustainability.

#### **4.1.2 Student Selection and Registration**

##### **i) Undergraduate programs**

##### ***Selection of applicants for undergraduate programs***

Selection of suitable candidates who applied to join the various degree programs in the School of Medicine for the 2021/2022 academic year has just been concluded and the names for the selected candidates have been published in the MUHAS website. A total of 445 candidates were selected for the 5 undergraduate programs. The total number of selected candidates'

represents a slight increase (2.7%) compared to the 433 candidates selected for 2020/21 academic year.

Among the selected candidates, 229 (51.5%) belong to Doctor of Medicine (MD) degree program which is same number as for 2020/2021 academic year. The enrolment in the SOM programs is limited by the program capacity as shown in Table 2.

**Table 2: Number of selected and Registered Candidates to join Undergraduate Programmes in SOM for 2021/2022**

Programme	Selected		Registered	
	All	Gender (M/F)		All
		Male (%)	Female (%)	
Doctor of Medicine	229	154(67.2%)	75(32.8%)	229(51.5%)
Bachelor of Science in Radiation Therapy Technology (BScRTT)	33	27 (81.8%)	6 (18.1%)	33(7.4%)
Bachelor of Medical Laboratory Sciences General (BMLS Gen)	35	34 (86.8)	1 (13.2%)	35(7.9%)
BMLS in Clinical Chemistry (BMLSCC)	21	16 (83.3%)	5 (16.7%)	21 (4.7%)
BMLS in Haematology and Blood Transfusion (BMLSMBT)	20	16 (78.9%)	4 (21.1%)	20 (4.5%)
BMLS in Histotechnology (BMLS Histo)	19	15 (94.1%)	4 (5.9%)	19 (4.3%)
BMLS in Parasitology and Medical Entomology (BMLS PE)	25	16 (87%)	9 (13%)	25 (5.6%)
BMLS in Microbiology and Immunology (BMLSPE)	20	17 (81%)	3 (19%)	17 (3.8%)
Bachelor of Biomedical Engineering (BBME)	21	18 (100%)	3 (0%)	21 (4.7%)
Bachelor of Physiotherapy	22	14 (100%)	8 (0%)	22 (4.9%)
Total Candidate Selected	445	317(71.2%)	128(28.8%)	445 (100%)

Overall, the 128 (28.8%) number of registered female candidates for the 2021/2022 academic year remains far below the 50% target mainly due to the low number of

suitable female applicants. Of all the selected 445 candidates for undergraduate programs, 421 (94.6%) were actually registered (Table 3).

### ***Selection of applicants for Postgraduate degrees***

In total, 365 applicants were selected to join postgraduate programs (MMed, MSc and MScSS) in the school of Medicine. This number represents decrease by 7.4% compared to 394 candidates who were selected to join the programs for the 2020/2021 academic year.

**Table 3: Selected Candidates for MMed programs in SoM for 2021/2022 academic year**

Programme	Number Selected Candidates	Gender (M/F)	
		Male (%)	Female (%)
MMed Obstetrics and Gynaecology	31	18	13
MMed Internal Medicine	31	22	09
MMed Surgery	22	18	04
MMed Radiology	22	09	13
MMed Emergency Medicine	18	11	07
MMedPaediatrics and Child Health	27	10	17
MMed Ophthalmology	16	11	05
MMedOrthopedics and Traumatology	25	23	02
MMed Clinical Oncology	15	10	05
MMed Otorhinolaryngology	21	14	07
MMed Anesthesiology	16	10	06
MMed Urology	18	17	01
MMed Anatomical Pathology	04	01	03
MMedHaematology& Blood Transfusion	15	06	09
MMed Psychiatry and Mental health	08	04	04
MMed Microbiology & Immunology	2	00	02
<b>Total</b>	<b>291</b>	<b>184 (63.2%)</b>	<b>107 (36.8%)</b>



**Table 4: Selected Candidates for MSc programs in SoM for 2021/22 academic year**

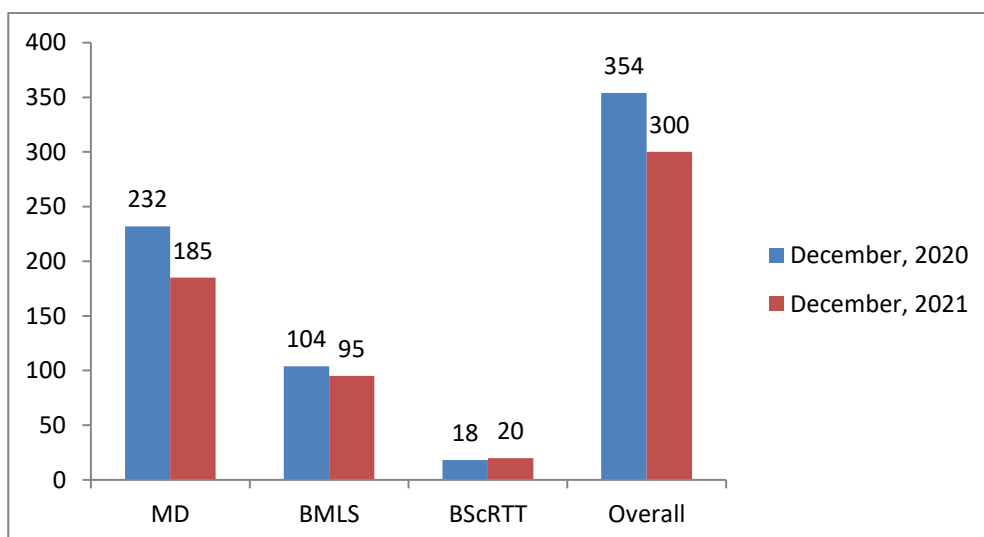
Programme	Selected	Gender (M/F)	
		Male (%)	Female (%)
MSc Microbiology and Immunology	07	04	03
MSc Clinical Psychology	09	05	04
MSc Nephrology	03	02	01
MSc Medical Gastroenterology & Herpetology	02	01	01
MSc Physiology	01	01	00
MSc Urology	02	02	00
MSc Clinical Pharmacology	02	02	00
MSc Anatomy	02	02	00
MSc Surgical Gastroenterology & Herpetology	02	02	00
MSc Neurology	01	01	00
MSc Histotechnology	02	02	00
MSc Neurosurgery	04	04	00
MSc Paediatric Haemato Oncology	03	00	03
MSc Cardiovascular Perfusion	04	02	02
MSc Cardiology	10	04	06
MScSS Cardiothoracic Surgery	03	03	00
MSc Interventional Radiology	03	02	01
MSc Neuroradiology	02	01	01
MSc Paediatric Surgery	03	03	00
MSc Respiratory Medicine	03	02	01
MScSS Urology	02	02	00
MSc SS Clinical Neonatology	04	00	04
<b>Total</b>	<b>74</b>	<b>47(64.0%)</b>	<b>23(346.0%)</b>

### 4.1.3 Teaching activities

All new Undergraduate and Postgraduate students were exposed to orientation week and the Undergraduates participated in the white coat ceremony held on 26<sup>th</sup> November, 2021. The white coat ceremony is a conversion from being a “*lay person*” to beginning the first steps to becoming a “*Health care Professional*”. Honoring the white coat as professionals is to emphasize a transition in the history of health care from a less to a more scientific approach to practice, associated with better outcomes for patients treated. Training activities and examinations were conducted as planned.

### 4.1.4 Assessment and Graduation

During 2021/2022 academic year, 300 undergraduate students graduated their first degrees including MD (n=185), BMLS (n=95) and BScRTT (n=20). Figure 10 shows the number of graduate students in 2021 against the previous year. The number of students that graduated from all undergraduate programs in December 2020 decreased by 25.7% from 354 in 2020 to the current 300.



**Figure 10: Number of graduates per undergraduate programs in 2020 and 2021**

### 4.1.5 New Programs

During the reporting period three new postgraduate program and two undergraduate programs from the school were discussed by the School board and senate and the Senate Quality Assurance committee and the same were forwarded to TCU for

accreditation for 2022/2023 academic year. The programme submitted for accreditation were:

1. Bachelor of Science in Audiology, Speech and language Pathology
2. Bachelor of Science in Occupational Therapy
3. Master of Science in Rhinology
4. Master of Science in Women Imaging
5. Clinical Neonatology (MSc. Neonatology)

#### **4.1.6 International Elective Students**

For this reporting year, the School received a total of forty (40) International students from various Universities for clinical elective study placement in various departments. This figure is more than the 38 and 14 students who reported in 2019/2020 and 2021/2022 respectively.

#### **4.1.7 Research and Consultancy**

##### **i) Research Projects**

During the reporting period over 234 collaborative research projects were conducted by members of academic staff. Several other studies were conducted by undergraduate and postgraduate students under supervision.

##### **ii) Publications by academic members of staff**

By the end of June 2022, a total of 234 collaborative research projects were implemented, out of these, 160 were ongoing and 74 were new. In addition, members of academic staff were engaged in over 60 specific research studies and supervising more than 400 student research projects. The period from 1<sup>st</sup> July 2021 to 30<sup>th</sup> June 2022 recorded a total of 172 publications (Appendix 1) in peer reviewed journals mostly in International Journals. The number of publications (172) for the 2021/2022 academic year represents a decrease in publication output by 59 from the 231 publications that were reported for 2020/2021 academic year but a significant decrease by 22.5% from the 298 publications reported for the year 2019/2020. This decrease could be attributed by the slowing of research activities due to COVID-19 pandemic that limited international collaborations. The reported publications were searched from PubMed, Google Scholar, HINARI and other databases and appraised by the responsible departments/authors provided one of the authors is a listed School of Medicine academic staff Member and is identified by the publishing Journal as MUHAS affiliate.

### **iii) Consultancy**

At our sister clinical service institutions, MNH, MAMC, MOI, ORCI, JKCI and district hospitals in Dar es Salaam, staff continued to provide in-patients and out patients services including management of COVID-19 patients. During the reporting period staff in the School of Medicine continued to provide consultancy services and collaborations in various capacities and institutions, but predominantly in support of the MOHCDGEC, Research and workshops in-country.

### **4.1.8 Governance Matters**

#### **i) New Staff recruited**

During the reporting period MUHAS received from the President's Office – Public Service Management & Good Governance the permit to employ Tutorial Assistants (TAs). The School of Medicine received five (5) tutorial assistants and two (2) Health Laboratory Scientist.

#### **ii) Staff appointments**

During the reporting period the University Management appointed new Heads of Departments in the School of Medicine for the triennium 2021/2022- 2023/2024. Further on the same the University management appointed the Ag Dean of School of Medicine and Ag Associate Dean for the triennium 2021/2022- 2023/2024.

#### **iii) Honorary lecturer appointments**

During this reporting period twenty three (23) academic staffs were nominated as Honorary/Adjunct Lecturers to various departments.

### **4.1.9 Staff Development and Performance Appraisal**

#### **i) Transfers or Resignations**

During the reporting period one academic staff (Prof. Projestine S. Muganyizi) Dean School of Medicine was transferred to University of Dar es Salaam-Mbeya branch as Principal of the College. The position of the Dean School of Medicine was replaced by appointing of Dr. P. Ruggajo to be the acting Dean of the School. Furthermore, there was no academic/administrative staff reported to resign from public service.

#### **ii) Performance Agreements 2021/2022**

During the reporting period all academic and administrative staff from the School of Medicine were appraised against set OPRAS objectives for 2021/2022.

**iii) Security Matters**

During the reporting period, there was no remarkable security issue.

**iv) Health Matters**

During the reporting period one death case reported. Academic staff in the School of Medicine Dr. August Massawe from the department of Paediatrics and Child Health died on 13<sup>th</sup> August, 2021. The deceased was buried in Umbwe, Moshi. May his soul rest in peace.

## 4.2 School of Dentistry



**Dr. Matilda Mtaya**  
**Dean, School of Dentistry**

### 4.2.1 Introduction

The School of Dentistry was established in 1979 as a Division of Dentistry of the Faculty of Medicine of the University of Dar es Salaam with the following objectives:

1. To train undergraduates in all aspects of dentistry and teach theoretical medical and basic sciences leading to a degree of Doctor of Dental Surgery (DDS),
2. To provide oral health care to patients in and around Dar es Salaam region and referral cases from upcountry,
3. To function as a research centre, where different researches on oral health are carried out, monitored, and coordinated with other collaborating agencies from the government and private sector in the country and from abroad. These include health agencies such as the Tanzania Food and Drug Authority, Ministry of Health, other Ministries like Commerce and Industries, Local governments, in preventing the occurrence of oral diseases through advocating proper oral hygiene and controlling the consumption of cariogenic non-essential foodstuffs and other predisposing factors to oral conditions.
4. To team up with the Ministry of Health in the training of other oral health personnel who usually work closely with the dental surgeon in rendering services to patients.

To-date there are several Dental Schools in Tanzania, but the School of Dentistry-MUHAS is the only institution in Tanzania where dental education is offered at both, first degree and postgraduate levels.

### Functions:

- (i) Training graduate dentists and postgraduate specialists in different oral health fields suitable for hospital and community work in Tanzania, regionally and

internationally

- (ii) Carrying out research in all fields of oral health
- (iii) Providing continuing education in all fields of oral health
- (iv) Rendering oral health services to patients at specialist and super specialist levels
- (v) Providing advisory services to the government in the field of oral health

#### 4.2.2 Activities during the Reporting Period

In 2021/2022, sixty-five (65) undergraduate and nine (09) postgraduate students were admitted in the School of Dentistry. This was the same number of undergraduate students as those admitted in the previous reporting year (2020/2021). There was, however, a change in the number of admitted postgraduate students whereby in 2020/2021 11 students were admitted, which was a decrease of 18.18%. Teaching both theoretical and clinical, and fieldwork rotations were conducted smoothly. In September 2021 and March 2022 University examinations for both undergraduate and postgraduate students were conducted successfully according to the University almanac. The number of enrolled undergraduate students remained the same as the previous year because limited capacity of the school.

A total of thirty-five (35) undergraduate students, thirty (30) males, and five (5) females completed studies and graduated in December 2021. The number of undergraduate graduands remained the same as of 2020/21. Four (4) postgraduate students (1 male and 3 females) graduated, therefore there was an increase of 100% compared to 2 only who graduated in 2020/2021.

The school continued to use professionalism assessment tools during clinical rotations with success. Sensitization of staff and students on the importance of using this tool continued with good compliance. This is an on-going process which is continuously modified and improved along the way according to existing needs. Implementation of the CBC continued smoothly focussing at inculcating into the students adequate skills in all aspects of clinical dentistry and community dentistry which will enable them to work independently in any part of the world. The step-wise acquisition of competencies which started with exposure during the third year followed by junior and senior clinical rotations laid down a good foundation for better performance in their future practice.

During the year under review (2021/2022) one academic member of staff was continuing with his PhD programme. He is currently collecting collect data.

Members of staff and students attended seminars and continuing education sessions within Tanzania. One (1) academic member of staff from the Restorative Department was invited as external examiner at MOI University in Kenya and other members from Oral and Maxillofacial Surgery and OPCD were invited as external examiners and at the University of Nairobi which they did virtually. There was one external examiner from the University of Nairobi who virtually moderated examinations in the department of Restorative Dentistry.

During the academic year under review, members of staff from the School conducted research that resulted in 13 publications, which is a decrease of 15.3% compared to 15 publications of the previous year. Consultation and clinical services to patients with oral health problems in the School of Dentistry clinics, The Muhimbili National Hospital and Mloganzila campus were provided throughout the year with active participation of members of staff from the School working in collaboration with clinical staff of the MNH.

### Departments of the School of Dentistry and their Core functions

The three departments of the School of Dentistry implemented fully their core functions through teaching undergraduate and postgraduate students, conducting research, rendering services to patients and offering preventive and community activities to the general public. Outreach services in primary school and the general community were carried out in Dar es Salaam and Morogoro regions.

### 4.2.3 Management Profile in the School of Dentistry during the Reporting Period

**Table 5: The Management Team of the School of Dentistry**

S/N	NAME	POSITION
1.	Dr. Matilda Mtaya-Mlangwa	Dean, School of Dentistry
2.	Dr. Karpal Singh Sohal	Head, Department of Oral and Maxillofacial Surgery (OMS)
3.	Dr. Ferdinand M. Machibya	Head, Department of Orthodontics, Paedodontics and Community Dentistry (OPCD)
4.	Dr. Lilian E. Mkonyi	Head, Department of Restorative Dentistry (RD)
5.	Dr. Tumaini Simon	Dental Manager, School of Dentistry



#### 4.2.4 Staff Matters

There was a slight change in the number of staff compared to that of the previous reporting year with a total of 25 members, of whom 15 (60%) are males and 10 (40%) females. This is due to demise of two (males) academic member of staff during the previous reporting period. The profile of academic staff numbers and ranks is as shown below.

**Table 6: Academic Staff in the School of Dentistry**

Department	Designations							
	Profess ors	Associ ate Profess ors	Senior Lectur ers	Lectur ers	Assist ant Lectur ers	Tutor ial Assist ant	Tot al	On Contr act
RD	0	0	4	2	0	3	9	3
OPCD	1	0	5	0	0	2	8	1
OMS	0	0	5	1	0	2	8	3
<b>Total</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>25</b>	<b>7</b>

**KEY:** RD = Restorative Dentistry, OPCD = Orthodontics, Paedodontics and Community Dentistry, OMS = Oral and Maxillofacial Surgery.

The overall faculty to students' ratio is 1:10.8 for all DDS students, 1:18.6 in Oral and Maxillofacial Surgery, 1:16.5 in Restorative Dentistry, and 1:18.6 in Orthodontics, Paedodontics and Community Dentistry. The number of academic staff and faculty to student ratios were almost static compared to the previous reporting year.

**Table 7: Number of Administrative, Technical and Support Staff in the School of Dentistry**

Qualification	Male	Female	Total
Master Degree	1	0	1
Bachelor Degree	4	3	7
Diploma	6	7	13
Certificates	0	1	1
Primary School Education	1	1	2
<b>Total</b>	<b>12</b>	<b>12</b>	<b>24</b>

The number of non-academic staff remained the same as the previous year 2020/2021. The number of non - academic staff to student ratio is 1:16.

### 4.2.5 Students matters

#### 4.2.5.1 Enrolment

##### Undergraduate

In 2021/2022, sixty-five (65) undergraduate students (8 females and 57 males) were admitted in the School of Dentistry. The number of students remained static compared to the previous reporting year (2020/2021). Teaching in the School and fieldwork rotations (Nutrition field, elective period and Morogoro rotations) were conducted smoothly. In August/September 2021 and March/April 2022 both undergraduate and postgraduate students sat for the University examinations which were successfully conducted according to the University almanac. Efforts made locally and internationally to advertise the programmes that are offered by the School helped to attract applicants. However, this was not without challenges. The challenges included a declining number of teaching personnel while students' numbers are increasing which will create unfavourable personnel: student ratio. Similarly, the increase in enrolment, while the available space and facilities remain the same, poses a big challenge in clinical teaching.

The total number of undergraduate students increased from 271 to 301 compared to that of the year 2021/2022, which is an increase of 1.11%.

**Table 8: Enrolment of Undergraduate Students, School of Dentistry**  
**Postgraduate**

DDS	Sex		Total	Female %
	M	F		
Semester 1 - 2	57	8	65	12.3%
Semester 3 - 4	52	7	59	11.8%
Semester 5 - 6	54	6	60	10%
Semester 7 - 8	48	14	62	22.5%
Semester 9 - 10	44	11	55	20%
<b>Total</b>	<b>255</b>	<b>46</b>	<b>301</b>	<b>76.6%</b>

#### **Enrolment of Postgraduate Students:**

Nine (9) postgraduate students were admitted in the School of Dentistry during the reporting year. Compared to the previous reporting year (2020/2021) this was a decrease of about 18.18% for postgraduate students' admission. This number of postgraduate students in the school was low in all departments compared to the capacity of the School. The school is making efforts to rectify this by encouraging undergraduate students to develop interest in the different specialities offered by the School. Also, students are urged to work hard and attain good overall GPAs which will allow them to qualify for admission for postgraduate studies in the different programmes that are offered by the School.

#### **4.2.6 External examiners**

The School did not receive any external examiners for the March 2022 University examinations. There were moderators for each department.

The observations and recommendations of the moderators were discussed at departmental and School Board levels and reactions were submitted to higher University organs and appropriate measures by the departments were accordingly taken.

#### **4.2.7 Graduation Statistics**

In December 2021 thirty-five (35) undergraduate (thirty (30) males and five (05) females) and four (4) postgraduate students (1 male and 3 females) graduated.

Generally, there was no increase of graduands for undergraduates, however there was a 44% decrease in the number of female graduands. For postgraduates the number of students increased by 100% from 2 to 4 compared to the previous year (2020/2021).

**Table 9: Graduation Statistics of Undergraduate and Postgraduate, School of Dentistry for year 2021/2022**

Undergraduate - Degree Programme (DDS)	DDS Students Graduated		
	M	F	TOTAL
	30	5	35
Postgraduate – All MDent Degree Programmes	MDent Students Graduated		
	M	F	TOTAL
	1	3	4

#### 4.2.8 Major Ongoing Research

Several research projects were in progress during the reporting period some of which are internally funded and some externally funded.

**Table 10: .....????????? Title missing**

SN	Title of the Research project	Research Coordinator	Department
1.	Hawa Shariff Mbawalla, Shadia Majid Abubakary, Febronia Kokulengya Kahabuka. Dental care services in children: Pattern and factors for delay in seeking care among Tanzanian paediatric dental patients. Journal of Oral Health and Oral Epidemiology (Resubmitted 3 <sup>rd</sup> February 2022)	Dr. Hawa Shariff Mbawalla	Orthodontics Paedodontics and Community Dentistry
2.	National Oral Health survey.	Dr Joyce Rose Masalu	Orthodontics Paedodontics and Community Dentistry
3	The prevalence of clinical Temporal Mandibular Disorders and associated factors among patients attending MUHAS	Dr. Daniel EL,	Orthodontics Paedodontics and Community Dentistry

	orthodontic clinic. Won SIDA small grant for junior faculty. won SIDA small grant for Junior faculty.		
4.	Dental anxiety, Oral Health Status and Oral Health Related Quality of Life among private and public institution employees in Dar es salaam. Sida Seed Grant.	Dr.MeleaLusinde	Restorative Dentistry Department
5.	Survey of Knowledge, Attitudes, Skills and Practice of Evidence-Based Dentistry (EBD) among dental students and dentists in Tanzania. Sida Seed Grant.	Dr.DeodatusSabas	Restorative Dentistry Department
6.	Predicting Uptake of Covid-19 Vaccine Among University Students Attending MUHAS, UDSM, CBE and KCMC Using the Extended Theory of Planned Behavior. Sida Seed Grant.	Dr.Fortunata Cornel	Restorative Dentistry Department

## 4.2.9 Major works implemented during 2021/2022

### 4.2.9.1 Department of Restorative Dentistry (RD)

During the reporting period the School of Dentistry implemented various activities through their departments as follows:

- Screening of personnel of some public institutions as part of outreach programs and offering of Atraumatic Restorative Technique (ART) by both undergraduate and postgraduate dental students under supervision.
- Promotion of research activities among staff through writing grant proposals and concept notes
- Promotion of collaboration with other Universities and strengthen existing collaborations.
- Visits to primary schools by postgraduate students and their supervisors were conducted.

#### **4.2.9.2 Department of Orthodontics, Paedodontics and Community Dentistry (OPCD)**

- i. Promotion of research activities among staff through writing grant proposals and concept notes continued.
- ii. Provision of treatment to children with special needs.
- iii. Conducting outreach services to schools.
- iv. Promotion of collaboration with other Universities.

#### **4.2.9.3 Department of Oral and Maxillofacial Surgery (OMS)**

- i. Promotion of research activities among staff through writing grant proposals and concept notes.
- ii. Provision of specialized treatment services to adults and children for both outpatients and inpatients.
- iii. Promotion of collaboration with other Universities and strengthening existing collaboration.

#### **4.2.10 MUHAS - MNH Cooperation and Clinical services**

Good working relationship and cooperation was maintained between the two institutions during the reporting period (2021/2022). MUHAS-MNH staff meetings took place as per schedule every three months. During 2021/2022 most of the routine activities in the School were run using internally generated funds with minimal dependence on government subventions.

#### **4.2.11 Visits**

##### **Visit to the School of Dentistry**

The School received a visitors from the USA and Turkey.

##### **Visits from the School of Dentistry**

The School members did not visit anywhere in any academic trip.

#### **4.2.12 Deaths**

There was no death during the year 2021/2022

## 4.3 School of Pharmacy

### 4.3.1 Introduction



**Prof. K. Mwambete,  
Dean School of Pharmacy.**

The School of Pharmacy has five Departments namely; Medicinal Chemistry, Pharmacognosy, Pharmaceutics and Pharmacy Practice, Pharmaceutical Microbiology and Clinical Pharmacy and Pharmacology. The School has one undergraduate programme (Bachelor of Pharmacy) and eight postgraduate programmes, which are MPharm Quality Control & Quality Assurance, MPharm Pharmacognosy, MPharm Industrial Pharmacy, MPharm Pharmaceutical Microbiology, MPharm in Hospital and Clinical Pharmacy, MPharm Medicinal Chemistry, MPharm Pharmacovigilance & Pharmacoepidemiology and MSc Pharmaceutical Management.

The School continued to provide services in drug quality control through its Pharm Research & Development Laboratory to clients and assisting in several areas of pharmaceutical services, policy formulation and implementation. Also, the School has been spearheading a fight against coronavirus pandemic by producing sanitizers and other service to the MUHAS community and other clients.

### 4.3.2 Highlights of Major Achievements and Challenges

During 2021/2022, the School recorded various achievements as detailed below: -

#### **Teaching and Learning**

##### **Academic programmes**

In the reporting period, the School advertised its undergraduate programme and all its postgraduate programmes to attract candidates. Several approaches such as Saba-Saba, higher education exhibitions within and outside the country, Pharmacy week and MUHAS Annual Conference, Pharmaceutical Society of Tanzania General Assembly, Tanzania Pharmaceutical Students' Association Annual Conference were used for marketing the programmes.

### Admission of Postgraduate Students in the School for 2021/2022

During the academic year 2021/2022 a total of 15 postgraduate students was admitted as shown in table 8 below.

**Table 11: Admission of postgraduate students in 2021/2022**

Programme	Female	Male	Total
MSc Pharm Mgt	-	-	-
MPharm QA & QC	1	1	2
MPharm Hospital & Clinical Pharmacy	-	4	4
MPharm Industrial Pharmacy	1	1	2
MPharm Pharmacognosy	-	1	1
MPharm Medicinal Chemistry	-	1	1
MSc Pharmacovigilance & Pharmacoepidemiology	1	3	4
MPharm Pharmaceutical Microbiology	-	1	1
MSc by Research	-	-	-
<b>TOTAL</b>	<b>3</b>	<b>12</b>	<b>15</b>

### Admission of Undergraduate Students for 2021/2022

For the undergraduate programme, the School admitted 72 students (13 Females and 59 Males); three students did not report. Therefore, the actual enrolment capacity is 75 students per year.

#### Student Registration

New and ongoing student registration during the reporting year is summarized in Tables 9 and 10 –

**Table 12: B.Pharm. Student enrolment in 2021/2022**

First Year			Second Year			Third Year			Fourth Year			Grand Total		
F	M	T	F	M	T	F	M	T	F	M	T	F	M	T
13	59	72	21	41	62	14	54	68	30	39	69	78	193	271

The figure for the first-year students is relatively lower than the anticipated admission capacity (75) because three (3) students absconded for various reasons; though the figure is slightly higher than that of year 2021/2022. However, the School intends to expand enrolment of BPharm students to 100 for the next academic year 2022/2023 to cope with the ever-increasing number qualified applicants for BPharm programme in the country, and this is in line with the



School strategy of transforming into College of Pharmacy once the infrastructure and other teaching facilities allow. The gender balance is disagreeable especially for the first year (18.06% female students for the first year; and 28.8% for the entire School). Although the School's strategy was to increase the proportion of female students from 30% to 40% by 2022.

**Table 13: Postgraduate Student Admission in 2021/2022**

Academic Year	MSc Pharm Managt		MPharm QC & QA		MSc Vig & PharmEpid		MPharm Hosp & Clinical Pharm		MPharm Industrial Pharmacy		MPharm Pharmacognosy		MPharm Medicinal Chemistry		MSc by Research		MPharm Pharm. Microbiol	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
2021/2022	-	-	1	1	1	3	-	4	1	1	-	1	-	1	-	-	-	1
Percentage	-	-	50	50	25	75	0	100	50	50	0	100	0	100	-	-	0	100

### Implementation of the Competence Based Curriculum and Performance in Examinations

Teaching of modular programs for the undergraduate (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> years) and postgraduate was well conducted notwithstanding the Covid-19 pandemic. Students sat for regular Continuous Assessment Tests (CATs) and the end of module examinations in March, 2022. Failure rate for the first-year students in March 2022 was 16.9% which was relatively lower compared to year 2020/2021 which recorded a failure rate of 19.0% (Table 11).

The second-year students recorded a failure rate of 8.1% during this semester which is lower compared to the previous year which had 34.0%. Third year students recorded a failure rate of 14.7% relatively lower compared to the academic year 2020/2021 which recorded the failure rate of 21.0%. One postgraduate student and two undergraduate students were discontinued on academic grounds in the March 2022 examinations.

Academic activities for 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, and 8<sup>th</sup> semesters continue and the end of audit year examinations are scheduled to end on 18<sup>th</sup> August, 2022.

The academic performance for postgraduate students was generally good. Only MPharm Hospital and Clinical Pharmacy second year students sat for the March 2021 university examinations, and all of them passed. Majority of the second-year

postgraduate students are on the dissertation module, and their results shall be reported at the end of audit year in August 2022. The competency-based curricula are being implemented despite existing shortfalls such as budgetary deficits for laboratory works, relatively higher number of students versus available faculty and teaching infrastructure considering that about 33% (n=12) of the members of academic staff are on study leave. Both Undergraduate and postgraduate first year students have started implementing the newly introduced the Tanzania Commission for Universities grading systems. Now the pass mark is set at 60% (B) and 50% (C) for the postgraduate and undergraduate programs respectively, and grade A commences at 75% for both programs.

**Table 14: Student performances in examination at first sitting**

<b>SUMMARY OF RESULTS</b>	<b>1st yr</b>	<b>2nd yr</b>	<b>3rd yr</b>	<b>4th yr</b>
Students sat for the Examination	71	62	68	69
Students who passed	59	56	58	68
Students who failed	12	5	10	1
Students who absconded	0	0	0	0
Students who postponed studies	1	0	0	0
Students whose results were withheld	0	0	0	0
Incomplete results	0	1	0	0
Failure rate %	16.9%	8.1%	14.7%	1.4%

**Table 15:: Postgraduate Student performance**

Number of students	MSc Pharm Mgt		MPharm QC & QA		MPharm Hospit. & Clinical Pharmacy		MPharm Industrial Pharmacy		MPharm Medicinal Chemistry		MPharm Pharmacognosy		MSc Vig & PharmEpid		MPharm Pharm. Microbiol	
	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2
Sat for the Exam	-	5	2	-	4	2	2	2	1	-	1	3	4	-	1	-
Passed	-	5	0	-	3	2	1	1	1	-	1	3	1	-	0	-
Failed	-	0	2	-	1	0	1	1	0	-	0	0	3	-	1	-
Failure (%)	-	10 0	10 0	-	25	0	50	50	0	-	0	0	75	-	10 0	-

## Graduate output

A total of 67 undergraduate students and 10 postgraduate students graduated during the December, 2021 graduation ceremonies. More students graduated in the academic year 2020/2021 (67) compared to 2019/2020 (55), which is an increase of 21.8%. Nevertheless, only 10 postgraduate students graduated in 2020/2021 as compared fifteen (15) students in 2019/2020. Dearth of incentives for pharmacy graduates due to the inauspicious scheme of services that does not recognize the postgraduate pharmacy personnel to great extent deter the enrollment into our postgraduate programs.

### 4.3.3 Human Resource Development

#### Staff Development

During the year under review (2021/2022), two academic members of staff, Mr. Meshack Damian Lugoba from the Department of Pharmacognosy and Ms. Wema AswileKibanga from Department of Clinical Pharmacy & Pharmacology successfully completed their Master studies at MUHAS. Six faculty are still pursuing PhD studies and three (3) are on Masters Studies as presented in Table 13.

**Table 16: Academic staff training during the reporting period**

S/N	Name	Department	Degree Sought (Institution)	Status
1	Mr. Meshack Damian Lugoba	Pharmacognosy	MUHAS-MPharm. Pharmacognosy	Completed in Dec 2021
2	Ms. Wema AswileKibanga	Clinical Pharmacy and Pharmacology	MUHAS-MPharm. Hospital& Clinical Pharmacy	Completed in Dec 2021
3	Mr. Masota, Nelson	Medicinal Chemistry	PhD (German)	To graduate in 2023
4	Mr. Dickson Pius	Pharmaceutics & Pharmacy Practice	PhD (China Pharmaceutical University) China	To graduate in 2022
5	Mr. Alphonse I. Marealle	Clinical Pharmacy and Pharmacology	PhD (MUHAS)	To graduate in 2022

6	Mr. Raphael Shedafa	Medicinal Chemistry	PhD (MUHAS)	To graduate in 2023
7	Ms. AmisaTindamanyile	Pharmaceutics & Pharmacy Practice	PhD (KIS) Norway	To graduate in 2023
8	Mr. Vitalis Mbuya	Pharmaceutics & Pharmacy Practice	PhD (Bergen University, Norway)	2020-2023
9	Ms. Beatrice Godwin Aiko	Pharmaceutics & Pharmacy Practice	MSc Pharm Management-MUHAS	To graduate in 2022
10	Ms. Cleopatra Nyowella	Pharmacognosy	MUHAS-MPharm. Pharmacognosy	To graduate in 2022
11	Ms. Judith K. Constantine	Pharmacognosy	MUHAS-MPharm. Pharmacognosy	To graduate in 2022

#### 4.3.4 Research and Publications

##### Research/seminar dissemination

The School continued conducting symposia every Wednesday from 12.40 to 13.45 as one of the strategies of strengthening academic and research activities and exchange of skills and knowledge among faculty. In the period under review, symposia were not conducted for various reasons including covid-19 pandemic.

##### Research and Publications in the School

Individual faculty and through their research clusters continuously conducted research in areas of their interests and published their research findings in various national and international peers reviewed journals. A total of 67 (July 2021 to June 2022) scientific publications was published in several peers reviewed scientific journals.

The School of Pharmacy in collaboration with the Pharmacy Council of Tanzania and Tanzania Medical Devices and Drugs Authority (TMDDA) and Center for Pharmacy from University of Bergen, Norway, under the Partnership to Enhance Pharmacy Education and Research (PEPER) project continue to train three PhD candidates, one from MUHAS and the other two from TMDDA in fields of interests

for each part involved. As part of the PEPER project; two postgraduate students from University of Bergen, Norway, came to Tanzania to conduct research, under the students' exchange program. On the same line of the project, in early September 2021, five postgraduate students pursuing various Master's Degree Programs at the School visited the University of Bergen to complement their final year research / academic activities for a period of three months.

### Scientific/Professional conferences/Workshops

For this period under review, the 8<sup>th</sup> MUHAS Scientific Conference was organized at MUHAS on 26-27<sup>th</sup> July, 2021 in which most faculty from the School of Pharmacy actively participated.

### 4.3.5 Consultancy and public services

#### (i) Institutional Overhead/Internally generated funds

For the ending academic year 2021-2022, the School continued not to receive funds for various activities conducted at the school such as short courses, samples testing and consultancy works as well as production of sanitizers.

**Table 17: Internally generated funds and Institutional Overheads for 2021-2022**

S/N	ACTIVITIES	QUARTER	TSHS.	USD.	I/Overheads 15%	School income
1	Sample Testing	1st quarter 2021/2022	8,895,924.15	42,460.00	16,167,789.62	NIL
	Short course	1st quarter 2021/2022	12,000,000.00	0.00	1,800,000.00	NIL
2	Sample Testing	2nd quarter 2021/2022	19,332,426.06	0.00	2,899,863.91	NIL
	Sanitizers production	2nd quarter 2021/2022	86,757,000.00	0.00	12,900,000.00	NIL
3	Sample Testing	3rd quarter 2021/2022	6,281,448.52	0.00	942,217.28	NIL
	Sanitizers production	3rd quarter 2021/2022	72,400,000.00	0.00	10,860,000.00	NIL
4	Sample Testing	4th quarter 2021/2022	NIL	NIL	NIL	NIL
<b>TOTAL</b>		<b>TZS</b>	<b>205,666,798.73</b>	<b>42,460.00</b>	<b>45,569,870.81</b>	

#### (ii) External Examiners

In 2021/2022, the external examiners were invited to examine in Five Departments of the School. However, some of them couldn't come because of

some restrictions imposed as results of emergence of Covid-19 pandemic. Instead, most of the departments used internal moderators:

- In September 2021, the Department of Medicinal Chemistry invited Dr. Beatrice K. Amugune, Senior Lecturer from College of Health Sciences, University of Nairobi, Kenya, to serve as the External Examiner.
- The Department of Pharmaceutical Microbiology used a moderator, Prof. Veronica Mugoyela in the September 2021 University Examinations. Likewise, Dr. Phillip Sasi and Dr. Ramadhan Nondo served as the moderators for the Postgraduate and Undergraduate Programs of the Department of Pharmacognosy in the September 2021 University Examinations.
- While in the March 2022 University Examinations, the Department of Pharmacognosy invited Dr. Francis Machumi from the Institute of Traditional Medicine to serve as the moderator.
- While Prof. Stephen Mshana from the Catholic University of Health and Allied Sciences served as the External Examiner for the March 2022 University examinations having been invited by the Department of Pharmaceutical Microbiology.
- The moderators or/and external examiners' reports were submitted and processed accordingly by the respective Departments, School Board prior to submission to the Directorate of Quality Assurance for further processing.
- Some of the main issues raised by the External examiners/moderators and pertinent reactions/responses made by the respective Departments included:

### **Department of Medicinal Chemistry**

- **PC100, PC 200 and PC 300**

PC100: Basic Chemistry, PC 200: Applied Chemistry and Chemotherapeutic Agents and PC 300: Pharmacodynamics Agents & Pharmaceutical Quality Assurance.

- **General Comments:** The moderator commented on the fact that was not given opportunity to moderate the questions before the examination was done. The Department noted this, however responded that it is not a routine procedure to invite the moderator to moderate the examination prior to administration. But promised to strictly assure the quality of the exam by internal/departmental moderation.

- **Examination performance:** The moderator noted that there was a need for early identification and intervention of weak students during the learning process. For which the department could not agree any more. More assignments as well as practical examples will be given to students.

The moderator also suggested that students may benefit from more practical exposure in some of the topics covered to better relate with the theoretical knowledge imparted. The department concurred and requested the University Management to renovate the Medicinal Chemistry Lab and provide adequate teaching equipment and reagents. The lab has been nightly renovated and reagents bought on time.

- **MPharm Quality Control and Quality Assurance *viva voce***

The dissertation was found to be adequate and satisfactory. Minor corrections and concerns were suggested which were positively taken care of for improvement of the dissertation. The moderator encouraged the candidate to ‘appropriately’ disseminate the research findings.

- **Conclusive remarks:** The moderator commended the faculty for displaying team work, professionalism and decorum while carrying out this important duty. The Department and School promised to maintain the pace and standard.

## Department of Pharmacognosy

### PG 200: Pharmaceutical Botany and Natural Products

The external examiner was of the opinion that examination questions be reviewed by the department examination committee to avoid typographical and spelling errors and more than one correct answer for the MCQs. The Department ensured the proper use of the departmental examination committee to minimize the errors by reviewing the exams before printing.

### PG602: Phytochemical Development and Quality Assurance

The external examiner noted that the examination was fair and of good quality. However, the faculty / examiners are advised to include other examination format like short answers questions to broaden knowledge check during assessment. The department concurred and promised to maintain good examination practice by including other examination format such as short answers. The School Board noted and commended for satisfactory examinations.

### **PG 610: Fieldwork**

“The candidates did very good ethno pharmacological survey studies addressing current medical problems,” observed the external examiner. It was interesting to learn that; the plants used for their dissertation will be selected from the list of recorded plants. The external examiner pointed out that the reports were publishable materials. The department appreciated the comments and promised to continue with the documentation of useful medicinal plants. The School Board was pleased with the comments and commended the department.

The external examiner also noted that, the field work was not funded by sponsors/employers as it was not in the special academic requirement. She proposed that such field work module be considered for funding in the future so that to enable students acquire ethno-pharmacological skills from the field. The department plans to request funds to cover the field cost since this is the part of training and it constitutes a full course. The School Board noted and is ready to forward such request to higher decision-making university organs.

### **Department of Pharmaceutical Microbiology**

#### **PB 200.01: Bacteriology**

The external examiner commented that the examination questions presented in the theory covered a broad range of topics within the fields of Bacteriology, majority in the systematic bacteriology. These questions were relevant and of high quality. Clinical cases, short essays and long essays questions added value of the examination to test the skills and knowledge application. However, uniformity of choices in MCQ was not maintained, 11 questions had five choices and 39 four choices. The department ensured that the uniformity of choices in MCQ will be strictly followed starting next semester. The School Board noted.

#### **PB 200.02: Mycology and virology**

The external examiner noted that MCQ questions covered basic virology and mycology. The essays questions were well set to test the general knowledge in virology. Both the department and School Board concurred.

#### **PB 300.0: Immunity and Vaccination**

The external examiner observed that the questions were well set covering varieties topics of immunity and its application. He added that the questions were relevant



to test general knowledge regarding basic immunology and its application.

**PB 300.02: Applied Microbiology**

He also noted that the questions for PB 300.02 were of standard quality testing both basic and application of microbiology.

**General Observations:** The external examiners commented that the questions in all papers were stated in clear and unambiguous language and were of the high quality, they tested knowledge with clinical cases testing their decision-making skills. As observed last year, there a need of careful proofreading the examination several times to correct obvious errors. In his opinion, the questions set were adequate for the evaluation of undergraduate students taking prescribed modules.

The external examiner was of the opinion that marking was carefully done, thorough, and fair. Indeed, the award of marks by the internal examiners was fair and objectively. He also added that the use of marking scheme with clear required points was observed, and that such is a very good practice and should be maintained. Furthermore, said the overall performance in all modules was very good, with the majority (86.7%) of the candidates scoring B grade and above.

**Concluding remarks:**The Bacteriology, Virology and Mycology, Immunity and Vaccination, and Industrial pharmaceutical microbiology examinations were organized and conducted well. The examinations were fair, composed well, testing both knowledge and skills. The university examination results reflected the true performance of the candidates for the individual modules and in his opinion, the faculty did their best to prepare the students for these examinations. The marking and processing of examination and the exams result were handled with care and diligence following the University examination regulations and guidelines. He commended the faculty in their effort to maintain acceptable academic standards in the Department. The department concurred with the positive comments and assured the both external examiners and members of the School Board to improve on the observed weaknesses. The School Board noted and assured the department that it will carefully make follow-ups on the pointed deficits.

## **Department of Clinical Pharmacy and Pharmacology**

### **PL 202: Basic Pharmacology**

The external examiners commented that the examination questions were fair. However, pointed out that a few students (10%) lacked competencies in responding to oral questions. Majority also did not perform well even in the written examinations. Upon close Examination the external examiner noted that they did not do adequate practical works on animals that could help them cement their knowledge on organ receptors-drug interactions. The department acknowledged the weakness. It partly attributed to lack of laboratory as it relied on the Department of Clinical Pharmacology laboratory at the School of Medicine, and the then absence of laboratory technologist. Therefore, the Department assured the School Board to rectify the observed weakness. The School Board noted.

### **PL 300: Applied Pharmacology**

The external examiner observed that the course comprised questions on Systemic Pharmacology that includes anticancer drugs and antibiotics, which were fair. However, the external examiner noted that most students could not recall many common stuffs. This was contributed by lack of timely marking of continuous assessment and timely provision of feedback to students. The department concurred and ensured to do all the best to ensure that the observed defects will not recur. The School Board noted.

### **PL 400: Therapeutics**

The external examiner observed that the questions mostly dwelled on clinical applications of drugs to patients in wards; and noted significant improvement in the performance compared to previous years. He commended the department on linking the theoretical training with patient care and encouraged the department to focus on specific units in wards for training purposes than being too broad as it is now. The external examiner suggested that the department could concentrate particular units that could serve as training models for clinical rotations such as Cardiology, Gastroenterology, Nephrology, Obstetrics and Gynecology and Infectious Units. He added that the other units can be dealt with during internship graduation. He emphasized that the clinical rotations should subject students more in major ward rounds, which will give the opportunity to interact with patients. The department concurred with the external examiners on the suggested training model. The School Board noted.

### **AT 600: Applied Therapeutics**

“The questions were fair, ’commented the external examiner. However, he observed that majority of students were slow in responding both written and oral examination. The external examiner suggested that giving presentation assignment is one of the means of improving oral presentation. He noted some foreign students who experienced more difficulties in self-expression in English and suggested that the School should consider mastery in English language as one of the criteria for enrolling a student to a course.

### **PV 600: Principles of Pharmacovigilance**

The external examiner noted that though the examination questions were fair, students could not demonstrate the acquired experiences in the fieldwork training. The external examiner encouraged to outsource trainers from institutions where fieldwork placements are done such as Tanzania Medicines and Medical Devices Authority (TMDA) and other public health programs that deal with vaccination. The department noted and concurred to the comments and ensured that will make use of them to improve the training.

### **AT 603: Clinical Rotation: Psychiatry, Neurology, Obstetrics and Gynecology and Oncology**

The external examiners noted that this examination was clinical/ward based and was very much impressed by the students’ performance. He also encouraged the department to allocate some staff specifically for clinical training in order to improve the training. The department noted it and informed the external examiners that it employs an honorary lecturer (Clinical Pharmacist), who is linked with the Muhimbili National Hospital (MNH). He also suggested the use of students log books that will be counter signed by a preceptor in the ward to avoid absenteeism during the clinical rotations. The department concurred and the point was taken. The School Board noted and concurred with the external examiner’s suggestion.

### **Department of Pharmaceutics and Pharmacy Practice**

#### **PT 100: Physical Pharmacy**

The external examiner/moderator was of the opinion that the questions papers were submitted together with the marking schemes in good time for review and almost all students passed with a grade. “This positive attribute has to be maintained by the department” he commended the department. Both the

department and School Board concurred with the moderator and ensured that the positive attribute will be maintained.

**PP 200: Physical-Chemical Principles of Pharmaceutical Formulations**

The EE/moderator commended the department saying the examination papers combine an excellent utilization of materials and coverage of the course scope and majority of the students' passed exams. The department appreciated for the positive comments and ensured that the positive attribute will be maintained. The School Board concurred with the Department and encouraged it to keep it up.

**PT 300: Biopharmaceutics and Drug Delivery Systems & PP 300: Over the Counter Products and Communication Skills**

Majority of students passed with B grades for the two examined courses; this could be attributed to good quality examinations which provided opportunity for bringing out different attributes of learning. The department concurred with the moderator and ensured that the positive attribute will be maintained. The School Board concurred with the Department and encouraged it to keep it up.

**PP 400: Pharmaceutical care, Pharmacy Law, Management and Medicines Supply**

The moderator commented that the performance of the students was in general average and followed a normal distribution curve. She also added that the distinction students in BPharm IV were exceptionally good in their oral examinations. Well, the students reflected their knowledge during their oral examinations. The department concurred with the moderator / external examiner's comments and promised to maintain the pointed out positive attributes. The School Board commended the departments and advised it to address any weakness indicated by the external examiner.

**PT 400: Clinical Kinetics and Good Manufacturing Practice**

The moderator was of the opinion that the students' performance was average in the examined course, with 19.6% of the students failing the exams. She advised the department to consider remedial classes to help in the supplementing students. Furthermore, she advised the department to review the course contents so as to match with contact hours.

Responses from the department were that it managed to provide remedial classes to almost all supplementing students, although only one student passed their

examination. It concurred with the moderator's comment on the need to review the course content to correspond with the contact hours and this can be possible during the next min-review of the Bachelor of Pharmacy Curriculum.

#### **4.3.6 Challenges Faced by the School during the reporting year Infrastructure**

The School continued to experience severe constraints in infrastructure for all core activities (Teaching, Research and Consultancy) in terms of space, equipment, reagents and funding. The school is looking forward to writing fundable research proposals for possible expansion of its infrastructure and completion of Mlonganzila Campus to be able to expand enrollment of BPharm students. Nevertheless, the University managed to renovate some office for faculty and two laboratories.

For the coming academic year 2022/2023, the School has been prepared to enroll a total of 100, which is an increase of 33.3%. Despite inadequacy of infrastructure and low number of faculty; the School will take care of this increase by sharing the available ones and / or parallel sessions.

#### **Teaching materials and reagents**

The School has also requested for an increase of budgetary support for purchasing reagents and other laboratory facilities for both undergraduates and postgraduate students so that the competences stated in the curriculum can be accomplished. Improvements have been made as compared to the year 2020/2021, as the MUSE system increased transparency in financial management, thus enabling timely purchase of the teaching materials.

#### **Staffing**

In the academic year 2021/2022, staffing continued to be insufficient in most of the Departments. Pharmaceutics and Pharmacy Practice Department which has a total of seven (7) academic staff on permanent contracts, and one (1) on temporary contract. The department is responsible for training students in two examinable courses to undergraduate (BPharm) students, which are Pharmacy Practice (PP200-PP400) and Pharmaceutics (PT100-PT400) and two (2) postgraduate programmes viz. MPharm Industrial Pharmacy and MSc Pharmaceutical Management. Currently, four (4) faculty are on study leaves. This gives a staff-student ratio of less than 1:98.

The Department of Pharmaceutical Microbiology had six (6) academic staff, three of whom also had three (3) administrative responsibilities and two on PhD studies. This was, therefore, a staff-student ratio of 1: 292 for the department. The Department of Medicinal Chemistry had eight (7) faculty; one (1) with administrative duties and one (1) staff in charge of R & D Laboratory. Other staff without administrative responsibilities included two (2) Assistant Lecturers, and one on PhD study leave. The staff-student ratio was, therefore, 1:73. The Department of Pharmacognosy had seven (7) faculty and comprised of two (2) Associate Professors and two (2) Assistant Lecturers. One Lecturer whom had administrative responsibilities and two Tutorial Assistants. This gave a staff-student ratio of 1:73. The Department of Clinical Pharmacy and Pharmacology had a total eight (8) faculty, two (2) of whom had administrative duties and one (1) on PhD studies. It also had one Lecturer and four (4) Assistant Lecturers. This therefore translated to staff-student ratio of 1:68 for the Department.

In order to address the staff inadequacy, the school has been requesting for recruitment of more faculty whenever permission to employ is granted. The School has also been engaging honorary lecturers from other institutions to reduce the heavy teaching loads.

## 4.4 School of Nursing



**Dr. Dickison A. Mkoka**  
**Dean School of Nursing**

The Annual Report for the year 2021/2022 consists of two main sections: Introduction and Highlights of Major Achievements and Challenges

### 4.4.1 Introduction

In the academic year 2021/2022 the School of Nursing (SON) continued to perform its core functions of

teaching, research and public services as well as establishing links and other collaborative activities.

The School is currently running three (3) Undergraduate programs and six (6) Postgraduate programs. Undergraduate programs are; Bachelor of Science in Nursing, Bachelor of Science in Nurse Anesthesia and Bachelor of Science in Midwifery. The Post Graduate Programs are: Master of Science Nursing in Mental Health, Master of Science Nursing in Critical Care and Trauma, Master of Science in Midwifery and Women's Health, Master of Science Oncology Nursing, Masters of Science Nephrology Nursing and Masters of Science Cardiovascular Nursing

### 4.4.2 Highlights of Major Achievements and Challenges

#### 4.4.2.1 Major Achievements

During 2021/2022 reporting year, the School recorded various achievements as detailed below:

#### **Teaching and Learning**

Comparing with the year 2020/2021, in 2021/2022, the total enrollment for Undergraduate students increased by 18.1% while the Postgraduate students decreased by 10.1% (Table 15). The percent increase in Undergraduate was contributed by increased enrollment of students in BSc. Nurse Anesthesia and BSc. Midwifery. The percent decrease in Postgraduate was contributed by decrease in enrollment of students in almost all Postgraduate programs except MSc. Nephrology Nursing

**Table 18: Enrolled Undergraduate and Postgraduate students in 2020/2021 and 2021/2022**

<b>Programs</b>	<b>Enrolled students in 2020/2021</b>	<b>Enrolled students in 2021/2022</b>
<b>Undergraduate Programs</b>	342	404 (18.1% increase)
<b>Postgraduate Programs</b>	79	71 (10.1 % decrease)
<b>Total</b>	<b>421</b>	<b>475 (12.8% increase)</b>

For the year 2021/2022, the total number of 151 students was registered to join both Undergraduate and Postgraduate programs in the SON. The distribution was as follows; BSc. Nursing sixty one (61); BSc Nurse Anesthesia forty eight (48); BSc Midwifery twenty (20); MSc. Nursing in Mental Health one (1); MSc. Nursing in Critical Care and Trauma four (4) ; MSc. Nephrology Nursing ten (10); MSc. Cardiovascular Nursing two (2v) ; MSc. Oncology Nursing two (2) and MSc. Midwifery and Women's Health four (4). There was a decrease in total number of first year registered students for Undergraduate for Bachelor of Science in Nursing. Overall there was small decrease in total number of first year for all undergraduate programs in the year 2021/2022 (129) compared to the year 2020/2021(134). Also there was a considerable decrease in total number of first year registered students for all postgraduate programs decreased from 49 in 2020/2021 to 22 in 2021/2022. For Postgraduates, the number of applicants who registered decreased due to decreased number of students who registered for almost all programs except MSc. Nephrology Nursing(**Table 15**).

**Table 19: Registered first year Undergraduate and Postgraduate students in 2020/2021and 2021/2022.**

<b>Undergraduate Programs</b>	<b>Registered students in 2020/2021</b>	<b>Registered students in 2021/2022</b>
BSc. Nursing	68	61 (10.3% decrease)
BSc. Midwifery	19	20 ( 5.3 increase)
BSc. Anesthesia	47	48 (2.1 increase)
<b>Total</b>	<b>134</b>	<b>129 (3.7% decrease)</b>
<b>Postgraduate Programs</b>		
MSc. Nursing Critical Care	7	4 (42.9% decrease)



and Trauma		
MSc. Nursing Mental Health	1	1 (no increase)
MSc. Midwifery and Women's Health	9	4 (55.6% decrease)
MSc. Nephrology Nursing	11	10 (9.0% decrease)
MSc. Cardiovascular Nursing	11	2 (81.8% decrease)
MSc. Oncology Nursing	10	2 (80 % decrease)
<b>Total</b>	<b>49</b>	<b>22 ( 55.1 decrease)</b>

### Performance in examinations

The percent of Undergraduate students who passed all courses in the first sitting was 66.7% in 2020/2021. Also, the supplementary cases were 26.9% in 2020/2021. In the last reporting year, about 7.6% of student were discontinued. This is high number compared to 2019/2020 where only 2.7% were discontinued. The pass in first sitting for Postgraduate students were 72.5% in July/August 2021. Also, the supplementary cases were 27.45%. Also, there was one discontinued student in the reporting year of 2020/2021 (1.96%) (Table 16).

**Table 20: Performance in Examination for Undergraduate and Postgraduate in year 2020 and 2021**

Undergraduate Programs	July/August 2021			
	Pass	Supplementary	Discontinuation	Incomplete results
BSc. Nursing	160/219 (73.1%)	59/219 (26.9%)	3/219 (1.4%)	-
BSc. Midwifery	7/17 (41.2%)	6/17 (35.3%)	4/17 (23.5%)	-
BSc. Nurse Anesthesia	9/28 (32.1%)	6/28 (21.4)	13/28 (46.4)	-
<b>Total</b>	<b>176/264 (66.7%)</b>	<b>71/264 (26.9%)</b>	<b>20/264 (7.6%)</b>	-
<b>Postgraduate</b>				

<b>Programs</b>				
MSc. Nursing Critical Care and Trauma	21/29 (72.4%)	8/29 (27.6%)	-	-
MSc. Nursing Mental Health	3/3 (100%)	3/3 (100%)	-	-
MSc. Midwifery and Women's Health	13/17 (76.47%)	3/17 (17.64%)	1/51 (5.88%)	-
<b>Total</b>	<b>37/51 (72.5%)</b>	<b>14/51 (27.45%)</b>	<b>1/51 (1.96%)</b>	-

### Graduation in December 2020 and 2021 for Undergraduates and Postgraduates

Comparing with the year 2020, in 2021, the number of graduates in Undergraduate decreased by 9.5% for undergraduate but increased by 27% for Postgraduate programs respectively. The decrease observed for undergraduate programs is because of decreased number of BSc. Nursing graduates (Table 17)

**Table 21: Number of Graduates in Undergraduate and Postgraduate Programs in 2020 and 2021**

<b>Undergraduate Programs</b>	<b>Number of Graduates in December 2020</b>	<b>Number of Graduates in December 2021</b>
BSc. Nursing	38	49
BSc. Midwifery	-	-
BSc. Nurse Anesthesia	-	-
<b>Total</b>	<b>38</b>	<b>49</b>
<b>Postgraduate Programs</b>		
MSc. Nursing Critical Care and Trauma	5	23
MSc. Nursing Mental Health	2	1
MSc. Midwifery and Women's Health	11	5
<b>Total</b>	<b>18</b>	<b>29</b>

### Curricula for New Masters of Nursing Programs

Development of curricula for four new programs namely MSc. Nursing Neonatology Nursing and Neonatal Intensive Care, MSc Pediatric Nursing and Adolescent Health, MSc of Nursing Leadership, Management and Clinical Governance and MSc Nursing Education Theatre Nursing and Orthopedic and Neuroscience) are in progress. All four programs are expected to star in 2023/2024 academic year.

### Short courses

During the reporting period of 2021/2022, seven (7) short courses were conducted. These short courses include; Teaching Methodology (five trainings); Basic Critical Care for Nurses (one training) and Basic Emergence Obstetric Care (one training).

### Services, consultancies

#### External examiners and Travel

In 2021/2022, faculty members acted as External examiner in various Universities namely: University of Dodoma (UDOM), Dodoma, and Hubert Kairuki Memorial University.

In addition, during the reporting year, most staff participated in workshops as well as other Continuing Education for professional Developments. In line with the President's Directives on travels, the numbers of local travels increased compared to International travels by overall 42.9% increase (Table 18). This implies academic staff members were able to interact and render more services to the local than international community.

**Table 22: Number of international travels versus local travels 2021/2022**

Period	International travels (Outside Tanzania)	Local travels (Within Tanzania)	Local travels Percent increase / decrease
July/September 2021 Quarter	0	4	100% increase
October/December 2021 Quarter	0	1	100% increase
January/March 2022 Quarter	3	3	None
April/June 2022 Quarter	0	2	100% increase
TOTAL	3	10	42.9% increase

#### 4.4.3 Consultancy

The SON consultancy bureau was approved in November 2017. The SON is actively working on different strategies to make sure the bureau facilitates income generation.

#### 4.4.4 Exhibitions

In June/July 2022 one (1) staff and two (2) students from School participated in Saba Saba exhibitions and demonstrated various activities.

#### 4.4.5 Collaborations and Networking

##### **International links**

Generally, in 2021/2022 there was a decrease in number of international visitors mainly due to travel restriction in other countries following COVID-19 pandemic. NEPI, a collaborative elective exchange within three Universities namely Makerere University, Uganda, Ekwedeni University, Malawi and MUHAS was established in March, 2017. However, for the reporting year of 2021/2022, there were no elective students to and from SON-MUHAS.

Also, during the reporting period, partnerships for research, teaching and student exchange with other Universities e.g. Bergen University College, Norway; University of Southern Denmark and University College Sydnsk, Denmark; Uppsala University and Umea, Sweden; Department of Health, State of Western Australia, Dalhousie University, Canada; and Pennsylvania State University in USA and University of Minnesota continued well. The School also renewed two MoU with Nagasaki University and St. Luke's University, Japan

##### **Local links**

The School of Nursing continued to collaborate with other Schools of Nursing in the eight Universities of health sciences (public and private) in Tanzania through the Dean's Forum. These are: University of Dodoma (UDOM), Dodoma; Catholic University of Health and Allied Sciences (CUHAS), Mwanza; St. Johns University, Dodoma; Aga Khan University, Dar es Salaam; Hubert Kairuki Memorial University, Dar es Salaam; International Medical Technology University, Dar es Salaam; and Kilimanjaro Christian Medical College, Moshi. The Forum intends to collaborate in various activities to promote Nursing and Midwifery Education and Professionalism in Tanzania.

Also the School continues to collaborate with other Institutions such as Muhimbili National Hospital, Municipal Hospitals and Lugalo Hospital in Dar es Salaam, Mirembe Psychiatric Hospital and Isanga Institute, Dodoma for students' clinical placements. The SON therefore strives to maintain and strengthen these links and made concerted efforts to promote International, Regional and Local Links.

#### **4.4.6 Research and Publications**

During the year under review, faculty in the School carried out research and submitted proposals for ethical clearance and manuscripts for publications in International Journals. During the reporting period 16 papers were published in peer reviewed Journals. This was increased by 19% when compared with 13 papers published in 2020/2021.

Also the number of publications where by a faculty member was the first author were 5 in 2021/2022 with no increase if compared to the same number of 5 in 2020/2021.

#### **4.4.7 Grants**

In this reporting year, the SON did not receive any grant

#### **4.4.8 Human Resource Development in the School of Nursing**

##### ***Staff recruitment***

The school has an obligation to maximize its collaborative opportunities to ensure adequate staffing levels are reached by all means. In 2021/2022, despite an increased number of students for both graduate and postgraduates, no junior faculty members at the rank of tutorial assistants or senior faculty members at the rank of lecturer and above were recruited. Two staff were transferred in adding a total number of faculty from 23 in 2020/2021 to 25 in 2021/2022.

Thus, the School is striving through various means to overcome the challenge of inadequate number of faculty through lobbying with the management for recruitment of new faculty both at juniors and seniors level.

##### ***Staff development***

In the year under review 2021/2022 four (4) faculty continued with PhD training in various Universities; St. Luke's University in Japan (Dorika Mwakawanga), Uppsala in Sweden (Agnes Masae), MUHAS (Rashid Heri & Baraka Morris).

In addition, four (4) faculties are continuing with their full time Masters of Nursing training in various universities both local and international. These are Hamza Lilenga, Victor Chikwala, Pius Temba and AthumanKibwanda.

### **Resource Mobilization**

A major source of income for the School during the reporting period was from short course(s). Generally there is decrease of income for the School in the year 2021/2022 and this decrease has been attributed to decreased number of elective students applying for elective attachments at School of Nursing, MUHAS due to travel restriction which has not yet lifted in some countries due to COVID-19 pandemic.

#### **4.4.9 4.4.9 Challenges faced by the School during the reporting period**

##### **Infrastructure**

Although the School continued to share facilities (teaching venues, research facilities and clinical placements) with other Schools, Muhimbili National Hospital, and municipal hospitals, the School still lacks a fully equipped Simulation Laboratory with items such as Models and Simulation materials. However, major progress has been made on efforts to equip the skills lab. For example, for Midwifery there are three working manikins: Mama Natalie, Baby Natalie and vaginal examination models and numerous supplies in a big room within Continuous Health Profession Education (CHPE) building.

##### **Staff**

Staffing of senior faculty is in a crisis situation in all three (3) Departments. Most junior faculty members are on postgraduate studies (MSc. and PhD). Currently the school has only two associate professors and six lectures. Furthermore, to implement the competency-based curriculum, the School requires two permanent Skill lab technicians to facilitate clinical skill learning during simulation lab sessions.

## 4.5.School of Public Health and Social Sciences



**Prof. G. Frumence**  
**Dean, SPHSS**

### 4.6.1 Introduction

The School of Public Health and Social Sciences (SPHSS) is one of the five schools in the University. The staff in the School perform all the core functions of the University which are Teaching, Research and Consultancy services and in doing these, the School collaborates with other Institutions in research, student exchange and joint supervision of students. This report describes all activities conducted in the school of Public Health and Social Sciences during the previous academic year 2020/2021. The activities have been summarized into: Teachings and learning, Meetings, Workshops, Research, Consultancy, existing links, and publications.

### 4.6.2 Existing Programmes

The School hosts one Undergraduate Programme namely Bachelor of Science Environmental Health Sciences (BSC EHS) and seventeen postgraduate programmes namely, Master of Public Health Regular Track (MPH), Master of Public Health - Executive Track (MPH-EXEC), Master of Public Health Distance Learning (MPH-DL), Master of Arts in Health Policy and Management (MA HPM), MSc in Tropical Diseases Control (MSC TDC), MSc in Applied Epidemiology (MSc-AE), MSc in Epidemiology and Laboratory Management (MSc ELM), MSc in Parasitology and Medical Entomology (MSC PE), Master of Medicine Community Health (MMed Com Health), Master of Science in Behaviour Change (MSc BC), Master of Science in Behaviour Change Communication (MSC BCC) for Health, MSc. in Environmental and Occupational Health (MSc EOH), Master of Bioethics and Health Professionalism (MBE), MSc Health Information Management (MSc HIM), MSc in Project management, monitoring and evaluation in Health (MSc PMMEH), MSc in Health Economics and Policy (MSc HEP) and MSc in Implementation Science (MSc IS).

### 4.6.3 Enrolments of Undergraduate and Postgraduate students

In this ending academic year, the total number of undergraduate and postgraduate students enrolled in the 2021/2022 has slightly decreased compared to the previous years. For Post graduate students, the School registered a total of 167 students which decreased from 201 in 2020/2021 and 181 students registered in 2019/2020. For the BSc EHS, a total of 89 students were registered in 2021/2022 compared with 94 students who were registered in 2020/2021 and 96 in 2019/2020

**Table 23: Number of Enrolled Undergraduate & Postgraduate Students in 2021/2022 as compared to 2020/2021 and 2019/2020 academic year**

S/N	Programme Name	Program Duration	2019/2020	2020/2021	2021/2022
1	Master of Public Health by Distance Learning	2 years	68	62	65
2	MSc in Project Management Monitoring and Evaluation in Health (evening Track)	2 years	37	30	19
3	Master of Public Health (Regular Track)	1 year	15	15	18
4	Master of Public Health (Executive Track)	2 years	23	15	18
5	MSc Applied Epidemiology	2 years	9	14	14
6	Master of Bioethics	2 years	8	8	4
7	MSc Health Information Management	2 years	0	0	0
8	MSc Epidemiology and Laboratory Management	2 years	7	10	7
9	MSc Environmental and Occupational Health	2 years	5	4	2
10	MSc Parasitology and Medical Entomology	2 years	1	8	0
11	Master of Arts in Health Policy Management	2 years	1	4	1
12	MSc Tropical Diseases Control	2 years	3	1	3
13	MSc Behavior Change Communication for Health	2 years	4	1	2
14	MscBehavior Change (evening track)	3.5 years	0	0	0
15	Mmed Community Health	2 years	0	0	0
16	MPH Implementation Sciences	2years	0	9	6



17	MSc. Health Economic Policy	2 years	0	20	8
	<b>SUB TOTAL for PGs</b>		<b>181</b>	<b>201</b>	<b>167</b>
16	BSc Environmental Health Sciences	3yrs	96	94	89
	<b>GRAND TOTAL</b>		<b>277</b>	<b>295</b>	<b>256</b>

#### 4.6.4 Implemented Activities during the academic year 2021/2022

##### 4.5.4.1 Teaching/Examinations and Assessments

Members of staff continued with teaching of both postgraduate and undergraduate students within the School and the University at large.

##### Undergraduate Teaching:

- i. **Cross cutting courses:** The Department of Epidemiology and Biostatistics was involved in teaching Epidemiology and Biostatistics Modules (ER200.01 & 02) for all 2<sup>nd</sup> year undergraduate students in the University. In the fourth quarter the department taught and examined Epidemiology and Biostatistics courses/modules: ER 200.02. Department also participated in invigilating various examinations conducted during the reporting period. Exams conducted as planned and results submitted/uploaded to SARIS.
- ii. . The Department of Environmental and occupational Health continued teaching most of the modules from BSc. EHS First year, Second year, and Third year and also facilitated MD 4 Community Health rotation. In the fourth quarter the department was involved in teaching the following courses/ module Urbanization and Human Settlements (EH 104.2), Building technology (EH 103); Environmental Microbiology (EH 101.03) and also coordinated Microbiology laboratory sessions offered by the Department of Microbiology and Immunology; Environmental Chemistry (EH 101.1) and Environmental Chemistry (EH 101.2); Food systems, composition and Nutrition-Module 1(EH 205.1); Occupational Health and Safety Practice (EH 202.02); teaching CDC to third-year; teaching and supervision MD4 Community Medicine rotation; teaching and supervision of MD3 Communicable disease course; MD2, DDS2 and BMLS1; and teaching and assessment of Principles of Occupational Health (EO 204.02).
- iii. The Department of Development Studies continued to teach DS 100 and DS 200 in both semester 1 and semester 2 students in the University and

some courses in Bsc EHS programme both in semester I and II, the DS department also continued teaching and supporting Community medicine rotations under the coordination of Community Health Department. In the fourth quarter the department was involved in teaching the following;-EH 305: Environmental Economics in Health; EH 306.1: Organization and Health Systems Management for BSc. EHS; LM 302: Laboratory Management; MD4 Community Medicine Rotation and MD3 One Health Module.

- iv. The Department of Community health was involved in coordinating and teaching of MC410 (Community Medicine) to MD4 students which involves 4 rotations per year, and coordination of the nutrition field project. The department also following the adoption of the harmonized MD curriculum. The timetable was in place and teaching started in the second semester 28th March 2022. In the fourth quarter the department continued to participate in teaching and coordinating of MD4. MD4 Community Medicine rotation (Group B) Second group started rotation on 4th April 2022 and ended on 17th June 2022. Three groups of MD4 Community Medicine rotation have been completed; the fourth group is on track and expected to be completed by 26th August 2022. University Examination (UE) was conducted as scheduled for each of the three groups and results will be uploaded to SARIS. Department is also coordinating a new course in Community Health Organization (EO 100) for first year MD students, following the adoption of the harmonized MD curriculum. The classes started 28th March 2022 and they did CAT 1 in June 2022.
- v. The Department of Bioethics and Health Professionalism was involved in teaching and examine Professionalism and Ethics (PF 100.2) and Professionalism and Ethics (PF 300) to all undergraduate students at the University. The Department of Parasitology and Medical entomology received rotating BMLS students in second and third years. The department also continued with supervision of undergraduate elective projects, and postgraduate students (MSCs and PhDs) dissertation works. In the fourth quarter the department was involved in teaching professionalism to Biomedical Engineering students.
- vi. The department of Behavioral Sciences was involved in teaching BSC EHS first year and second year, also the departmental Staff members attended field work activities for MD 4 field supervision.

## Post Graduate Teaching

All Departments at the SPHSS were involved in teaching of postgraduate courses for students registered for programmes offered at the School and those registered and offered in other schools.

- i. The Department of Epidemiology and Biostatistics offered Epidemiology and Research Methodology(ER 600.01), Biostatistics(ER 600.02) to all first-year postgraduate students at MUHAS and taught all modules in the MSC AE, MSc ELM and MPH IS programmes and Principles of Epidemiology (FP601) and Biostatistics (FP 602) to all postgraduate students in the Masters programs offered at the SPHSS, FELTP field attachment modules was also taught by the department. In the fourth quarter the department taught and examined Epidemiology and Biostatistics courses/modules: Biostatistics(ER 200.02), Analytical Epidemiology and Causality (AE 604), Advanced Methods in Epidemiology and Biostatistics (TD 601) and Advanced Qualitative Research Methods (IS 601).
- ii. The staff of department of Bioethics and Health Professionalism participated in teaching first year MBE students in Critical Thinking and Argumentation (BE 602)-Ethical Rationing and Resources Allocation (BE 609), Bioethics (EE 600); the department also participated in teaching and examining Clinical Ethics (BE 608), Global Bioethics (BE 603) and Dissertation (BE 699). In the fourth quarter the department participated in Teaching and Examining the following Courses; Public Health Ethics (BE 605); Bioethics of vulnerable population (BE 607); Human Right Ethics (BE 606); and Clinical Bioethics (BE 608).
- iii. The Department of Environmental and Occupational Health taught all courses for MSc in Environmental and Occupational Health, and family case studies and Introduction to Environmental and Occupational Health (FP 604) which is offered to MD4 students in community medicine rotation and all SPHSS Postgraduate students including MSc PE and MSc TDC, MPH and FELTP and PhD Students. In the fourth quarter the department was involved in teaching and assessment of the several modules. The following modules have been taught and examined; marking is ongoing Environmental and occupational health (FP 604); Food and health (EO 607); Global Health (EO 604) module for MSc. EOH year one; Principles of Public Health and One Health (FP 600) for MPH Distance

- Learning (ODL), students have been taught and continuous assessment marked.
- iv. Department of Development studies was involved in teaching Principles of Public Health and One Health (FP 600), Health Management, Planning and Policy (FP603) and Research Methods (FP 606) to students taking all postgraduate programs in the school, participated in teaching Introduction to Implementation science, Knowledge Translation for the MPH IS students, Urbanization and human settlement for the MSc. EOH students as well as Special Public Health Issues (PQ 600) to students taking MPH programs at the SPHSS. The department of Development Studies is also coordinating and teaching most of the courses for first and second year students pursuing MA HPM, MSc PMMEH and MSc. HEP. In the fourth quarter the department was involved in teaching Knowledge translation (IS 605); Introduction to Health Economics (HE 605); Internship (PME 611)
  - v. The Department of Community Health was engaged in teaching of Principles of Public Health and One Health (FP 600) to all SPHSS postgraduate programmes and Special Public Health Issues (PQ600) to MPH programmestudents. Staff from the Department of Community Health participated in the development of a curriculum for a new program on Nutritional Epidemiology. The curriculum has been submitted and discussed at the department and School of Public Health and Social Sciences (SPHSS) board. In the fourth quarter the department is in the process of starting a new program on Nutritional Epidemiology. The developed Msc. Nutritional Epidemiology curriculum has been submitted for accreditation to the Tanzania commission for universities (TCU) for accreditation. This document underwent all required University's procedures before submitted. Faculty from the department of Community health is also coordinating Special Public Health Issues (PQ 600) module for MPH Regular, Executive; and Open and Distance Learning (ODL) Tracks. Teaching and assessments are ongoing as appropriate for the respective tracks. Staff in the department were involved in teaching the following courses to Post graduate students: - MPH regular, MPH Executive, MPH ODL, MSc Bioethics and Project Management, Monitoring and Evaluation (PMME) programme.

- vi. Behavioral Sciences Department was engaged in teaching of Implementing Change (FP 607) to all Post graduate students at the SPHSS and all courses in MSc BCC programmes.
- vii. The Department of Parasitology and Medical Entomology was involved in teaching both first year and second year MSc PE and MSc TDC. In the fourth quarter the department taught and examine;-Advanced Parasitology course for MSc. PE for postgraduate students. Department also received rotating BMLS students in second and third years

### **Supervision and Mentoring**

During the year, Staff members continued to supervise and provide support to both undergraduate and postgraduate students from various programmes in writing proposals for elective research, dissertations and thesis (e.g. MD, MPH, MSc's, PhDs etc.). Undergraduate and postgraduate first year have been assigned mentees.

Staff also travelled to various part of the country to carry out field supervision. Members participated in supervising students in MD 3 and Communicable disease control (CDC) field work conducted in Morogoro Region. Faculty travelled to Arusha, Tabora, Dar es Salaam, Dodoma, Morogoro and Mbeya to supervise FELTP students performing field placement activities. Also Department of EOH member participated in teaching and field supervisions of MD2, DDS2, BSc EHS 2 Nutrition field projects.

Staff in the department of Epidemiology and Biostatistics continued to provide epidemiological and statistical support to staff and post-graduate students through daily open-door consultation.

### **Examinations and Assessments**

Staff members of the School participated in both formative and summative assessments to both undergraduate and post graduate students. During this period, we had conducted one end of audit year examinations in September, 2021. In all these examinations the pass rate has been high indicating both the high quality of teaching and commitment of both faculty and students, however, Anatomy modules 1 and 2 have shown increase in failure rate, from 26% and 17% in Academic year 2019/2020 to 33% and 20% in Academic year 2020/2021 respectively.

### Examinations for Undergraduate students

In September 2021, a total of two hundred and seventy-one (271) undergraduate students sat for University Examinations during the audit year 2020/2021 (Table 20). Of these 94 were in the first year, 92 in the second year and 85 in the third year. Two hundred and sixteen students (80%) passed and were recommended to proceed to the next semester/be awarded BSc EHS degree while fifty one (19%) students failed in one or more courses and were recommended to supplement the failed courses in October, 2021 while one student froze studies: Below is a table providing details of performance academic for Bsc EHS.

**Table 24: Academic performance in the end of Audit year 2020/2021 examinations for BSc EHS**

S/N	Year of Study	No. Passed and recommended to proceed to next semester/Awarded degree)	No. Supplementing in one or more courses	Number with Missing Courses	No. Froze from Studies	Total
1	1 <sup>st</sup> Year	55	38	0	1	94
2	2 <sup>nd</sup> Year	87	5	0	0	92
3	3 <sup>rd</sup> Year	77	8	0	0	85
	Total	219	51	0	1	271

### Examinations for Postgraduate Students

In September 2021, a total of 477 students sat for end of audit year examinations from the 14 programmes offered at the SPHSS (Table 20). Of these 115 (56%) first years students passed and were recommended to proceed with semester 3. There was a total of 88 (18%) including students who failed one or more course and finalists who were given three months to submit their dissertations. Majority of the students in this group either were recommended to proceed the next semester after they have cleared the failed courses and others graduated after they have submitted error free dissertation within three months. In addition, 175 (37%) students had incomplete courses or had frozen their studies due to different reasons and were recommended to sit for special examination for the missing

courses when next offered or to submit dissertation by January 2021 while 9 (2%) were discontinued from studies.

**Table 25: Postgraduate Academic performance in the end of Audit year 2020/2021 examinations**

Programme	no. of students sat for examination	No. Passed recommended to proceed to next semester/be Awarded degree	No. Supplementing in one or more courses/Submit error free within 3 months	No. with Missing Courses(abscond/froze studies)	No. marginally failed dissertation/resubmit within 6 months	No. Discontinued from Studies on academic/abscondment grounds
MSc AE 1	14	8	5	2	0	0
MSc AE 2	9	9	0	0	0	0
MSc ELM 1	10	7	2	1	0	0
MSc ELM 2	5	5	0	0	0	0
MPH Regular	15	8	1	6	0	0
MPH Regular 2	1	1	0	0	0	0
MPH Executive Track 1	15	7	7	1	0	0
MPH Exec Track 2	20	11	2	8	0	0
MPH Exec Track 3	4	2	0	2	0	0
MPH Exec Track 4	2	1	0	0	0	1
MPH DL 1	61	35	18	7	0	1
MPH DL 2	68	3	9	65	0	0
MPH DL 3	45	8	5	37	0	0
MPH DL 4	27	13	2	14	0	0
MPH DL 5	2	1	1	1	0	0
MSc PMMEH 1	37	17	11	3	0	0
MSc PMMEH 2	41	23	5	13	0	0
MSc PMMEH 3	10	5	0	5	0	0
MSc PMMEH 4	9	6	3	0	0	3
MPH IS	9	7	2	0	0	0
MSc EOH 1	4	4	0	0	0	0
MSc EOH 2	4	3	0	1	0	0
MSc EOH 3	1	1	0	0	0	0

MBE 1	8	3	4	1	0	0
MBE 2	7	5	0	2	0	0
MBE 3	4	2	0	1	0	1
MSc PE 1	8	4	3	1	0	0
MSc PE 2	2	1	0	1	0	0
MSc TDC 1	1	0	1	0	0	0
MSc TDC 2	3	2	1	0	0	0
MA HPM 1	4	2	0	0	0	2
MA HPM 2	1	1	0	0	0	0
MSc HEP	20	12	6	1	0	1
MSc BCC	1	1	0	0	0	0
MSc BCC 2	3	2	0	1	0	0
MSc. HIM	2	1	0	1	0	0
<b>TOTAL</b>	<b>477</b>	<b>221</b>	<b>88</b>	<b>175</b>	<b>0</b>	<b>9</b>

#### 4.5.4.2 Workshops / Meetings (Attended or Conducted)

All departments held regular departmental meetings to discuss and address general academic and administrative issues. The staff also attended various meetings held at the University. The following list shows the different meetings attended by staff at the University and outside the university.

1. SRPC and Expedited Meetings under DRP office for ethical clearance approval
2. Health promotion conference organized by the Ministry of Health under the health promotion unit.
3. AFROHUN Leadership virtual Summit on August 12th 2021
4. Network for Community Health Systems Network meeting on the 27th August 2021
5. ITP steering Committee Meeting 22nd September, 2021
6. Health Economics workshop on opportunities for the health economics trainees on 15th September, 2021
7. Prof, Bill Ngasala from the department of Parasitology and Medical Entomology attended the MoH-Malaria Control Program workshop on School Malaria Survey in Morogoro Region - August 2021.
8. Two faculty from department of Bioethics and Health professionalism (Ms. Judith Shayo and Mr. Lazaro Haule) participated in Ethical Regulatory Aspects of clinical research, NIH, online training from 22nd September -3rd November 2021



9. Dr. Renatha Joseph and Ms. Rebecca Rabach attended the Annual National Research Ethics Conference-Uganda, online training from 13th to 16th September 2021.
10. Mr. Godwin Pancras attended a short Course on Foundations of Clinical Research, Online training from September 18th to September 19th 2021
11. Mr. Godwin Pancras attended a Course on Epidemic Ethics: Balancing COVID-19 with other priority health needs, Online training on July 19th, 2021.
12. Dr. Renatha Joseph attended advance qualitative short course 14th - 18h June 2021; venue: CHPE
13. Dr. Renatha Joseph attended Research Methods Certificate Course Program: 5th -9th July 2021 offered by Centre of Biomedical Ethics and Culture Sindh Institute of Urology and Transplantation and Center for Microbiology Research NAIROBI – Kenya.
14. Dr. MuchoMizinduko participated in a mentorship activity for the Frontline Surveillance short course in Ruvuma, Njombe and Iringa from 15-28 August 2021.
15. Dr. Davis Amani participated in preparatory meetings for the Non-Communicable Diseases conference that were held in Arusha from 30th August to 1 September 2021.
16. Dr. Davis Aman and Dr. Eric Mboya attended a workshop to finalize report writing for the NACP projects including Antenatal Surveillance, HIV drug resistance and HIV data quality assessment in Morogoro from 20 to 24 September 2021.
17. Dr. Theresia Ambrose participated in a workshop to finalize TB and Leprosy sub national data analysis and Use Guide to be held in Dodoma from 20-24 September 2021.
18. Mr. William Nelson attended virtually the 12th European Congress on Tropical Medicine and International Health from 28th September to 1 October 2021 held in Bergen, Norway
19. Dr. MuchoMizinduko participated in the development of the Monitoring and Evaluation framework of the Health Sector HIV and AIDS Strategic Plan V
20. Prof. Rose Mpembeni, Dr. Theresia Ambrose, Dr. MuchoMizinduko, and Mr. Heavenlight Paul attended meetings with the Ministry of Health Community Development, Gender, Elderly, and Children as well as the President's Office - Regional Administration Local Government to re-introduce and re-engage with the ministries for project PERSUADE.

21. Dr. MuchoMizinduko attended an Academic Writing Workshop organized by the Directorate of Library in collaboration with the University of Oslo
22. Dr. Erick Mboya and Dr. Davis Amani together with the office of DRP organized the manuscript writing workshop “Manuscript Boot camp” for Students and faculties which was conducted from 25<sup>th</sup>- 29<sup>th</sup> October 2021 at the MUHAS campus.
23. Dr. Erick Mboya and Dr. Davis Amani participated in organizing the 3<sup>rd</sup> National Non-Communicable Scientific Conference which was held at AICC in Arusha on 11<sup>th</sup> and 12<sup>th</sup> November 2021.
24. Dr. Sakwari, Dr. H. Mohamed and Ms. Magdalena facilitated and attended the Annual Environmental Health Conference held in Dodoma from 12<sup>th</sup> -17<sup>th</sup> December 2021
25. Mr. Godwin Pancras attended a Global Conference on Bioethics and Corona Virus Pandemic from 10<sup>th</sup> to 11<sup>th</sup> March 2021
26. Mr. Godwin Pancras attended a Education Research workshop from 1<sup>st</sup> to 5<sup>th</sup> February 2021
27. Mr. Godwin Pancras attended a Workshop with the theme; Foundations of Clinical Research (offered by Harvard Medical School) from June 5-6
28. Ms. Judith Shayo and Mr. Lazaro Haule participated in Ethical Regulatory Aspects of clinical research, NIH, online training from 22nd September -3rd November 2021
29. Ms. Rebecca Rabach attended the Annual National Research Ethics Conference-Uganda, online training from 13th to 16th September 2021.
30. Mr. Godwin Pancras attended a short Course on Foundations of Clinical Research, Online training from September 18<sup>th</sup> to September 19<sup>th</sup> 2021
31. Mr. Godwin Pancras attended a Course on Epidemic Ethics: Balancing COVID-19 with other priority health needs, Online training on July 19<sup>th</sup>, 2021.
32. Mr. Godwin Pancras attended a Conference: 8<sup>th</sup> East African Health & Scientific Conference from 17th-19th November 2021
33. Dr. Mangi attended data analysis workshop for stigma and TB index assessment in Dodoma
34. D. Mangi attended orientation program to departmental teams for evaluation for teaching excellence and reward at MUHAS
35. Dr. Saronga attended meeting on how to improve TEACHING and LEARNING at Muhimbili University of Health and Allied Sciences (MUHAS) for Undergraduate and Postgraduate student

36. Prof. Kakoko, Dr. Mangi and Dr. Metta attended DOCEHTA project Kick off meeting in Dodoma
37. Dr. Mangi participated in collaborative Granting writing workshop - Afrique One Aspire, NIMR Dodoma and SUA – for strengthening research collaboration conducted in Dodoma
38. Prof. Kakoko and Dr. Metta participated in the dissemination of the findings from the COVID-19 acceptance study at MUHAS
39. Dr. Metta attended the Mental Health Priority Setting Workshop, DSM
40. Research Findings Dissemination and Stakeholders' Engagement workshop: theme: Access To Health Care Services among The Elderly Population. Dates: Date; 28th October 2021. Place; Nzega, Tabora-Tanzania
41. ALAMIME Project Oversight Committee Virtual meeting held on 30<sup>th</sup> November 2021. The meeting was attended by Deans of Schools of Public Health from Uganda, Tanzania DRC, Nigeria, and Niger and Burkina Faso.
42. NORAPART annual Project meeting, which was held on 8<sup>th</sup> December 2021 and was attended by both partners from Bergen University and MUHAS?
43. Members of Department of Development Studies attended Research dissemination workshop in Nzega  
Members of Department of Development participated in Non-communicable diseases control conference in Arusha
44. TPHA Scientific conference 30November-3rd December 2021 in Dodoma- Members of Department of Development participated
45. November 2021: Workshop on gene drive technologies for malaria control and elimination (Prof. Ngasala attended) at IHI office Mikocheni.
46. Members of the department of Bioethics facilitated a short course on Responsible conduct of research from 10<sup>th</sup> to 14<sup>th</sup> January 2022.
47. Mr. Heaven light Paul attended a workshop on Spatial Statistics at KCMCo from March 28 through March 30, 2022
48. Mr. Elias Bukundi attended a data analysis workshop, in March, organized by TAMDA on adverse events following immunization by JJ COVID-19 vaccine (Cohort event monitoring)
49. To discuss collaboration on leadership training through short courses and existing masters' programmes under the school of public Health and Social Sciences. The Outcome; CAPSTONE concept project in collaboration with

- Ministry of Health, GIZ, university of Heidelberg, and Global Fund ; Output: 1st online training workshop 28th March to 31st March to programme officers under the Ministry of Health
50. Primary Health Care Book Writing workshop by PoRALG aim to document the evolution of Primary Health Care in Tanzania; Outcome: Draft zero chapter in Human resources for Health
  51. Manuscript writing workshop by THET consortium aim to disseminate THET project activities; Outcome; Five drafts manuscripts developed
  52. Risk Management training by TMDA aim to build capacity to the risk management coordination team at MUHAS; Outcome; Knowledge of risks management among the risk coordination team at MUHAS. Symposium presentation of my PhD work to stakeholders February 2022
  53. Health Systems Sida Proposal Writing Retreat was held in Bagamoyo from 7th to 11th March 2022 where several faculty attended.
  54. Community Health System (CHS) Connect Workshop was held through zoom to brainstorm on future direction of the Network
  55. A few faculty from the school participated in Developing a new course on Leadership and management for Malaria Eradication under ALAMIME Project
  56. Several faculty from the school attended a short course On Advanced Qualitative methods
  57. Dr. Candida Moshire attended Forgarty Global Health HBNU Consortium's 2022 Mentorship workshop in Cape Town, organized by the Fogarty Global Health HBNU Consortium from 23rd to 24th of May 2022
  58. Dr. Candida Moshire attended the DSI-Africa program symposium and launch in Kwazulu-Natal from 25th to 27th of May 2022
  59. Dr. Davis Amani participated in a HIV data quality evaluation activity for selected facilities in southern highland region that was organized by Walter Reed Army Institute of Research (WRAIR) in Mbeya Region from 23rd to 29th of May 2022.
  60. Mr. Heavenlight Paul participated in a site set-up activity for a randomized control trial study, organized by Tanzania Food and Nutrition Center in Dodoma and Singida regions from 11th to 20th of May 2022
  61. Dr. Theresia Ambrose participated in a TB data use evaluation meeting, organized by the National Tuberculosis and Leprosy Program (NTLP) from 27th to 30th of April 2022.

62. Mr. Elias Bukundi attended training on HIV/AIDS and Non-communicable Diseases, organized by TACAIDS, MUHAS and President Office, Public Service Management and Good Governance (PO-PSMM&CG) from 24th to 26th May 2022.
63. Department of Environmental and Occupational Health conducted short courses on Health Impact Assessment for the middle to big project to stakeholders at MUHAS between 14 to 17th June 2022
64. Dr. Kimera attended one workshop organized by NORHED project on Safe worker.
65. Members of the department of Bioethics and Health Professionalism participated in the preparation of Bioethics Postgraduate diploma from 5th to 7th May 2022.
66. One member from the department of Bioethics and Health Professionalism attended the 31<sup>st</sup> NIMR annual scientific conference on 17th-19th May 2022: Theme: A Multisectoral Approach for Health: An Agenda for Health Systems Strengthening towards Achieving Universal Health Coverage. Tanzania (attended by Godwin Pancras)
67. Godwin Pancras also participated in Regional Conference on Strengthening Research Ethics (STReK) on 24th- 26th May 2022: Theme: Strengthening Research Ethics Capacity and Networks. Kenya )
68. Prof Ngasala & Ms. Vivian Mushi attended Annual Joint Scientific Conference to be held on the 17th-19th May 2022 at the Julius Nyerere International Convention Centre.

#### **4.5.4.4 Research Activities**

The following is the list of 130 ongoing research projects in the School:-

1. Dr. Sirili Nathanael: Community Health Systems connect (CHS connect) comprised of MUHAS, University of Zambia, Makerere University-Uganda, University of Waterloo-Canada, Umea University Sweden and Western Cape University-South Africa
2. Landscape Analysis for Child and Adulthood Overweight and Obesity: Tanzania in Collaboration with TFNC, MUHAS, UDSM, University of Dodoma and Sokoine University of Agriculture (Dr. Gladys Mahit)
3. Strengthening health economics in Tanzania and Norway: NORPART – a collaborative project with MUHAS and University of Bergen, Norway (Prof. Gasto Frumence)

4. Faculty in the school continue with the implementation of research and training activities under the Sida Health Systems Strengthening in collaboration with MUHAS and Umea University
5. Prof. Leshabari and Dr Metta continuing with research on PRE- exposure prophylaxis roll out in Tanzania and ethics of health policy experiments projects.
6. PREPTA- Pragmatic Trial for HIV Pre-Exposure Prophylaxis Roll-Out in Tanzania: The project aims to test the effect of health mobile application in improving adherence to PrEP among MSM and FSW.
7. Dr. Happiness Saronga participating in Adolescent Wellness Visits to Reduce Health Risks research study led by Prof. Sylvia Kaaya
8. Ministry of Health Community Development, Gender Elderly and Children, Global Fund for HIV, Malaria, TB; Data Quality Assurance for HIV response in Tanzania 2020
9. Ministry of Health Community Development, Gender Elderly and Children, Global Fund for HIV, Malaria, TB; National Antenatal Surveillance, 2020
10. Transmission of malaria from submicroscopic infection
11. Establishing a Plasmodium ovale liver-stage model to study hypnozoite latency and relapse
12. THET- Project (Exploring the Ethical role of Community Advisory Boards in HIV Clinical Trials: Revisiting the Fundamental Ethical Principles)
13. A PhD Research on “Ethical implications for sharing of HIV Vaccine Trial benefits in Tanzania funded by the (MoEVT)
14. A Study project on Community advisory boards funded by THET
15. A systematic review on how do community advisory boards fulfill their ethical role in HIV clinical trials? A systematic review of qualitative evidence.
16. Ethical issues influencing adolescent’s adherence to antiretroviral therapy at Temeke Regional Hospital, funded by Ministry of Education and Vocational Training of Tanzania (MoEVT) as part of PhD training.
17. The department of Bioethics and Health Professionalism is writing research in Bio bank proposal for DMRET supplement grant application.
18. Nurses’ perception of research vulnerability, research ethics guidelines and their dual-role in clinical research in Tanzania
19. Research Strengthening and Transdisciplinary Patient Centered Approach for the Prevention of HIV Drug Resistance in Dar es Salaam: This is a capacity strengthening and research programme collaboration between MUHAS in Tanzania and KU-Leuven in Belgium

20. D43 Research Training Grants: Building capacity for patient-centered outcomes research to improve quality and impact of HIV care in Tanzania. Funded by National Institutes of Health (NIH), Fogarty International Center (FIC)
21. R01: Diet, environment, and choices of positive living (DECIDE): Evaluating personal and external food environment influences on diets among PLHIV and families in Dar es Salaam, Tanzania
22. The Prime Diet Quality Score (PDQS) questionnaire validation among urban adult women in Tanzania
23. PREPTA- Pragmatic Trial for HIV Pre-Exposure Prophylaxis Roll-Out in Tanzania”
24. Transforming Health Professions Education in Tanzania THET Project – 2018-2023
25. The Centre of Excellence for cardiovascular sciences (MUHAS)
26. Dar es Salaam Barmaids PrEP Trial
27. Mapping perioperative care pathway to support surgical treatment in Tanzania in collaboration with University College London Hospitals NHS Foundation Trust, London, UK.
28. Key performance indicators for improving the last mile in antiretroviral therapy to prevent HIV drug resistance (HIVDR) in Tanzania. This is a joint Project between MUHAS, Mzumbe University in Tanzania and KU-Leuven in Belgium
29. Partnership to Enhance Country Analytical Capacity and Data Use in East and Southern Africa-(PERSUADE)
30. Spirometry reference equations for Tanzanian populations, Dr. Hussein Mwanga (Post-doctoral research)
31. An intervention to reduce occupational noise exposure among workers in Tanzania using earplugs and earmuffs Dr. Israel Paul (post-doctoral research)
32. Occupational exposure to carcinogens and work-related cancer in Tanzania, Mr. LucoMwelange (PhD research)
33. Working environmental conditions, injuries and respiratory health among workers in the iron and steel industries in Tanzania, Ms. SaumuShaban, (PhD research)
34. Noise exposure and hearing ability among industrial workers in comparison to general population in Dar es salaam, Tanzania, Witness john (PhD research)



35. Assessment of acceptability of implementing community health worker–led breast cancer awareness and screening program in Ileje district, Tanzania (Dr. Tumaini Nyamhanga)
36. Dr. Ezekiel, Winfrida Onemso and colleagues from TFNC, Ministry of Agriculture secured a grant from USAID to conduct a study on food taboos and preferences in eight regions of Tanzania.
37. Dr. Happiness Saronga in collaboration with colleagues from TAMISEMI are conducting a study titled “Estimating the costs of providing health services in primary health care facilities in Tanzania”
38. GROWNUT II- Growing Partnership for Higher Education and Research in Nutritional Epidemiology in DR Congo and Tanzania UiB, PRONANUT – Congo, MUHAS & TFNC
39. Development of novel diagnostics for African non-falciparum malaria
40. Measurement of the risks of Non-Biological Harms of HIV Vaccine Trial and Their Influence on Peoples’ Willingness to Participate in Clinical Trials. by Ms. Judith Shayo
41. Ethical issues related to financial payment of healthy volunteers for their participation in prevention trials in Tanzania by Fr. Raymond Athanas
42. Research ethics committees’ performance: Perspectives of REC secretariat, members and researchers in Tanzania by Lazaro A.S. Haule
43. Fleming Fund Country Grant 2 (CG2) —the UK Department of Health and Social Care, and American Society for Microbiology. Role: Co-PI
44. ENGAGE: Educating and Developing Bioethicists in Tanzania Fogarty NIH Grant: 1D43TW011809 – 2021-2026. Role: Co-PI
45. Establishing village emergency care pilot program three selected communities in Tanzania: a baseline study of indicators for impact and community readiness
46. Magnitude of Mental Health Challenges and Associated Risk Factors Among Healthcare Workers During COVID-19 Pandemic: A Case of Tanzania Health Facilities
47. Prevalence and predictors of food insecurity among households with under-five children living in the poorest income Quintile Tanzania: A case of Njombe Region
48. Exploring evidence for adapting comprehensive health seeking behavior and practice for individuals, families and communities in selected district councils in Tanzania



49. One Postdoc-HIV- Neuropathogenesis; Molecular techniques in infectious diseases
50. Prof. Kakoko and Dr. Metta in collaboration with colleagues from the departments of Development Studies and Epidemiology and Biostatistics, MoHCDEC secured funding to conduct a study to assess “Public Knowledge, Perceptions, Attitudes and Practices on Covid-19 and its preventive measures in Tanzania”
51. Dr Ezekiel and colleagues secured funding from Swedish Research council for new project titled: RESTAKE: Health system and community Resilience during the synergistic epidemics of Covid-19 and tuberculosis: A multilevel comparative case study in Tanzania and Kenya
52. Dr. Happiness Saronga secured funding for a study on “Behavioral incentives to increase linkage to confirmatory testing and PrEP after HIV self-testing (HIVST) among adolescent girls and young women (AGYW) in Mwanga Tanzania: A Randomized Controlled Trial” (Post-doctoral fellowship award by NIH).
53. Dr. Happiness Saronga started a new collaboration with Liverpool School of Tropical Medicine and other collaborators on research in Maternal and Newborn Health
54. Allocation and Utilization of CT scan and MRI in Tanzania
55. Food Consumption Survey among non-pregnant non-lactating Women of Reproductive Age in Mbeya Region, Tanzania
56. Development of novel diagnostics for African non-falciparum malaria
57. Measurement of the risks of Non-Biological Harms of HIV Vaccine Trial and Their Influence on Peoples’ Willingness to Participate in Clinical Trials. by Ms. Judith Shayo
58. Ethical issues related to financial payment of healthy volunteers for their participation in prevention trials in Tanzania by Fr. Raymond Athanas
59. Research ethics committees’ performance: Perspectives of REC secretariat, members and researchers in Tanzania by Lazaro A.S. Haule
60. Assessment of Barriers to Policy Implementation on Isoniazid Preventive Therapy for Children Living with Human Immunodeficiency Virus in Rural Tanzania by Rebecca Rabach
61. Dr Hussein Mohamed conducted a research project on “The trend of Water sanitation and hygiene related diseases 2019-2021 in Mtama district council and Lindi Municipal Council in Lindi region

62. Dr Hussein Mohamed conducted together with TPHA conducted research (plus intervention) on vaccine acceptance among elderly in all districts in Kilimanjaro regions
63. Dr. Stephen Kishinhi conducted collaborative research with the Ministry of Health on Workplace improvement among workers in health sector in Mtwara and Ruvuma region
64. Dr. Stephen Kishinhi collaborated with PMTCT in Maternal retesting of HIV to pregnant and lactating women in lake zone, TANZANIA
65. MUHAS- ICAP: IBBS project
66. EPRENUT: NORHED 2022-2026
67. Establishing village emergency care pilot program three selected communities in Tanzania: a baseline study of indicators for impact and community readiness.
68. Magnitude of Mental Health Challenges and Associated Risk Factors among Healthcare Workers during COVID-19 Pandemic: A Case of Tanzania Health Facilities.
69. Exploring evidence for adapting comprehensive health seeking behavior and practice for individuals, families and communities in selected district councils in Tanzania.
70. Behavioral incentives study
71. Maternal and Newborn Health study
72. Bio-behavioral Survey of HIV and other Sexually Transmitted Infections among women at high risk of contracting HIV infection and people who inject drugs.
73. Importation and transmission of malaria in Zanzibar: a case study for elimination)
74. Assessment of Barriers to Policy Implementation on Isoniazid Preventive Therapy
75. Strengthening Health System Research for Enhancing Innovations and Sustainable Socio-Economic Development 2015-2020.
76. Appraisal of accountability mechanisms for quality improvement in maternal newborn and child health services in Mkuranga Tanzania
77. Developing a culturally sensitive strategy for reducing child malnutrition in Tanzania
78. The role of health related variables and the drop-outs in voluntary health insurance.
79. The role of CHF as a determinant of catastrophic health expenditure.

80. Metabolic Syndrome: the role of lifestyle and gut microbiota in rural and urban Tanzania.
81. Situation analysis on Overweight and Obesity among Children and Adolescents in Tanzania conducted in 2021
82. Mass Dog vaccination Campaign and research activity conducted in Kisarawe in 2021
83. Magnitude of Mental Health Challenges and Associated Risk Factors among Healthcare Workers during COVID-19 Pandemic: A Case of Tanzania Health Facilities.
84. Exploring evidence for adapting comprehensive health seeking behavior and practice for individuals, families and communities in selected district councils in Tanzania.
85. Fleming Fund Country Grant 2 (CG2)—the UK Department of Health and Social Care, and American Society for Microbiology.
86. Bone mineral density and serum bone mineral biochemical markers among patients with end stage renal disease.
87. Improving HIV treatment outcomes for people who use drugs: adapting and piloting a drug-use stigma-reduction intervention in HIV care and treatment clinics in Tanzania
88. Adapting patient-reported outcomes measures with people who use drugs in Tanzania
89. ICAP, NACP, CDC: Bio-behavioral survey among key populations in selected regions of Tanzania. Jan-Dec 2022
90. A PhD Research on “Ethical implications for sharing of HIV Vaccine Trial benefits in Tanzania funded by the (MoEVT)
91. A systematic review on how do community advisory boards fulfill their ethical role in HIV clinical trials? A systematic review of qualitative evidence.
92. Measurement of the risks of Non-Biological Harms of HIV Vaccine Trial and Their Influence on Peoples’ Willingness to Participate in Clinical Trials. Funded by NIH
93. Ethical issues related to financial payment of healthy volunteers for their participation in prevention trials in Tanzania.
94. Research ethics committees’ performance: Perspectives of REC secretariat, members and researchers in Tanzania

95. Assessment of Barriers to Policy Implementation on Isoniazid Preventive Therapy for Children Living with Human Immunodeficiency Virus in Rural Tanzania by Rebecca Rabach
96. Relapse rates of P. ovale (PORT) (MUHAS, UNC, IHI Florida University)
97. Research Strengthening and Transdisciplinary Patient Centered Approach for the Prevention of HIV Drug Resistance in Dar es Salaam
98. D43 Research Training Grant
99. R01: Diet, environment, and choices of positive living (DECIDE): Evaluating personal and external food environment influences on diets among PLHIV and families in Dar es Salaam, Tanzania
100. The Prime Diet Quality Score (PDQS) questionnaire validation among urban adult women in Tanzania
101. Mapping perioperative care pathway to support surgical treatment in Tanzania in collaboration with University College London Hospitals NHS Foundation Trust, London, UK.
102. Key performance indicators for improving the last mile in antiretroviral therapy to prevent HIV drug resistance (HIVDR) in Tanzania: This is a joint Project between MUHAS, Mzumbe University in Tanzania and KU-Leuven in Belgium
103. Partnership to Enhance Country Analytical Capacity and Data Use in East and Southern Africa-(PERSUADE)
104. Scientific collaboration under the (short) title: Klinikpartnerschaften – Partner stärken Gesundheit
105. Mother and Child Health
106. Bio-behavioral Survey of HIV and other Sexually Transmitted Infections among women at high risk of contracting HIV infection and people who inject drugs.
107. TB STIGMA INDEX STUDY
108. E-MOTIVE Project
109. CoVID-19 Research Pillar Study
110. Adolescent Wellness Visits study
111. Undetected equals untransmitted (u=u): CDC ( Department of community Health)
112. Access to COVID-19 vaccine information among rural communities: case of Geita region (department of Bioethics)
113. Human antibody responses to Anopheles saliva in a malaria endemic setting (Parasitology and Medical Entomology)

114. Food taboos and preferences study ( Department of Behavioural Sciences)

#### 4.5.4.7 Consultancy Work

During the year staff from the School worked on a number of consultancies as shown below:

1. AI-REAL for Pathology Costing.
2. Data Systems and Data Use Capacity Building Project
3. John Hopkins University, JHPIEGO Tanzania, MOHCDGEC. Assessing feasibility, acceptability and perceived sustainability of a pilot program to integrate HPV vaccination with other adolescent services in low-vaccinating regions in Tanzania. March-June 2021
4. Clinton Health Access Initiative: Operational Research to Assess the Capacity of Health Care Providers and Client's Perspective towards the Hormonal Intrauterine System. March 2021-February 2022
5. UNICEF, TFNC, MoHCDGEC: Rapid Assessment on Implementation of Integrated Management of Acute Malnutrition Program in Tanzania. April-June 2021
6. Ministry of Health Zanzibar, UNFPA: Maternal and Perinatal Death Surveillance in Zanzibar December 2020
7. MUHAS-UNICEF Implementation Research on Community Health systems in Kigoma, Tanzania
8. Therapeutic efficacy Surveillance in Nagaga Masasi district in Parasitology Department
9. Establishment of Village Emergency Health care services in collaboration with Abbott-Tanzania- Department of Development Studies
10. Dr Hussein Mohamed was commissioned a consultancy by UNDP to identify Gaps and Opportunities in the Training of Environmental Health in Tanzania to incorporate sustainability Dimensions in the Teaching Curriculum (**An individual consultancy**)
11. Dr Hussein Mohamed was commissioned a consultancy by Heart-to-Heart Foundation-a South Korea Based organization to conduct end of project evaluation of the WASH project titled "To prevent Waterborne Diseases through Water Sanitation and Hygiene Interventions in Lindi Region (**An individual consultancy**)

12. Ministry of Health Zanzibar, UNFPA: Maternal and Perinatal Death Surveillance in Zanzibar December 2020 Final dissemination and close out - Department of Community Health
13. John Hopkins University, JHPIEGO Tanzania, MOHCDGEC. Assessing feasibility, acceptability and perceived sustainability of a pilot program to integrate HPV vaccination with other adolescent services in low-vaccinating regions in Tanzania. March-June 2021 Final report and dissemination. Project close out- Department of Community Health
14. UNICEF, TFNC, MoHCDGEC: Rapid Assessment on Implementation of Integrated Management of Acute Malnutrition Program in Tanzania. April-June 2021 Final report submission and dissemination. Project close out- Department of Community Health
15. Consultancy to enhance country analytical capacity and data use in Eastern and Southern Africa (PERSuADE II): Global Fund to Fight HIV, TB, and Malaria Preliminary report- Department of Community Health
16. Development and finalization of the 2020-2025 National TB and Leprosy Advocacy, Communication and Social Mobilization (ACSM) strategy Meeting conducted with consultant, NTLP and FHI 360 to review the developed strategy - Department of Community Health
17. TOUCH Foundation: Endline evaluation of m-mama project on maternal and newborn health Proposal development and submission for IRB
18. JHPIEGO: Evaluation of the HPV-Plus project in Northern highlands' regions Concept note development
19. Department of Development Studies Conducting Data Quality Assessments (DQAs) at DoD/WRAIR-supported facilities through funding from the US President's Emergency Plan for AIDS Relief (PEPFAR) in Tanzania.
20. Consultancy to enhance country analytical capacity and data use in Eastern and Southern Africa (PERSuADE II): Global Fund to Fight HIV, TB, and Malaria
21. Development and finalization of the 2020-2025 National TB and Leprosy Advocacy, Communication and Social Mobilization (ACSM) strategy

22. TOUCH Foundation, Vodafone foundation, Grand Challenge Canada: End line Evaluation of the m-mama program on Strengthening Health Systems to Reduce Maternal Mortality and Morbidity in Shinyanga Region, Tanzania. September 2021- April 2022
23. Situation analysis for baseline assessment on the establishment of emergency health care services at Mkinga Tanzania in collaboration with Abbott Tanzania. Capacity strengthening activities on abortion research in Tanzania

#### **4.5.4.8 Links and Programs**

The School has continued strengthening links and collaborations through various departments where they collaborate with different institutions within and outside the country. The school links/collaborates with the following Universities, Organizations and institutions;

1. MOMIC Project on Cervical cancer at KinondoKwetu in Kenya
2. Karolinska Institutet (KI) - Sweden
3. FIMM - University of Helsinki (FIMM-UH) - Finland
4. Uppsala University (UU) – Sweden
5. Kenya Medical Research Institute (KEMRI) – Kenya
6. LaserProbe LP Oy – Finland
7. Importation and transmission of malaria in Zanzibar: a case study for (ZIM Project)
8. University of North Carolina
9. Muhimbili University of Health and Allied Sciences (MUHAS) – Tanzania
10. Zanzibar Malaria Elimination Program
11. African Leadership and Management Training for Malaria-Eradication (ALAMIME), Network with five Schools of public health from Uganda, DRC, Niger, Burkinafaso, and Nigeria
12. Community Health Systems connect (CHS connect) comprised of MUHAS, Makerere, University of Zambia, University of Western Cape, University of Waterloo, and Umeå University
13. Aggressive Injection – Related East Africa Lymphoma (AI – REAL).
14. MUHAS- University of Pennsylvania Collaboration
15. MUHAS-Fudan University Collaboration
16. MUHAS- Oxford University collaboration

17. MUHAS- University of Pennsylvania second collaboration (ENGAGE)
18. MUHAS- Kumamoto University (Japan)
19. MUHAS-KCMUco-SFUCHAS-PORALG- MOHCDGEC-UNICEF-AMREF
20. Dartmouth MUHAS Research Ethics Training Programme (DMRET)
21. Educating and Developing Bioethicists in Tanzania” (ENGAGE)
22. Consortium For Clinical Research Regulation and Ethics Capacity Development in the Eastern Africa Region (CCRREEA)
23. Development of PhD research ethics curriculum by Strengthening Doctoral Education for Health in Tanzania (DOCEHTA)-Project in collaboration with the University of Dodoma and University of Oslo.
24. Cancer mapping project under PEHEAT program Pesticides Hazards on Ecosystem and Environment in the SAGCOT Region: The Case of Bees and Other Pollinators ( New Link)
25. NORHED II: Safe workers for sustainable health and education. Lead exposure and associated health effects among workers at lead acid battery recycling plants in Dar es Salaam
26. Influence of water, sanitation and hygiene on persistent transmission of urogenital schistosomiasis among preschoolers and school age children in Lindi, Tanzania
27. Establishment of Emerging disease research centers Establishment of IVD training program
28. Importation and transmission of malaria in Zanzibar: a case study for elimination (new Link in the department of Parasitology and Medical Entomology)
29. The UK Department of Health and Social Care, and American Society for MicrobiologyRole: Co-PI( New Link department of Community Health)
30. GAGE( New Link department of Community Health)
31. GROWNUT -2. NORHED II 2021-2026 (New Link department of Community Health)
32. Bioethics SIDA research cluster
33. Open University of Tanzania
34. National Institute of Medical Research (NIMR)
35. Norwegian Institute of Technology on the proposal development titled “Suicidal behaviour among women exposed to domestic or gender-based violence in Tanzania: A qualitative study” Supervising 2 Norwegian namely Ronja and Tatiana Masters students from (new link)



36. Sida small grant for research support (Nurses perception of research vulnerability, Research ethics guideline and their duo role in clinical research in Tanzania.)
37. Grant from THET-Project (Transforming Health Education in Tanzania)
38. African Leadership and Management Training for Malaria-Eradication (ALAMIME) -Prof. GastoFrumence.
39. Development and validation of the dried urine spot method for detection of Schistosoma circulating antigens from a resource-limited archetype in Tanzania PI: AbdallahZacharia Co-investigators: FarajaLyamuya, George Ogweno, TwilumbaMakene and Billy Ngasala Funder: COR-NTD and administered by ARNGTD Small Grants Program Study period: February 2022 to February 2023
40. Genital schistosomiasis and its association with infertility among males of reproductive age in high endemic areas of Lindi region, Tanzania PI: TwilumbaMakene Department: Parasitology Medical Entomology; Co-investigators: AbdallahZacharia, Gift Lukumay, Stanley Haule and Billy Ngasala; Funder: MUHAS SIDA SEED GRANT; Study period: February - July 2022
41. Defining and integrating essential NCD interventions in Tanzania. A collaboration with University of Bergen
42. MUHAS-WDF collaboration
43. MUHAS-TDA collaboration
44. MUHAS, NIMR-Tanga, IHI, NMCP and CDC/PMI

## **4.6.5 Staff Recruitment and Development**

### **4.5.5.1 Staff Recruitment**

School received the following new staff:

1. Ms. Zuhura Kimera, is a newly recruited academic member of staff in the Department of Environmental and Occupational Health. She has been working as an Adjunct lecturer for the past two years before being transferred to the department Environmental and Occupational Health.
2. Dr. Israel Paul is a new Adjunct Lecturer Department of Environmental and Occupational Studies.
3. One tutorial assistant namely Hozeeru Iddi Palilo was recruited in the department of Parasitology and Medical Entomology

4. One tutorial assistant namely ElinesiMwasanga was recruited in the department of Development Studies.

#### 4.5.5.2 Staff Development

**Table 26: .....???????????????? Table tile????**

S/n	Name	Study programme	Progress
1	Dr. Renatha Joseph	PhD Candidate	Ongoing
2	Mr. Godwin Pancras Katunzi	PhD Candidate	Ongoing
3	Ms. Judith Shayo	PhD Candidate	Ongoing, Addressing proposal comments
4	Fr. Raymond Athanas	Admitted for PhD at Muhimbili University	Ongoing, Registered
5	Ms. Rebecca Rabach	Admitted for PhD at Muhimbili University	Froze studies
6	Mr. Lazaro Haule	Admitted for PhD at Muhimbili University	Ongoing, Got ethical clearance.
7	Alphoncina Kagaigai	PhD Training	<ol style="list-style-type: none"> <li>1. Short course on Applied Methods of Cost-Effectiveness Analysis course on progress 28/03-01/04 2022.</li> <li>2. One manuscript has been submitted ant the other one was submitted to supervisorDr. L. S. Paulo sor for comments.</li> </ol>
8	Malale Tungu	PhD training	<ol style="list-style-type: none"> <li>3. Submitted 2 manuscripts for publication.</li> <li>4. Writing a cover</li> </ol>

			story (Thesis).
9	Dr. Linda. S. Paulo	PhD Training	Data collection and analysis.
	Ms, Saidah Bakar	PhD	Starting the programme
10	Ms Naomi Saronga	PhD. Australia	Ongoing
11	Dr. Mucho Mizinduko	Registered for PhD at MUHAS from 2018	Two manuscripts published. Manuscript writing ongoing. Half time seminar done in April 2021. Attended online courses.
12	Dr. Theresia Ambrose	Registered for PhD at MUHAS from 2021	Data analysis and manuscript writing ongoing. Attended courses at Northwestern University
13	Ms. Jackline Mbishi	MSc Biostatistics in Hasselt University, Belgium from September 2020 (2 years)	Begun studies in September 2020. Good progress.
14	Dr. Erick Mboya	MSc Epidemiology and Biostatistics, Kilimanjaro Christian Medical University College – begun October 2021 (2 years)	Matriculated in October 2021.
15	Dr. Davis Aman	Applying for masters training	Application process ongoing
16	Mr. Heavenlight Paul	Applying for PhD training	Application process ongoing at various universities
17	Mr. Elias Bukundi	Plans for PhD training ongoing	NA
18	Ms. Doreen Mutemi	PhD programme	Has made halftime presentation

19	Mr. Zakayo Nzella	BMLS	Second Year Undergraduate studies
20	Dr. Hussein Mwanga	Postdoc, MUHAS	
21	Mr. Salehe Said	PhD, USA	
22	Mr. Jovin Bachwenkizi	Phd, Fudan University China	
23	Mr. HeribertKaijage	PhD, UDSM	
24	Mr. LucoMwelage	PhD, MUHAS	
25	Ms. Saumu Shabani	PhD, MUHAS	
26	Ms. Witness J. Axwesso	PhD, MUHAS	
27	Francis August	PhD Training	One manuscript published One manuscript submitted Draft manuscript three

#### 4.6.6 Major constraints faced by the School during the year

School identified the following challenges and suggests solution for future improvement.

1. Shortage of staff including senior staff, which in turn leads to the great challenge in supervision of students' thesis. Staffs have been having a burden in supervision of students thus the present junior staffs are strongly encouraged to publish and be promoted to the senior academic positions. However, time for writing proposals and conducting research becomes a great challenge to the members of academic staff and hence may be the reason for slow growth of some staff career and may fail to meet their career goals and aspiration. Insufficient research skills within the members of school are a challenge. Staffs should get more training on research and support to attend research Courses.
2. Office spaces are not enough; some of the staff are sharing small offices for example in the department of Bioethics. Some offices are not suitable

for use as they have fungus and poor ventilation. The solution is look for a good office or else to see how best the extensions can be done to accommodate other staff. (Dr.Glady's Office, Administrator Office and LucoPatson Office).

3. Large number of students in one class posing difficulties in ensuring competency based learning takes place effectively. Lack of public address system in 24-hour room used for teaching undergraduates. Proposed solutions in 24 hour room: Mrs. Sichali, an honorary lecturer as has been helping but this year we have to rely on an external expert of the field. Transportation-Taking students to the field practical especially for undergraduate students is a challenge that the university has no buses to accommodate big number of students such as 90 BSc EHS first year students
4. Laboratory space in the Department of Parasitology and Medical Entomology and Environmental Health and Occupational Sciences has been a great challenge for a quite long time now. The Department of Environmental and Occupational Health received a donation of equipment for teaching practical skills from Prof Sullivan but have not yet secured a room for keeping them safe and for proper practical training. In this year 2021/2022 the Department is expecting to receive many more equipment, this coming academic year. The department of Parasitology and Medical Entomology also does not have Laboratory space - The Department has received of equipment for molecular biology analysis, but have not been able to install and use them for both research and practical training. There has been also a challenge since the Parasitology laboratory located in Block F1 which can be used for that purpose is currently occupied by a Project from the Department of Microbiology. The department is requesting that the laboratory be returned to the SPHSS so that we can effectively perform our research and training functions.
5. The Department of Bioethics and Professionalism in Health is looking forward to be a resource for bioethics consultant services within and outside the country. Potential sources of consultancies services are higher learning institutions, research institution, national regulatory boards like NIMR, COSTECH and TFDA, Ministry of Health, Community

- Development, Gender, Elderly and Children (MoHCDEC), non-governmental organizations (NGOs) working with vulnerable populations in need of protections, and Human rights organization. But due to Lack of bioethics awareness this has been leading to fewer consultancies.
6. Revision should be done to include the Courses of Environment Ethics and Gender Ethics. This can be done when revising the Curriculum of different programs.
  7. Burnout due to many and ever-increasing tasks
  8. Lack of proper and safe office
  9. Venues for undergraduates DS seminars are not enough
  10. Challenges in Photocopying examination papers
  11. Outdated and slow-performance of Desktop Computers
  12. Insufficient research skills within the members of the department are a challenge. Staffs should get more trainings on research and support to attend research Courses

## 4.6 Institute of Traditional Medicine

### 4.6.1 Introduction



**Dr. Otieno,  
Director, Institute  
of Traditional  
Medicine**

The Institute of Traditional Medicine, previous known as Traditional Medicine Research Unit was established under the Muhimbili University College of Health Sciences, Act of Parliament no. 9 of 1991, Section 10 (1) (c). The Act provided for an Institute Board that reports to the Academic Board of the College. The Institute is charged with the responsibility to research into traditional healing systems, in Tanzania, to identify useful practices which can be adopted and also to identify Useful *material medical* which can be modernized and developed into drugs for use to improve human health. Tanzania is estimated to have over 80,000 traditional healers with varying specialties. The majority of healers are herbalists using mainly plants and a few animal and mineral products in their practices. Traditional healers are likely to be first consulted health provider due to socio-cultural settings in rural Tanzania. The estimated traditional healer: population ratio is 1:400 compared to 1:30,000 for medical doctor to population ratio.

Of all over 12,000 higher plant species growing in Tanzania, at least 10% have medicinal values and some of them already have a big market potential worldwide and can be exploited for local drug production. The Institute is already poised to play a leading role in the development of this vast resource by strategically creating expertise in all areas related to drug development, including research and training in good practices, basic science knowledge, phytochemistry, biological testing, pre-clinical studies, clinical trials and evaluation, pharmaceutical technology, standardization of herbal pharmaceuticals, biotechnology etc. The goal is to produce herbal medicines with best levels of active molecules

### 4.6.2 Highlights of Activities Implemented in 2021/2022

During the reporting period, the Institute continued to run postgraduate training in Traditional medicine development at PhD and MSc levels successfully whereby one PhD and 5 MSc students graduated. Current Enrolled students include 5 PhD and 1MSc student. In addition, the institute has two accredited continuing education and professional development (CEPD) short course for Traditional Health Practitioners (THP).The aim of first continuing education and professional

development (CEPD) courses is to instil good practices in professional conducts of THPs while the second is to training different experts in pharmaceutical aspects of traditional medicine; Quality control regulation and Intellectual property rights. Through these training the Institute has increased opportunity for its stakeholders to deliver innovative products and services that aid the integration of traditional medicine in Tanzanian health care system.

The Institute continued with its research to develop, standardize and dispense quality herbal medicinal products, after being proven for their effectiveness and safety. The income accrued from sales of herbal medicine was **TZS 158,140,500/=** products in a competitive market such as supermarkets and Pharmacies.

During the reporting period, the Institute attracted 2 new research fund making up to 6 currently ongoing Research projects that are at various levels of funding while four (4) were completed. The Institute, produced 14 Publications, participated in Four (4) exhibitions at National and International levels. Also, participated in 88 workshops/seminars, scientific conferences and national or international experts meetings.

### **4.6.3 Students' Matters**

#### **4.6.3.1 Academic Programs**

During the reporting period the Institute continued offering training programmes, which included: -

- i. One program in MSc in Traditional Medicines Development,
- ii. PhD program
- iii. Two CEPD short course program in Traditional Medicines Development

#### **4.6.3.2 Students Admission and Enrollment**

Two (1) masters' students got admission and were enrolled for MSc. Trad Med. Development at the Institute. Four (3) other MSc and (4) PhD students continued with their studies at the Institute (Table 21).



**Table 27: Students Admission, Enrolment and Achievements**

	<b>MSc. Trad. Med. Dev.</b>	<b>PhD</b>
	<b>2021/2022</b>	<b>2021/2022</b>
Admission (New)	0	1
Enrolment/registration	1	2
Freezing	0	0
Postponement	0	0
Completed/graduated	3	2

**4.6.3.3 Students Output and Performance**

During academic year 2021/2022, Traditional Medicine programs successfully produced three (3) graduates. Master of Science (MSc.) and PhD two (2).

**4.6.3.4. Short course training**

Within the reporting period, twelve Traditional Practitioners were trained as part of Professional Training Development

**4.6.4 Research Projects, Links and Publication****4.6.4.1. Research Links**

Research link was established with Tanzania Research Institute on micropropagation of Hypoxis species (African Potatoes)

4.6.4.2. The link has been established between Institute of Traditional Medicine and Tanzania Forest Service on propagation of *Prunus africana*

**4.6.4.2. Research Projects**

During the reporting period there are eight ongoing research projects as indicated below

**S/No Ongoing Research project for 2021/2022 academic year**

- (i) Search for novel anti-TB compounds from selected edible and medicinal mushrooms in Southern Region of Tanzania by Michael Qwarse, funded by DAAD
- (ii) Standardization of *Prunus africana* capsules Used for the Management of Benign Prostatic Hyperplasia in Tanzania

- (iii) Exploring Community Experiences and Practices on the use of Traditional Medicine in Management of COVID-19 in Tanzania, funded by the Amne Salim Covid-19 Research Fund
- (iv) Repurposing FDA/WHO approved pharmaceuticals as COVID-19 agent inspired by herbal medicine: An integrated computational and wet science study
- (v) Safety evaluation of crude extracts and isolation of antimicrobial compounds from selected Tanzanian medicinal plants used in the management of HIV and AIDS related conditions, funded by Sida-MUHAS
- (vi) Upgrading Instrumentation for Herbal Formulation Research Training Laboratory at MUHAS to Spearhead Industrialization. Funded by COSTECH
- (vii) Propagation of Hypoxis species using tissue culture technology. Funded by ITM
- (viii) Vulnerable Adolescence girls and Young women experiences of accessing PREPs in the selected Government care facilities in Tanzania. By Magreth T. Mwakilasa et al.
- (ix) Developing effective rodent control strategies to reduce disease risk in ecologically diverse rural landscapes by Dr. Kayombo and Magreth T. Mwakilasa et al.

#### **4.6.4.3 Links**

Transforming Health Professions Education in Tanzania (THET), a collaborative Project between MUHAS, CUHAS, KCMUCo, UCSF and Duke University

#### **4.6.5 Consultancies and Public Services**

- 4.6.5.1 Dr. Ramadhani Nondo participated in the work meeting organized by the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEC) to prepared “Herbal medicine prescription”. The held in Dar es Salaam from 21<sup>st</sup> to 25<sup>th</sup> June, 2021

- 4.6.5.2 Dr. Pax Masimba participated in developing National Covid-19 Response Plan from 26-28 May, 2021 at the Ministry of Health Ministry of Health, Community Development, Gender, Elderly and Children in Dar es Salaam, Tanzania.
- 4.6.5.3 Prof. Innocent is Coordinating the science cluster for the Moringa sand filter (MSF) hybrid technology, under flagship of water for all of the African Scientific, Research and Innovation Council-ASRIC
- 4.6.5.4 Collaboration on tissue culture propagation between MUHAS and TARI Kibaha MoU on tissue culture propagation signed between MUHAS and TARI Kibaha
- 4.6.5.5 4.6.5 1.Conservation of *Prunus africana* in collaboration with TFSSeedlings raised at the TFS nursery in west Kilimanjaro (Rongai forest)
- 4.6.5.6 Conservation of *Osyris lanceolate* (Sandal wood) in East AfricaDetermination of Non Detriment Findings data is ongoing
- 4.6.5.7 Prof. Innocent is Coordinating the science cluster for the Moringa sand filter (MSF) hybrid technology, under flagship of water for all of the African Scientific, Research and Innovation Council-ASRIC
- 4.6.5.8 4.6.8 Collaboration on tissue culture propagation between MUHAS and TARI KibahaMoU on tissue culture propagation signed between MUHAS and TARI Kibaha
- 4.6.5.9 Conservation of *Prunus africana* in collaboration with TFSSeedlings raised at the TFS nursery in west Kilimanjaro (Rongai forest)
- 4.6.5.10 Conservation of *Osyris lanceolate* (Sandal wood) in East AfricaDetermination of Non Detriment Findings data is ongoing
- 4.6.5.11 Stability studies for Organic capsule samples submitted by Elven Agri Company Limited.

## 4.6.6 Staff Development

### 4.6.6.1 Training leading to degree award

- (i) Alphonse Ignas is on his PhD programme on Traditional Medicine development at MUHAS
- (ii) Michael Quase is on PhD programme at MUHAS

(iii) Alexander Mwijage is on his PhD programme at MUHAS

#### **4.6.6.2 Graduations**

Mourice Mbunde PhD at MUHAS

Baraka Ndiege PhD at MUHAS

Siri Abihudi PhD at Nelson Mandela Institute of Technology

#### **4.6.6.3 Staff training attachments to other Institutions**

(i) Thomas Jackson is finalizing his PhD programme at the UDSM

(ii) Ms. Zaituni Msengwa is on her PhD programme at the UDSM

(iii) Mr David Credo is on his PhD programme at SUA

(iv) Baraka Ernest is on PHD at UDSM

(v) Cassian Mwinuka on Masters program at UDSM

(vi) Mariana Shayo is on her PHD at KCMC

#### **4.6.6.3 Retirement**

No staff retired at the reporting period.

### **4.6.7 Infrastructure Development and facilities procured**

#### **4.6.7.1. Infrastructure development**

##### **4.6.8.2. Facilities procured**

Department of Natural Products, Formulation and Department of Biological Pre-clinical studies installed Fume hood and Safe cabinet instruments for chemical reaction and analysis Microbiological testing respectively.



**Figure 11:Fume Hood in Department of Natural Products and Formulation,  
Chemistry laboratory**



**Figure 12: Safe cabinet in Department of Biological and Pre-clinical studies laboratory**

#### **4.6.7.2. New herbal products**

The Institute of Traditional Medicine of Traditional Medicine Development has developed new three herbal products namely; **CENTICA CAPSULES**, **Facetica cream** and **Centella cream**



**Figure 13: CENTICA Capsules: It has been formulated as a memory boosting agent, one dose contains 60 capsules**



**Figure 14:Centella cream: Used as a wound healing agent, removes scars, psoriasis and stretch marks.**



**Figure 15:Facetica cream: Used for acne removal, pimples, and as anti-aging cosmetics**

#### 4.6.8 Workshops/Seminars

1. Prof. Mainen Moshi participated in a TMDA Advisory Committee for Registration of Human Medicines and Medical Devices on 30<sup>th</sup> September 2021.
2. Prof. Mainen Moshi participated in a TCU meeting to discuss and ratify benchmarks for the MD and BSc Nursing curriculums in Tanzania
3. Mariana attended on online course on Molecular Methods, Genomics and Bioinformatics for Infectious Disease Epidemiology. Hosted by Ohio State University under One Health Summer Institute (GOHSI) 2021 from 2<sup>nd</sup> -23<sup>rd</sup> July 2021.

4. Mariana attended a short course on whole genome sequencing and its applications at Sokoine University of Agriculture from 13<sup>rd</sup> -18<sup>th</sup> September 2021.
5. Mariana attended a two weeks workshop on Biophysics school held at the University of Dodoma from 20<sup>th</sup> September to 1<sup>st</sup> October, 2021.
6. ITM staff participated in a Stakeholders' meeting to discuss CPD topics for short course on 16<sup>th</sup> September, 2021.
7. Prof. E. Innocent attend the WG5 of ARSO TC 82 meetings on 24th August, 2021 by ZOOM.
8. Prof. E. Innocent attend the ARSO TC 82 meetings on 22nd and 23rd September, 2021 by ZOOM
9. Mr. Jackson Thomas participated in traditional medicine day (Maadhimisho ya Kitaifa ya Siku ya Tiba Asili ya Mwafrika) which was held in Dodoma 28-31 August 2021, organized by the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEC).
10. Department held two meetings on 5<sup>th</sup> and 12<sup>th</sup> August 2021 to develop short courses for MSc and PhD by research and publications Pax J. Masimba attended harmonization meeting in Morogoro for COSTECH proposals on 1<sup>st</sup> and 2<sup>nd</sup> October, 2021.
11. Pax J. Masimba attended a webinar hosted by the Association of Commonwealth Universities (ACU) on The Path to Research Leadership in Africa and India on the 23rd September 2021.
12. Magreth Thadei Mwakilasa attended REDCap training at Sokoine University of Agriculture from 23<sup>rd</sup> August 2021 to 27<sup>st</sup> August 2021
13. Magreth Thadei Mwakilasa attended a zoom training on Indigenous Knowledge System Research Methodology Training Workshop from 9<sup>th</sup> September 2021-10<sup>th</sup> September 2021.
14. Magreth Thadei Mwakilasa attended a workshop on Policy Briefs Writing and Disseminations at MUHAS CHPE organized by School of Public Health and 27 September, 2021- 01 October, 2021
15. Baraka Ernest attended a seminar on “Principles and guidelines for academic and scientific writing” from 25<sup>th</sup> to 27<sup>th</sup> August, 2021 at the University of Dar es Salaam organized by the Institute of Resource Assessment and Centre for Climate Change Studies.
16. Baraka Ernest attended to the “The national Consultative Policy Dialogue on Climate Financing in Tanzania” from 23<sup>rd</sup> to 24<sup>th</sup> September 2021 at Royal Village Hotel in Dodoma City organized by the Vice President's Office in



- collaboration with Research on Poverty Alleviation (REPOA) and Foreign Commonwealth Development Organization (FCDO)
17. Joseph Otieno participated in a zoom meeting on nomination of Scientific Committee for African Indigenous Knowledge Systems
  18. Joseph Otieno attended mini conference for traditional medicine week organized by Sokoine University of Agriculture in 15<sup>th</sup> August
  19. Mourice N. Mbunde and Benson Peter organized an awareness seminar to stakeholders on herbal products produced at ITM held on September 24, 2021.
  20. Mourice N. Mbunde participated in the 16th Higher Education, Science, and Technology Exhibitions held at Mnazi Mmoja Grounds, Dar es Salaam from July 26-31, 2021
  21. Mourice N. Mbunde attended a training workshop on policy briefs writing and dissemination held at MUHAS from 27<sup>th</sup> September to 8<sup>th</sup> October 2021
  22. Mourice N. Mbunde attended a Behavior Change workshop for the development of the Demand Creation Initiative of wildlife products organized by TRAFFIC East Africa held at Four Points Sheraton Arusha from 28-30<sup>th</sup> July 2021.
  23. Michael Qwarse attended short course Advanced Qualitative analysis from 14 - 18 June 2021 at CHPE
  24. The department conducted a meeting on 23<sup>rd</sup> September 2021 to discuss external examiners report
  25. Mr. Jackson Thomas attended seminar on “Risk management training”, facilitated by TMDA, held at CHPE from 07<sup>th</sup> to 09<sup>th</sup> March 2022.
  26. Dr. Benson Peter Mugaka attended Training on standardization and formulations of herbal medicine conducted by Ministry of Health from 15<sup>th</sup> to 18<sup>th</sup> February 2022, Dodoma
  27. Mr. Jackson Thomas attended seminar on “Risk management training”, facilitated by TMDA, held at CHPE from 07<sup>th</sup> to 09<sup>th</sup> March 2022.
  28. Dr. Benson Peter Mugaka attended Training on standardization and formulations of herbal medicine conducted by Ministry of Health from 15<sup>th</sup> to 18<sup>th</sup> February 2022, Dodoma
  29. Dr. Benson Peter Mugaka attended training on “turnitin anti-plagiarism checker” organized by the Institute of traditional medicine, held 09<sup>th</sup> June, 2022 at ITM Board room from 10:00 am to 12:30 pm.
  30. Dr. Benson Peter Mugaka attended stakeholders meeting to discuss curriculum for short course on “Animal care and se in research”. The meeting was held on 16<sup>th</sup> June 2022 at CHPE building, DPI boardroom.

31. Dr. Benson Peter Mugaka Participated in publishing of an article titled “Shija, E. A., Kabakama, C., Mugaka, B. P., Yu-jiao, X., & Shi, Y. (2022). Clinical Presentations and Predictors of Severe Sick Cell Disease among Patients Who Attended Muhimbili National Hospital Dar-Es Salaam, Tanzania: A Retrospective Study. *Int J Blood Res Disord*, 9, 076.
32. Mr Michael Qwarse presented at the NIMR 31<sup>st</sup> Annual Joint Scientific Conference: A Multisectoral Approach for Health: An Agenda for Health Systems Strengthening towards Achieving Universal Health Coverage.
33. Dr. Mourice Mbunde attended training on “turnitin anti-plagiarism checker” organized by the Institute of traditional medicine, held 09<sup>th</sup> June, 2022 at ITM Board room from 10:00 am to 12:30 pm
34. Dr Mourice Mbunde participated in the Introductory Workshop on Integration of African Indigenous Knowledge Systems in the Core Business of Higher Education and Research Institutions, on 2 - 3 JUNE 2022. Organized by the African Institute in Indigenous Knowledge Systems (AIKS), University of KwaZulu-Natal, South Africa.
35. Dr Mourice Mbunde participated in the Antimicrobial Resistance Leaders Program for Tertiary Students in Africa- Webinar on ‘Food without Harm: Reducing the Need to Use Antimicrobials’ organized by Food and Agriculture Organization (FAO) and World Animal Protection (WAP) through Virtual mode in June 18 2022.
36. Dr. Mourice Mbunde attended a Peer Educators training workshop for MUHAS Faculty held at MUHAS from 23<sup>rd</sup> to 26<sup>th</sup> May 2022.
37. Dr. Mourice Mbunde participated and delivered oral presentation titled *In Vivo Antifungal Activity of Sericic acid in Immunocompromised Mice against Candida albicans* during the 31<sup>st</sup> NIMR Annual Joint Scientific Conference May 2022.
38. Dr. Ramadhani Nondo and Prof E. innocent attended “training on Teaching and Assessment of professionalism” organized by DCEPD. Held 08<sup>th</sup> June, 2022 at CHPE main conference hall from 14:00 to 17:00 pm.
39. Dr. Ramadhani Nondo, Prof E. innocent and Mr. Boniphace Charles attended training on “turnitin anti-plagiarism checker” organized by the Institute of traditional medicine, held 09<sup>th</sup> June, 2022 at ITM Board room from 10:00 am to 12:30 pm
40. Prof E. Innocent participated Coordinated and Participated in training workshop on Innovation and entrepreneurship in health care held at MUHAS on 4th-8th April, 2022

41. Prof E. Innocent participated in the International Workshop on ‘Role of Science, Technology and Innovation (STI) in Achieving Sustainable Development Goals – 2030’ that was organised during 24-25 May, 2022 through Virtual Mode. Organized by Centre for Science & Technology of Non-Aligned and Other Developing Countries (NAM S&T Centre), India
42. Prof E. Innocent participated in the MUHAS innovation bootcamp held on 30<sup>th</sup> may-3<sup>rd</sup> June, 2022, at CHPE, Muhimbili University of Health and Allied Sciences.
43. Prof E. Innocent participated in the Introductory Workshop on Integration of African Indigenous Knowledge Systems in the Core Business of Higher Education and Research Institutions, on 2 - 3 JUNE 2022. Organized by the African Institute in Indigenous Knowledge Systems (AIKS), University of KwaZulu-Natal, South Africa
44. Dr. Siri Abihudi, Dr Joseph Otieno, Dr. Pax J. Masimba, Dr. Edmund Kayombo, Mr. Samson Hilonga and Ms. Margareth T. Mwakilasa attended an ethnographic workshop at MUHAS from April 19-22, 2022.
45. Dr. Siri Abihudi, Dr. Pax J. Masimba, Dr. Joseph Otieno attended workshop on TURNITIN on June 9, 2022.
46. Mr. Samson Hilonga attended by ZOOM a workshop on next generation covid-19 vaccine and therapeutics organized by WHO Africa
47. Mr. Samson Hilonga attended by ZOOM a workshop on the African Indeginous systems organized by African Institute in Indeginous systems June 24, 2022
48. Mr. Samson Hilonga attended by ZOOM a workshop on the African Indeginous systems organized by African Institute in Indeginous systems April 29, 2022
49. HIV/AIDS and Non-Communicable Diseases Training 24-26 May, 2022 at MUHAS in the MPL Board Room

#### 4.6.9 External Examiners

The Institute received External examiners request from departments and recommended them for three years tenures as follows.

- (i) Department of Biological and Pre Clinical Studies is Professor Ephrem Engidawork from College of Health Sciences Addis Ababa University.
- (ii) Department of Natural Product and Formulations is Dr Joan John ElionaMunissi from the University of Dar Esalam.

- (iii) Department of Medical Botany Plant Breeding and Agronomy is Dr Henry Joseph Ndangalasi from the University of Dar Esalam.

#### 4.6.10 Staff Recruitment

No staff was recruited in this year.

#### 4.6.11 Visitors to the Institute

**Table 28:..... Title???????????**

S/n	Name	Purpose for Visitation	From
1	Nitin Menon		To seek research collaboration
2.	Kyayonka Marco Kanan		To seek collaboration on herbal medicine
3.	Joseph Ndovu	COSTECH	Meeting between COSTECH and ITM to discuss on the implementation of the project awarded by COSTECH
4.	Adeline Ajuaye		
5.	Carlson Dulle		
6.	Selina Mchau		
7.	Dr. ChanasaMpelumbe		To seek research collaboration
8.	John E. Olsen	Copenhagen Nitin Menon	To seek research collaboration
9	John E.Oslen	Denmark	Collaborative Supervision
11.	B enjamin S. Elias	COSTEC	To seek collaboration on herbal medicine
12.	Joseph Ndovu		

## 4.7 Directorate of Planning and Investment

### 4.7.1 Introduction



**Prof. Raphael Sangeda**  
**Ag. Director of Planning and Investment**

The Directorate of Planning and Development Muhimbili Campus was established in 2013 as part of improving efficiency and functions at the University. In 2015 the name of the Directorate was changed from Directorate of Planning and Development to Directorate of Planning and Investment. The Directorate has three departments which includes Planning, Investment and Resource Mobilisation. The Directorate continued with the responsibility of coordinating the development and monitoring of the University strategic plan. It ensures that all Schools and Directorates develop strategic actions plans in line with the University

Medium Term Strategic Plan. It is also responsible for monitoring and coordinating implementation of the Annual Action Plan (AAP) and reporting on progress of its Implementation. The Directorate also coordinate development of university budget.

During the review period the Directorate promoted, engaged and monitored investment activities at the University for the purpose of income generation and growth. The directorate focused on developing MUHAS investment portfolio through identification of potential investment avenues and improving productivity on already available investments.

### 4.7.2 Promotion of University Activities

During the period under review MUHAS through the DPI was invited by TANTRADE and participated in the 46<sup>th</sup> Dar es Salaam International Trade fair which was started on 28<sup>th</sup> June, 2022 and ended on 13<sup>th</sup> July, 2022. During exhibitions, some Schools and some of the directorates prepared brochures and roll up banners that summarized different products and services offered by the University. These include Teaching and Learning, Innovation, Research and Publication Three Student Project Innovations include Mkanda Salama project. Sratani AI Project and Afya Intelligence Project were presented. Some of the research projects were able to display various achievements and impacts of their

studies through poster and screen presentation. During the reporting period MUHAS participated in the 17<sup>th</sup> Higher Education Institution Exhibitions organized by TCU, which took place from 18<sup>th</sup> to 23<sup>rd</sup> July 2022 at Mnazi Mmoja.

#### **4.7.3 Engagement of Real Estates Developers for Development of Various MUHAS Lands**

During the period under review MUHAS through the DPI have the Plans for the development of Uporoto plot and is underway. The University has already developed business plan for establishment of Polyclinic at Uporoto. The Team from the School of Medicine, Directorate of Planning and Investment and Directorate of Estate visited the Uporoto aiming of observing the area and the existing building and suggest the best way of Initiating Rehabilitation of Uporoto Polyclinic, fence and establishing car parking for MUHAS Polyclinics. The Budget for meeting costs for the first phase construction was requested from the Government and there 470 Million for the construction of the building.

For Bagamoyo the University through DPI have managed to Coordinate the renovation of one staff house which currently is rented to VITAA project and now is Coordinating the renovation of the second house at Bagamoyo Staff House and the storm water Channel at BADEKO.

In order to expand the Investment, the Directorate of Planning and Investment Agreed to recommend to the management to initiate the Construction of the Conference Facilities and Rest House like Kalenga for renting at BADEKO area. In year 2022/2023 the university has planned to continue with renovation of staff houses in Phases and the budget has set aside, the DPI through Directorate of Estate is in Process of preparing BOQ for the renovation of worn staff house at Bagamoyo, also the DPI has Renovated the Mazengo Ground house, procured and installed AC's and fans, also DPI requested the approval of procuring furniture and decoration for Mazengo house.

For promoting the customers for Kalenga House, the DPI is in process of reviewing the price in comparison with nearby apartments and will submit to the Managements for approval.

#### **4.7.4 Phase 1 Construction of Academic and Support Facilities at Mloganzila Campus**

Construction of Phase 1 of Academic and Support facilities at Mloganzila Campus in order to double students' intake was initiated in September, 2017. The one year and six months' contract for construction works were assigned to Tanzania Building Agency (TBA) by the Ministry of Education Science and Technology (MEST). The project involves construction of one lecture theatre, cafeteria, two blocks student hostels, one lecture theatre, four seminar rooms, one anatomy and pathology laboratories, staff offices and library. The construction progress is almost stagnant no works are ongoing at site.

#### **4.7.5 Establishment of the East African Centre of Excellence in Cardiovascular Sciences**

The activities done during the year 2021/2022 were as following:

**i) Construction of multipurpose building for CoECVS at Mloganzila**

The building handover was done on 18th May, 2022 after being fully completed. The identification of snags list is on-going together with rectification of the same. The building is under Defect Liability Period (DLP) for one year until 10th March, 2023.

Procurement of furniture: Delivery of furniture was on-going and almost 74% of items were delivered during reporting period; which include chairs and tables for training and seminar rooms are all already delivered at site for 100%; executive chairs - 80%, cabinets 90%, shelves 90% and tables 10%. Supplier continues delivery of the remaining furniture. The inspection of the supplied furniture was done on 23rd and 24th June, 2022.

Delivery shall start early July as supplier is processing clearing of the goods.

Procurement of Lab Equipment: Contract was delivered to the Supplier for signing on 14th June, 2022 after incorporate comments received from the Attorney General

**ii) Staff in Cardiovascular Sciences and collaboration with other Institutions**

Training is progressing well; during reporting period, six (6) candidates out of 38 are continuing with training. 32 candidates were completed their studies.

**iii) Curricula development for Masters, Super-specialty and PhD training programs in the fields of cardiovascular sciences (CVS)**

Curriculum committee is continuing with development of two (2) more curricula on Msc. Public Health in Cardiovascular Sciences and MSc. Paediatric Cardiology

**vi) Project Management, Coordination, Monitoring and Evaluation**

Two steering committee and eight (8) Project Coordinating Unit (PCU) steering meetings were conducted in the reporting period. Monitoring and Evaluation forms were developed and circulated to members for monitoring implementation of the planned activities on quarterly basis. Annual work plan and Procurement plan for the year 2021/2022 were developed and approved by the AfDB.

**V) Implementation of the HEET project**

The grant agreement between the Ministry of Education Science and Technology (MEST) and 15 Universities and 4 Institutions who benefited with the HEET project was signed on 19<sup>th</sup> June, 2022 at Morogoro.

A total of USD 2,740,034.11 has been disbursed to BOT HEET account from World Bank (WB) as of June, 2022.

Terms of References (ToRs) for Environment and Social Impact Assessment (ESIA), procurement of consultant, and Procurement Plan for various activities were revised as suggested by the WB and will be submitted to MEST for review and WB approval.

Work plan and ToRs for ICT and Gender Unit was finalized as per WB suggestions and request for approval to MEST and WB.

Selections of candidates for scholarship have been done. A meeting with appointed candidates is scheduled for early July, 2022 to establish their admission status before payments of their training expenses is done.

The project will employ three specialists in Procurement, works and finance. The already developed ToRs for employment of these specialists are being reviewed for final submission to MEST and WB for approval.

Curricula review and tracer study work plan and budget are being completed and will start implementation when approved by Management.



The coordinator for Monitoring and Evaluation is finalizing preparations of project framework as a tool for reporting activities of all projects under specific unit/coordination.

## 4.8 Directorate of Postgraduate Studies



**Prof. Emmanuel Balandya**  
**Director of Postgraduate**  
**Studies**

### 4.9.1 Introduction

The Directorate of Postgraduate Studies (DPGS), in collaboration with the Schools, Institutes and other Directorates, has the responsibility of promoting, marketing and monitoring the conduct of postgraduate training at the University. During the reporting period, DPGS processed admissions of postgraduate students in various programmes, reviewed postgraduate proposals and processed examination results.

### 4.9.2 Enrolment into Postgraduate Programmes

#### 4.8.2.1 PhD Degree Programmes.

DPGS continues to enrol students into PhD programmes. During academic year of 2021/2022, 5 students were granted full PhD registration. Together with 59 existing students, this makes the total number of 64 PhD students. Among them, 20 are females.

#### 4.8.2.2 Postgraduate Selection

The Directorate through the Joint Postgraduate Selection Committee under the Directorate of Postgraduate Studies met to recommend first round applicants for postgraduate studies for the year 2022/2023. 728 applicants were selected during the applications.

**Table 29: Summary of first-round recommended applicants for postgraduate studies for the year 2022/2023**

School /Institute	Selected students
School of Medicine	375
School of Pharmacy	16
School of Dentistry	13
School of Nursing	74
School of Public Health and Social Sciences	248
Institute of Traditional Medicine	02
<b>Total</b>	<b>728</b>

#### 4.8.2.3 Master Degree Programmes Registration.

During academic year 2021/2022, a total number of 1,210 students were enrolled in Master degree programme in five Schools and one Institute,

The table below summarizes the number of Master degree students enrolled by different Schools.

**Table 30: Summary of enrolment of Postgraduates for Academic Year 2021/2022**

School/Institute	Male	Female	Total
Medicine	453	288	741
Pharmacy	14	9	23
Dentistry	24	11	35
Nursing	23	48	71
School of Public Health and Social Science	177	162	339
Traditional Medicine	1	0	0
<b>Total</b>	<b>692</b>	<b>518</b>	<b>1,210</b>

### 4.9.3 Students Research Proposals

DPGS facilitated the review of Master and PhD proposals for ethical clearance in collaboration with the Directorate of Research and Publications. A total of 148 Postgraduate students' research proposals were reviewed.

### 4.9.4 Examinations results

The Directorate of Postgraduate Studies through Senate Higher Degrees Committee (SHDC) Processed University Examinations. The directorate through the senate higher degree committee (SHDC), received and recommended for approval of March 2022 University Examination results in April, 2022 for semester 1, 3, and 5 as shown in the table below;

**Table 31: Summary of the students' results for the March 2022 examination**

S / N	SEMESTER 1,3 AND 5	School of Medicine	School of Pharmacy	School of Dentistry	SP HS S	School of Nursing	IT M
1	Number of candidates appeared for examination	740	17	35	235	70	0
2	Number of Candidates passed	582	10	23	175	56	0
3	Number of Candidates failed	131	6	8	56	14	0
4	Number of Candidates postponed/freeze examination	19	0	1	4	0	0
5	Incomplete examination results	0	0	0	0	0	0
6	Number of candidates examination results withheld	0	0	0	0	0	0
7	Number of candidates who absconded	8	1	3	0	0	0

### 4.9.5 Postgraduate Graduates

The 15<sup>th</sup> MUHAS graduation was held on 4<sup>th</sup> December 2021. 348 candidates graduated in various Postgraduate programmes; Four (4) candidates were awarded PhD degree.

**Table 32: Summary of the postgraduate graduates in the year 2019 by gender**

S/No	School/Institute/Programme	Male	Female	Total
<b>1</b>	PhD	2	2	4
<b>2</b>	School of Medicine	86	69	155
<b>3</b>	School of Dentistry	1	4	5
<b>4</b>	School of Pharmacy	4	6	10
<b>5</b>	School of Public Health and Social Sciences	56	85	141
<b>6</b>	School of Nursing	4	25	29
<b>7</b>	Institute of Traditional Medicine	2	1	3
<b>8</b>	MSc by Research and Publications.	0	1	1
	<b>Grand Total</b>	<b>155</b>	<b>193</b>	<b>348</b>

## 4.9 Directorate of Research and Publication

### 4.10.1 Introduction



**Prof. Bruno Sunguya**

**Director of Research  
and Publications**

The Directorate of Research and Publications is the University's hub for coordinating research and innovations. The main activities under the directorate are to guide and promote conduct of research and dissemination of evidence from within and out of the University. Moreover, the directorate works to strengthen research infrastructure, build capacity of faculty, scientists, students, and MUHAS collaborators and affiliates to achieve the mission and vision of the University. To this end, the directorate works to develop and update research guidelines, policies, and standard operating procedures; conduct and facilitate research training for various stakeholders at the University and beyond; strengthen quality of laboratories and research environment; maintain research integrity; manage pre- and post-award for sponsored projects; and ensure innovations and discoveries are protected to benefit the researchers, institution, and the nation.

#### **Vision**

To be a leading center for coordinating quality health and related research that responds to national, regional and global challenges.

#### **Mission**

To provide a conducive environment for research in health and related fields, promote the conduct of research that is in line with Tanzania's National Research Agenda and enhance the University's capacity to advance frontiers of knowledge.

### 4.10.2 Organizational structure

The Directorate of Research and Publications has four approved units: (i) Institutional Review Board (IRB), (ii) Research Development (iii), Office of Sponsored Projects (OSP), and (iv) Intellectual Property Unit. The Directorate has three administrators serving for the OSP, IRB and the Tanzania Medical Journal (TMJ). The Directorate has two attached junior research fellows hired for the

Department of Epidemiology and Biostatistics, serving RDU and IPU, as well as other DRP's functions. Both are on study leave.

#### 4.9.2.1 Institutional Review Board

##### 4.9.2.1.1 MUHAS Research and Ethics Committee

The MUHAS Research and Ethics Committee is composed of 32 members with different areas of specialty. The main function of the committee is to receive, review, discuss, and grant ethical clearance to research proposals that requesting for ethical clearance.

The Ethics Committee is monitoring the progress of clinical trials implemented by faculty and collaborators at the University. In the academic year 2021-2022, a total of 491 proposals were reviewed, discussed and granted ethical clearance. They included postgraduate and undergraduate students' proposals. The Chairman of the University Senate has appointed two members to join the Committee to improve the efficiency of the committee. These members are Dr. Eulambius Mathias and Dr. Felix Sukums. However, members of the committee are facing a challenge of working tools. Out of 32 members, only 12 have Tablets as working tool for the committee activities. More tablets are required to cover all members for effective and efficiency performance.

In improving the quality of research, the Directorate procured software for plagiarism checkup under the Agreement with Turnitin LLC to provide the services for three years. The software is checking the similarities of the submitted proposals to difference sources of information such as internet source, publications, and students' paper. The University has established 30% as cut off point (similarity index) for proposals submitted for research. The payment was made for the first year in respect of 1000 participants in August 2021 and participants started to use it in December 2022. During the period under review 834 (83.4%) license were used out of 1000 procured.

Below is a summary of the requests submitted for ethical clearance in the year 2021/2022:

**Table 33: Summary of the proposals submitted for review**

Submission Type		
Students	Postgraduate	318
	Elective students	90
Others	Request for Ethical Clearance only	2
	Protocol Amendments	4
	Requests ethical clearance and funding	77
	Total	491

#### 4.9.2.2 Intellectual Property Unit

The objective of Intellectual Property Unit (IPU) is to develop culture for innovation and protect products emanating from projects conducted by both students and faculty. The Unit is governed by Institutional Intellectual Property Management Committee (IIPMC), which was appointed by the Chair of the Senate. The committee is in charge for operationalizing IPU activities including capacity development and processing the protection of IP. It was able to convene every quarter during the reporting period. The committee reports its matters to the Senate through Senate Research and Publications Committee (SRPC). To improve the functions of the IPU, a total of TZS 48,000,000/= was set aside in the 2021/2022 financial year to partition and creation of IPU offices. The new offices will be used for IPU related activities. To date, only two innovations have submitted to the unit and granted patency.

#### 4.9.2.3 Office of Sponsored Projects

This unit aids faculty during grants applications (pre-award), and award management (post-award). It is charged with the general oversight of research activities at MUHAS.

##### 4.9.2.3.1 Projects Funding

Research conducted at the University continued to be largely funded by foreign entities. In the period of July 2021 to June 2022, the University had 113 active international sponsored projects; out of which 41 were new projects. Project funds awarded during the financial year were TZS 1,456,822,845.64 and USD 10,130,722.24. The overhead retained by the university amounted to TZS 2,047,839,628.55.

#### 4.10.3 New projects

During the period, the unit received 41 new awards (new projects) as listed down:-

**Table 34: New projects awards in the period**

S/NO	Project Title	Project Collaborator	Donor/
1	Every Newborn-Reach Up Early Education intervention for all Children in Bangladesh, Nepal & Tanzania (EN-REACH)	Ada Health GmbH	
2	Data Quality Assessments (DQA) in DoD/WRAIR Supported Regions and Facilities	WRAIR-DOD	
3	Undetectable is Equal to Un-transmittable	CDC, UCSF	



4	EDCTP Clinical Research and Product Development Fellowships	European and Developing Countries Clinical Trials Partnership (EDCTP)
5	Upgrading Instrumentation for Herbal Medicine Formulation Research Training at Institute of Traditional Medicine	University of Abardeen
6	Establishment of Joint Research-Based Education in Dentistry in Norway and East Africa	University of Bergen
7	Development and Validation of dried Urine spot method for detection of Schistosoma circulating antigens from a Resource Limited archetype in Tanzania (DUDESCA)	COR-NTD through ARNTD
8	The Impact of COVID-19 Pandemic on mental health and other treatment outcomes of adolescents living with HIV (AWHIV)	NIH/ Northwestern University
9	An Interdisciplinary Initiative to strengthen Maternal Health Services and Surveillance in Ethiopia and Tanzania (MATRISET)	University of Ethiopia
10	Public Knowledge Perception Attitude and Practices on COVID-19 and its Preventive Measures in Tanzania	UNC
11	Hypofraction for Prostate Cancer in Africa	
12	Importation and transmission of Malaria in Zanzibar	NIH/University of North Carolina
13	Artificial Intelligence for Diagnosis of Breast Cancer	Google Ireland
14	Nutrimum Study	World Health Organization
15	Emergency Care of Patients with critical Illness in a National Hospital in Tanzania	Mahidol-Oxford Tropical Medicine
16	Multimorbidity associated emergency hospital Admissions: Screen and Link Strategy to Improve Outcomes for High-Risk Patients in Sub Saharan Africa	NIH
17	The Role of FRMPD4 Gene in Modulating the Level of Fetal Hemoglobin in Patients with Sickle Cell	NIH

	Disease	
18	African Leadership and Management Training for Impact in Malaria-Eradication (ALAMIME)	Billy and Melinda Gates Foundation
19	Seroprevalence and Seroincidence of SARS-COV2 among Health Care Workers at MNH and Amana Regional Referral Hospital	Northwestern University and Sida-HIV subprogram
20	Bio- Behavioral Survey	CDC/ ICAP- Columbia University
21	Implementation Research to Identify Mechanisms of Effects of the UNICEF Supported Systems Package for Survival at Birth in Mbeya Region	Tampereen Korkeakoulu
22	Development and Evaluation of the Simple & Easy Antenatal Education Using a Mobile Phone Application in Tanzania	Hiroshima University
23	Strengthening Capacity and Catalyzing Change for Research and Communication Partners in Low Middle Income Countries	Guttmacher Institute
24	Global Health Advocacy Incubator	Campaign for Tobacco Free Kids
25	Development of a Blueprint for a Digitalized Primary Health System with a Strengthened Connection to the Community Health Programme in Zanzibar	D-tree International
26	Global Health Fellowship (GloCal)	NIH/ University of California San Francisco
27	Clinical Neonatology Programme	The Else Kröner-Fresenius-Stiftung (EKFS) through German Society of Tropical Paediatrics and International Child Health (GTP)
28	Engaging Swahili-Speaking Communities to Access Covid-19 Factual Information through Use of Digital Media	National Research Foundation
29	GIZ Tanzania	GIZ
30	Strengthening of Doctoral Education for	NORAD/ University of

	Health in Tanzania (DOCEHTA)	OSLO
31	Influence of Health Care	
32	Establishment of Village Emergency Care Programme	ABBOTT Fund Tanzania
33	Breast Cancer Awareness	Write State University
34	Ada Health CWR Evaluation	Ada Health GmbH
35	Global HOPE-MUHAS PaediatricHaematology and Oncology Fellowship	Texas Children Operating
36	Safe Working Conditions by Innovative Research and Education	University of Bergen
37	Glocal Health Fellowship Grant	NIH/ University of California San Francisco
38	Fever Aetiology and Prognostic Point of Care Biomarkers in Africa Children with Severe Febrile Illness	NIH/ University of California San Francisco
39	Zanzibar Health Supply Chain Management Information Systems Review	Public Sector Service
40	COVID-19 vaccines acceptability and associated factors among healthcare workers in Tanzania	UNICEF
41	GBV Writing Workshops	London School of Hygiene and Tropical Disease

#### 4.10.4 Applications

During the period, the unit facilitated 42 applications as listed down: -

- Dartmouth-Boston University HIV-TB Research Training for the Infectious Diseases Institute at MUHAS – NIH?
- Bridging Early-Stage Researchers to Independent Careers in HIV Research in Low- and Middle-Income Countries
- Adaptation of intervention for improving retention in integrated ART services, clinical and psychosocial outcomes for people who use drugs

- (PWUDs) living with HIV(LHA) at Muhimbili National Hospital methadone clinic in the Dar es Salaam, Region, Tanzania
- External Validation and Implementation of a Novel Mobile Health Application for Acute Diarrhea Management across the Lifespan
  - Implementation of Rapid Molecular Testing to Improve the Diagnosis and Treatment of Pediatric Cancer in Low-Middle Income Countries
  - Plasmodium ovale hypnozoite development and relapse: a coordinate in vivo in vitro study
  - Trial of Zinc Supplements for Young Infants with Clinical Severe Infection in Tanzania
  - Palliative Stenting for Esophageal Cancer in Eastern Africa
  - Non-inferiority trial of lower-dose iron (30mg, 45 mg) compared to high dose iron (60mg) in multiple micronutrient supplements in pregnancy on maternal and infant outcomes: A randomized trial in Tanzania
  - The role of HbF decline and its determinants on Sick Cell Disease expression in the first three years of life (supplement) -NIH?
  - Artificial Intelligence and Popular Mobile Games for Screening of Illegal Drugs and Alcohol Abuse among Adolescent Children in Tanzania
  - Maryland Africa HIV-Associated Malignancy Research (MAHAM) Center
  - Toward Precision Medicine for Pediatric Solid Tumors in Tanzania.
  - Sexual & Reproductive Health Education for People with Disabilities in Tanzania
  - Exploring Laparotomy Outcomes for Surgical Quality Improvement at a Tertiary Care Facility in Tanzania (EX-LAP)
  - Collaborative project relating to antimicrobial resistance from a One Health perspective
  - Serial IGRA testing of Tanzanian adolescents to detect TB in household contacts
  - EN-REACH: Every Newborn: Reach Up Early Education Intervention for All Children
  - Instrumentation of traditional medicine development facilities at Institute of Traditional Medicine
  - Non-inferiority trial of lower-dose iron (30mg, 45 mg) compared to high dose iron (60mg) in multiple micronutrient supplements in pregnancy on maternal and infant outcomes: A randomized trial in Tanzania

- Conducting data quality assessments (DQAs) at DoD/WRAIR supported facilities through funding from the US President’s Emergency Plan for AIDS Relief (PEPFAR) in Tanzania
- Genomic integrity and safety of stem-cell gene therapy in African cohorts
- Using Implementation Science Research to Link Stakeholders and Vulnerable AGYW in Tanzania with HIV prevention and livelihood training.
- Complex sound encoding and interpretation in the brain as biomarkers for neurocognitive function in HIV and aging
- Global Health Program for Fellows and Scholars
- Rapid Molecular Testing of Pediatric Cancers to Improve Outcomes in Africa
- The use of local herbs and postpartum haemorrhage in labour
- Engaging Swahili-speaking communities to access COVID-19 Vaccine factual information through the use of digital media
- Managing Acute Kidney Injury Initiative in Tanzania (MAKINI TANZANIA) project
- Facilitating PMTCT, timely identification, enrollment into care and appropriate follow-up of all HIV exposed infants by demonstrating feasibility of implementation of Tanzania’s national retesting guidelines and identifying best practices and strategies for improving retesting services for pregnant and breastfeeding women through targeted clinical and technical support to select health facilities
- Effectiveness of incorporating oral health care services in HIV care for treatment clinics in improving quality of life of children living with HIV AIDS in Tanzania: A health facility-based trial.
- Clever Cancer Care
- Artificial Intelligence and Popular Mobile Games in Early Detection and Diagnosis of Illegal Drugs and Alcohol Abuse among Adolescent Children in Tanzania
- Community Health Workers: Interventions against dental caries
- Fogarty Global Health Program for Fellows and Scholars
- Expertise in researching violence against women and girls and evaluating programs to prevent and respond to that violence
- Implementation of a BA program in Audiology and Speech-Language Pathology (SLP) for MUHAS
- Advancing and applying peripheral and central auditory findings in HIV/AIDS

- Training Tanzanian Researchers for HIV/AIDS Implementation Science
- Strengthening Institutional Capacity to Conduct Global Cancer Research in Low- and Middle-Income Countries
- Tanzania Colorectal cancer study cohort” at Muhimbili National Hospital in Dar es Salaam.
- GloCal Health Fellowship Program under the University of California (UC).

#### 4.10.5 Research Development Unit (RDU)

An established research development unit (RDU) with its center at CHPE building (2nd Floor) is charged with overseeing research capacity building training and workshops, research dissemination, developing and revising research policies, guidelines and SOPs. RDU facility has also been receiving researchers from MUHAS and collaborators from within the country and outside the country. The researchers and collaborators have been using this center for research activities effectively for short research meetings and as a place of research work. Below are some of the RDU activities during the reporting period.

#### 4.10.6 Capacity Building

MUHAS through Sida support developed curricula for 18 research-related short courses. These courses are geared to strength research capacity among scientists at the university and beyond in order to increase diversity, scope, quality and number of research outputs. In the reporting period, a total of six short courses were developed and delivered for the first time. These are: 1) Responsible conduct of research, 2) Basic Qualitative Research, 3) Grant writing, 4) Clinical Pharmacokinetics, 5) Innovation and Entrepreneurship in Health, and 6) Advanced Qualitative

Research were delivered by faculty and scientists at MUHAS and at partner Tanzania and Swedish Institutions.

Recognizing the challenges in disseminating research findings, the university conducted two important workshops on 1) Policy brief writing and 2) Manuscript Development. Moreover, in an effort to steer and groom innovation mindset mainly among students, the first ever innovation boot camp was conducted during the reporting period. That plus other initiatives are geared to complement ongoing university's efforts to establish and become the hub of providing innovative

solutions to address health challenges. In the reporting period, these activities were attended by a total of 370 accounting for 44% increase (from 265) compared to the preceding reporting year. This implied increase in interests in the courses that are administered at the institution.

#### **4.10.7 Students' Led Academic/Innovation Events**

To leverage on the students' diversity and potential, the university has been at the forefront to stimulate and groom a culture for both innovation and research among students through mentorship, offering conducive environment for their activities, and supporting students' led initiatives. In the reporting period, the university offered technical support, provided and helped to solicit funds and provided guidance for the 15<sup>th</sup> Win and Learn Academic Event, Muhimbili University Students' Symposium for Debate (MUSSD), and a Medical Hackathon on deploying artificial intelligence in addressing the burden of NCDs. Potentially fundable innovations and research have emanated out of these activities.

#### **4.10.8 Development of Policy and Guidelines**

##### **4.9.7.1 Guidelines for internship program in Research projects at MUHAS**

The University Management commissioned a team of senior researchers to provide rational, methods of recruitment and assessment interns in research projects at MUHAS. The team worked on the directives and came out with the Guidelines for internship program in research projects at MUHAS. The guidelines will help and guide MUHAS Researchers on recruitment, training and improving capacity in various research undertaken by the various partners at MUHAS and hope to transform knowledge and preserve intellectual assets. Using this booklet, MUHAS will set various requirements and qualification of the Research Interns and identify areas where it can increase capacity and increase income generation. It will therefore help generate a new generation of junior researchers through practical training in the existing sponsored research projects. It will provide a direct and indirect mentoring of junior scientist and increase the visibility of MUHAS research nationally and globally.

##### **4.9.7.2 MUHAS Research Excellence Awards Guidelines**

The University plans to recognize the researchers who have been working on research and contribute a lot in research at MUHAS and award them as a part of appreciation to their contributions. The selected team came out with guidelines called "MUHAS

Research Excellence Awards” The guidelines are intended to recognize and encourage academic staff for their outstanding accomplishments in conducting research that is of major importance in their disciplines and who have made significant contribution in advancing knowledge and research outcomes. They cover the procedures and processes related to the processing and selection of academic staff who have excelled in research performance and deserve to be awarded. They are intended to ensure that all individuals who are eligible to be considered for the research awards are treated fairly and in a non-discriminatory manner. These guidelines are also expected to encourage good practices with respect to the conduct of ethically justified and scientifically sound research targeting major health problems of public health significance.

#### **4.9.7.3 Revised the Institution overhead Policy and Procedures for sponsored Projects**

In February 2022 the Directorate revised the Institutional Overhead Policy and Procedures for Sponsored Projects through a selected committee. The committee collected comments from researchers on the challenges experienced during the implementations of the 1<sup>st</sup> version of the Policy and suggested on how to improve it. The Committee also made benchmarking to other institutions and came out with the revised version. The revised version was submitted to the Management for further discussion with other stakeholders to improve the document.

### **4.10.9 Biorepository**

Through various research funding, the university has managed to develop different laboratories that offers long-term storage of, and access to stored samples. However, with increase in number and diversity of laboratory-based research, the existing infrastructure space and capacity became a limiting factor. In addressing this, the university through Sida support procured various equipment worth over 450 million Tanzanian shillings which are currently placed at East Africa Centre of Excellence for Cardiovascular Sciences at Mloganzila Campus. With this new facility, MUHAS will have adequate capacity to engage in longitudinal studies including those focused on genetics, attract more collaborators, save costs of data collection, and stimulate more biomedical science research.

### **4.10.10 Research capacity strengthening grants**

#### **MUHAS Research Grant Scheme:**

The university has striven to create conducive research environment for her scientists especially the early career researchers/junior faculty to implement their research projects by providing them with Seed grants. The funding for their projects is provided by Sida, and in the reporting period **TZS 279,991,550** /= were



awarded to 22 junior faculty between **October 2021 and January 2022**. Their projects are now in different stages of implementation.

#### **The Amne Salim Grant Scheme:**

The Covid-19 pandemic to some extent disrupted health systems, and livelihood of many however, no enough evidence was generated to influence practice, and inform policies and strategies. Owing to this, Amne Salim's family provided the university in **October 2021** with **TZS 100,000,000/=** which was awarded to eight (8) scientists at the university to conduct research focused on Covid-19. These projects are also at different execution phases.

#### **4.10.11 Research Dissemination**

##### **i) Conferences:**

The Directorate organized and conducted two important scientific conferences. These were:

##### **a) The 9<sup>th</sup> MUHAS Scientific Conference in July 2021**

The University conducted its 9<sup>th</sup> MUHAS scientific conference on 26<sup>th</sup> and 27<sup>th</sup> July 2021 at Muhimbili Campus. The event was hybrid and over 500 stakeholders from different institutions and countries participated in presentations and discussions which were reflective of the main theme, ***“Opportunities and Challenges for Tackling Emerging and Re-emerging Health Challenges”***. In this conference, a total of 90 abstracts were presented. Hon. Prof. Joyce Ndalichako, a then Minister for Education, Science and Technology officiated the opening ceremony of this event.

##### **b) The 3<sup>rd</sup> National NCDs Scientific Conference:**

Between 11<sup>th</sup> and 12<sup>th</sup> November 2022, the Ministry of Health through MUHAS and the NCDs Control and Prevention Program conducted the 3<sup>rd</sup> National NCDs Scientific Conference at AICC. The event involved over 700 participants from different parts of the world who had presentations and discussions focused on the main theme, ***“Multisectoral Engagement and Collaboration in Addressing Non-Communicable Diseases”***. The event was officiated by Prof. James Mdoe and Dr. Grace Magembe, deputy permanent secretaries Ministry of health, and PORALG during the opening and closing ceremonies respectively. A total of 168 abstracts

presented in this conference were published in the Tanzania Medical Journal and can be accessed through the link, <https://tmj.or.tz/index.php/tmj/issue/view/47>. The Directorate also, through the RTS program by Sida continued to support students and faculty to attending international conferences.

## ii) Symposia

In the reporting period, the Directorate through RDU spearhead the organization and conduct of three University-wide symposia. These theme-specific research dissemination platforms aimed to avail opportunity for MUHAS researchers, policy makers, and other stakeholders to interact and make positive effects and changes to policies and practices in health.

- a) In commemorating the 60 years of Tanzania Independence, public training and research institutions were directed to conduct symposia to reflect on transformations that have been taking place since 1961. On December 1<sup>st</sup> 2021 at Muhimbili Campus, MUHAS conducted a joint hybrid symposium with UDOM and UDSM which was guided by a theme, “*Changes of Diseases Landscape and Health Sector Response in Tanzania*”. Over 200 individuals participated in this symposium. Prof. Andrea B. Pembe, the Vice Chancellor for MUHAS officiated the event.
- b) In January 26<sup>th</sup> 2022, a 7<sup>th</sup> University Wide Dissemination Symposium was hosted at the university and it engaged different stakeholders who shared their experience and provided inputs reflective on the theme, “*Multistakeholders’ Engagement: “Turning the Tide of Sickle Cell Disease in Tanzania”*”. Incorporation of the hydroxyurea in the NHIF benefit package was one of the main outcomes of this event. **Prof. Abel Makubi**, Permanent Secretary in the Ministry of Health officiated this symposium
- c) The 8<sup>th</sup> University wide dissemination symposium was conducted on 6<sup>th</sup> April 2022 and focused to highlight the burden of hematological malignancies, and recommend strategies necessary to improve the quality of life among sufferers of these diseases. Over 600 stakeholders attended the event either virtually or physically. **Prof. Abel Makubi**, Permanent Secretary in the Ministry of Health officiated this symposium.

- d) Alongside the hematological malignancy symposium, the university conducted A blood drive, an event which resulted to collection of blood from faculty and students in efforts to raise awareness among the members of the University in blood donation. **Dr. Godwin Mollel**, Deputy Minister for Health officiated this event.

### iii) Research Dissemination through Publications

During the reporting period, a total of 407 journal articles were published by MUHAS faculty, students, and affiliates. Publications helps faculty to disseminate their findings and communicate with their peers in their respective fields.

### iv) Journals under MUHAS management

The University manages journals as a platform for research dissemination. Currently, MUHAS hosts three journals, two under the directorate.

- a) **Tanzania Medical Journal:** Tanzania Medical Journal (TMJ) is managed by the Muhimbili University of Health and Allied Sciences. The journal is an East-African Centric, peer-reviewed journal with significant emphasis in supporting the dissemination of medical knowledge in Tanzania and beyond. The journal aims to be scientifically reliable in improving all aspects of medicine. To contribute to advances in medical and scientific knowledge, TMJ publishes papers on original scientific research, short communications, case reports, editorials and review articles, in any branch of medical science. During the reporting period, TMJ published five regular issues (comprising of 35 articles) including one special issue of proceedings of the 3<sup>rd</sup> National NCDs Scientific Conference. The issues comprised of articles of original research, case reports and editorial sections from Tanzania and beyond.
- b) **Tanzania Dental Journal:** The Muhimbili University of Health and Allied Sciences has signed a Memorandum of Understanding to manage the Tanzania Dental Journal, which is owned by the Tanzania Dental Association. The journal will publish articles in the field of oral health and related fields in form of original research work, reviews, short communications, letters, and case reports. The management is currently developing the journal's scope and guidelines and setting an online platform for articles submission and processing.

**v) Public Engagement activities:** MUHAS participates in Dar es Salaam International Trade Fair Exhibitions which is held nationally at Mwalimu Nyerere Saba Saba grounds in Dar es Salaam. The reporting period marked the 46<sup>th</sup> round of hosting the event, and the university in particular was able to display (as part of dissemination) its research endeavors and innovation ecosystems. At the end, the University emerged as the 2<sup>nd</sup> winner among all higher learning institutions which participated in the event.

#### **4.10.12 Networking**

The Directorate continued networking with local and international research institutions. Moreover, the Directorate has continued coordinating research collaborations for ongoing research projects.

## 4.10 Directorate of Undergraduate Education

### 4.10.1 Introduction



**Prof. Erasto Mbugi**  
**Director of Undergraduate**  
**Education**

The Directorate of Undergraduate Education is responsible for coordinating and managing all applications for undergraduate admissions, teaching and learning, managing the Central teaching and Examinations timetables. It is also responsible for managing curriculum revision and identification of new areas of curriculum development and processing Undergraduate University examination results through SUEC and later recommend to SENATE for approval.

### 4.10.2 Main Functions of the Directorate

To support and promote excellence and professionalism in training of human resources for health that lead to the attainment of equitable socioeconomic development for the Tanzanian community and beyond.

### 4.10.3 Implementation of New Competency Based Curriculums for Undergraduate Programmes

#### **Bachelor of Science in Physiotherapy:**

During the academic year 2021/2022, The Directorate of Undergraduate Education managed to process through SUEC the new Undergraduate program namely the Bachelor of Science in Physiotherapy. This program has been accredited by the Tanzania Commission for Universities (TCU) and implemented in the 2021/2022 academic year.

### 4.10.4 New Proposed Competency Based Curriculums for Undergraduate Programmes

During the academic year 2021/2022, the Directorate of Undergraduate Education managed to process through SUEC and recommended to SENATE for approval the establishment of the two newly proposed Undergraduate curricula from school of Medicine, namely: -

1. BSc Audiology and Speech Therapy (AST) and
2. Bachelor of Science in Occupational Therapy (BSc-OT). These curricula were approved by Senate and submitted to TCU for review and possible accreditation to start enrolling students in the next academic year 2022-2023.

#### 4.10.5 Undergraduate Students Admission for the Academic year 2021-2022

**Table 35: Summary of Applications and Selection of Undergraduate Programs Academic**

S/N	PROGRAMME	Total No. of Applicants	Total No. of Admitted Applicants 2021/2022	Registered Students
1	Doctor of Medicine (MD)	3297	230	229
2	Bachelor of Pharmacy (BPharm)	3400	75	72
3	Doctor of Dental Surgery (DDS)	2126	65	65
4	BSc in Nursing	1730	70	61
5	BSc in Nurse Anaesthesia	635	50	49
6	BSc in Midwifery	553	20	20
7	Bachelor of Science in Diagnostic and Therapeutic Radiography (BSc-Rad)	1535	30	33
8	BSc- Environmental Health Sciences	931	100	89
9	BMLS in Histotechnology	159	21	19
10	BMLS in Haematology and Blood Transfusion	458	20	20
11	BMLS in Parasitology and Medical Entomology	246	25	25
12	BMLS General	1690	41	35
13	BMLS in Clinical Chemistry	470	20	21

14	BMLS in Microbiology and Immunology	603	25	22
15	Bachelor of Biomedical Engineering	591	25	21
16	Bachelor of Science in Physiotherapy	253	28	22
<b>TOTAL</b>			<b>845</b>	<b>803</b>

During the year 2021/2022 the Directorate of Undergraduate Education coordinated applications and selection of both direct and equivalent undergraduate applicants for various programs under its custody. A total of 845 students were selected of which 800 (94.6%) students were registered. The Directorate also processed the applications of both Diploma and Advanced Diploma programs for various programs.

A total number of 288 students were selected and among them 131 (45.5%) students were registered. Failure to pay tuition fees for both Undergraduate and Diploma students continued to be a challenge for students to retain their admissions, and 18 students either deregistered or froze studies due to failure to secure financial support (sponsorship) and loans from loan Board (HESLB).

**Table 36: Summary of Diploma and Advanced Diploma Programs admission 2021/2022**

S/N	PROGRAMME	Admitted Students	Registered Students
1	Diploma in Diagnostic Radiography (DDR)	47	32
2	Diploma in Diagnostic Radiography Evening (DDR)	44	29
3	Diploma in Environmental Health Science DSM-Regular (DEHS)	106	41
4	Diploma in Environmental Health	62	11

	Science DSM – Evening (DEHS)		
6	Diploma in Orthopaedic Technology(DOT) KCMC	15	6
7	Advanced Diploma in Dermatovereology - ADDV KCMC	14	13
	<b>TOTAL</b>	<b>288</b>	<b>132</b>

The discrepancy between selected and registered Undergraduate and Diploma students indicated above is due to various reasons including inability to pay tuition fees, Missed Loans from loan Board (HESLB), or transfer to other colleges/universities, lack of permission from employer etc. We have also noted that most of unregistered admitted students have no funds to enable them register and sustain university life.

### Undergraduate and Diploma students' enrollment 2021/2022

During the academic year 2021/2022, the Directorate administered the enrollment of 3,601 students into various programs whereby 2,940 are Undergraduate students and 661 diploma students. Out of 3,601 (1,023(28.4%) among enrolled were females.

### 15<sup>th</sup> MUHAS Graduation Ceremony

During the 15<sup>th</sup> MUHAS Graduation ceremony a total of 737 students graduated in various Diploma and Undergraduate programs, of which 223 students (30.3%) were females. The graduates according to degree programs included;- Doctor of Medicine, MD (185), Bachelor of Pharmacy, BPharm (67), Bachelor of Medical Laboratory Sciences, BMLS (95), Doctor of Dental Surgery, DDS (35), Bachelor of Nursing, BScN (49), Bachelor of Science in Environmental Health, BSc EHS (85) and Bachelor of Science in Radiation Therapy Technology, BScRTT (20). The Diploma graduates included:- Diploma in Nursing, DN (51), Diploma in Medical Laboratory Sciences, DMLS (32), Diploma in Environmental Health Sciences, DEHS (43), Diploma in Diagnostic Radiography, DDR (30), Diploma in Orthopedic Technology, DOT (10), Diploma in Pharmaceutical Sciences, DPS (24) and Advanced Diploma in Dermatovenereology, ADDV (11).



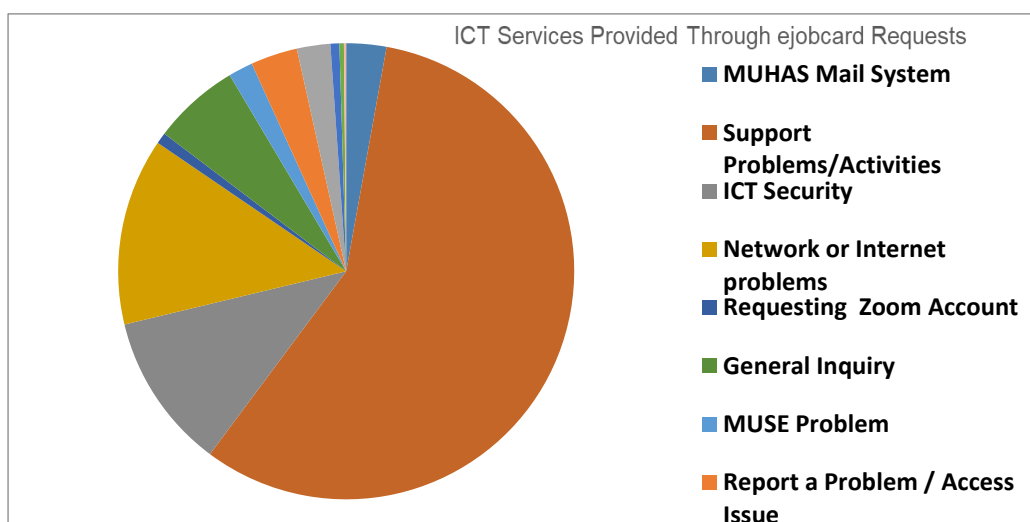
## 4.11 Directorate of Information Communication Technology

### 4.11.1 Introduction



**Dr. Rodrick Kisenge**  
**Director Information Communication Technology**

The Directorate of ICT is progressing with the integration of information and communication technologies (ICT) into all the University's core functions and operational as well as management activities. The university through the directorate has maintained and continue to invest in various ICT infrastructures, systems, and services. Figure 11 below indicates services that were requested through ejobcard in the current reporting period.



**Figure 16:ICT Services through eJobcard Requests**

### 4.11.2 Network Infrastructure and Internet Connectivity and Access

The Directorate of ICT is progressively maintaining the ICT infrastructure to ensure reliable access to Intra and Internet services. There have been significant network improvements that are aimed at meeting the growing Intra and Internet demands. During this reporting period, additional wireless access points with

more capacity were procured (Figure 12) as part of efforts by the university, through ICT, to improve LAN and WAN across the institution.



**Figure 17: Wireless Access Points**

#### **4.11.2. MUHAS Website and Mail System**

During the period under review, DICT continued to maintain the new MUHAS website, and mailing system. The Directorate is maintaining and supporting users on password recovery and creation of new account for the staff.

#### **4.11.3 Management Information Systems Implementation and Support**

DICT continued to manage and support a number of electronic management information systems (MIS) at the University that are insourced and outsourced as indicated in the ICT Service Catalogue. During the period under review, the Directorate in collaboration with Directorate of Human Resources and Administration (DHRMA) and Transport Unit supervised and supported the development and implementation of ICT Systems (Electronic File Management System and Fleet Management System). The directorate is working closely with

other stakeholders to make sure that these systems are operational. Furthermore, the Billing Management System (BMS) as component of Students' Academic Records Information Systems (SARIS) upgraded/customized and integrated with NHIF System and Mfumo wa Ulipaji Serikalini (MUSE). 10 additional zoom licenses procured and activated.

e-Learning Management System (Moodle) upgraded from version 3.8 to version 3.10 and network infrastructure improved. 203 courses created and 103 online exams (figure 13) support provided. A total of 203 courses were created and 103 online exams support provided. The ICT team facilitated e-learning to 350 staff and 767 students. In addition, the team provided eLearning support to 158 staff and 1114 students.



**Figure 18:MUHAS students doing examination online**

DICT continued to provide daily support of other systems includes KOHA and Library Information Systems, Institutional Repository (DSpace), Human Capital Management Information System (HCMIS), Biometric Attendance Register (BAR) System, Dental Information Management Systems (Dentrix) at the

University Dental clinic, Government Salary Payment Platform (GSPP), Planning and Reporting System (PlanRep), Research Ethics Information System (REIMS), Scientific Conference Portal, e-Vibali System,

#### **4.11.3.1 Biometric Time and Attendance System**

During the year under review, 13 out of 14 the installed biometric attendance register (BAR) kits are working properly, the remaining malfunction kit located at Chole Hostel is being fixed. Directorate provides ongoing support for Registration of new staff into the BAR system.

During the year 2021-2022 the eLearning system upgraded from version 3.8 to version 3.10

#### **4.11.3.2 Practical Training and Internship**

The directorate continued to offer practical training to ICT students from different Universities and colleges in the country as well as intern volunteers.

#### **4.11.4 Collaboration, Research and Publication Activities**

The directorate continued to participate in research activities in the year under review in which 1 proposal submitted, establishment of 1 research link, provide ICT support during proposal submission and also establish research management information system.

DICT continued to participate in a number of research grants writing in which 3 grants applications were submitted. The directorate with collaboration with DLS continues to lead the research program on strengthening the use of ICT at MUHAS, Project-Period: 2015-2020 funded by Swedish International Development Agency (Sida). The Directorate in collaboration with DLS and the Harvard Medical School are still running a project that gives medical students access to online medical resources (Up-to date database).

In addition, the directorate continued to provide ICT support to various research activities including support on data management. DICT continue to coordinate the collection of Internet fees from internal and external clients.

During the year under review, The Directorate of ICT has worked with different stakeholders for improving ICT infrastructure, systems and services at MUHAS and beyond as indicated in the list of projects and consultancies implemented and

ongoing. Moreover, the university allocated resources for the renovation of offices of the directorate of ICT and at the time of writing this report the renovation have been completed.

#### **4.11.5 Projects or Consultancies implemented during the year under review**

- (i) Building a stronger MUHAS in supporting research and innovation 2015-2020 under Sida Supported ICT and Library sub programme
- (ii) Data Systems and Data Use Capacity Building Project under Capacity Building Consortium
- (iii) Documenting experiences of implementing DHIS2 and health facility digitalization in Tanzania Mainland.

#### **4.11.6 Staff development**

During the year under review, the University has continued to encourage and support DICT staff to pursue further studies in different ICT disciplines. Three technical staff (Mr. Lackson David, Ms Rebecca Chaula and Ms Juliana Mbukeye) are progressing with studies during the period under review.

#### **4.11.7 User Support including Virtual Meetings**

User support is one of the core activities of the DICT to ensure efficient and effective use of ICT infrastructure, systems and services. During the period under review, the directorate continued to offer technical support to staff and students in the use of ICT systems and services. The directorate has provided user support and troubleshooting, our technical crew attended different problems related to hardware, software applications, SARIS, telephone and the Internet services in 2019/2020.

During this reporting period, a total of 745 virtual meetings were conducted through Zoom with 38,279 participants and the total duration of the meetings was 278,444 minutes.

**Table 37: Virtual Meetings through Zoom for 2021/22**

## MONTHLY SUMMARY

	Total meetings	Total participants	Time taken (Minutes)
JULY 2020	54	8,592	219,212
AUGUST 2020	60	6,619	5,837
SEPTEMBER 2020	102	4,207	10,318
OCTOBER 2020	20	771	2,047
NOVEMBER 2020	22	237	1,977
DECEMBER 2020	24	361	2,606
JANUARY 2021	35	1,023	4,169
FEBRUARY 2021	136	5,427	8,590
MARCH 2021	98	4,249	6,792
APRIL 2021	53	1,929	4,867
MAY 2021	43	2,121	3,389
JUNE 2021	98	2,743	8,640
<b>TOTAL</b>	<b>745</b>	<b>38,279</b>	<b>278,444</b>

### 4.11.8 Challenges facing the Directorate

Some of challenges hindering the directorate to adequately and efficiently support the use of the ICT to support University activities including: -

- (i) Shortage of staff (including administrative staff) in terms of numbers and qualifications to cope with increasing demands for ICT services.
- (ii) Limited funding to support ICT services and equipment
- (iii) Inadequate space for provision of services to our clients, mainly MUHAS staff as well as students.



## 4.12. Directorate of Library Services



**Prof Alli Mcharazo**

*Director of Library Services*

### 4.12.1 Introduction

The Directorate of Library Services (DLS) is annual report provides an overview of events, programs and accomplishments performed during the 2021/2022 academic year. It also explains various library services provided in supporting the university core functions and how the Library responded to students and faculty during post COVID-19 pandemic. During the period under review, the DLS conducted various activities and services including collection development,

upgrade of computer lab into e-learning center, construction of new KOHA system, and activation and registration of patrons to new library smart cards. Moreover, the DLS provided several short courses to faculty and students on scholarly content discovery, evidence-based practice and scientific writing as well as access to Research4life databases. Similarly, the DLS continued to prepare research bulletin and taught Information Technologies (IT100) and Communication Skills (CS100) courses to all undergraduate students. Other activities include doing research and publishing and well as renovating the DLS tea room. These activities and services have been described in subsequent sections.

### 4.12.2 Collection Development

#### 2.1 Acquisition of Books

During the period under review, the Library received new library reading materials from different sources as shown in Table 31 below.

**Table 38: Acquired library materials from different sources**

Source	Type of item	Quantity
Purchased by MUHAS	Books	279
Book Aid International		993
Donated by Prof. Sawe		5
Donated by Dr. Msonde		1

DPGS	Dissertation	319
DPGS	Thesis	37
DPGS	CDS	191
MUHAS	Newsletter	46
<b>Total</b>		<b>1871</b>

## 2.2 Subscription of e-resources

During the period under review, the DLS subscribed to a number of databases which include EBSCOHost, EMERALD, and more databases from Electronic Information for Libraries (EIFL) licensing programme as shown in Table 32. The access to these e-resources was granted through the Consortium of Tanzania University and Research Libraries (COTUL) to which MUHAS Library is a member.

**Table 39: List of subscribed e-Database**

<b>Publisher</b>	<b>Products</b>	<b>Status</b>
EBSCOHost	E-Book and E-Journal	Active
Emerald	E-Journal	Active
IOP Publishing	IOP Science	active
ASTM international	ASTM Compass	active
Edward Elgar Publishing	Edward Elgar Eb	active
JSTOR	JSTOR	active
Mathematical Sciences Publisher	MSP Journals	active

### 4.12.3 Upgrading of the Library ICT lab into University eLearning center

During the period under review the DLS through the University Management continued to upgrade the library ICT lab into the University eLearning Centre. On completion of this upgrade will allow most of the university eLearning trainings, online examinations and other related activities at MUHAS to be carried within the e-learning Centre. The library ICT lab has the capacity to accommodate 166 computers with internet connectivity. Moreover, during the period under review, the DLS received a total of **100** new computers as a replacement of the rejected computers that were reported to the university management by the DLS. The new computers have been inspected by a committee appointed by the university



management and the report has already been submitted to the respective authority for further deliberation.

#### 4.12.4 Construction of new KOHA library Management system and Data Entry

During the period under review, the DLS was granted permission by the University Management to construct a new Library management system. Therefore, the DLS installed and configured the new library management system (KOHA). The intention was to rectify the missing bibliographic data of library system since 2015. Currently, the DLS has managed to enter a total of **64,921** bibliographic records of library information resources into the KOHA system. Out of those **32,469** are book copies while **32,452** are serials/journals. So far, the data entry project is nearly completed by 98% of the library materials being entered into the KOHA system.

#### 4.12.5 Registration of Library Users to New Library Smart Cards (RFID)

The DLS installed a new security system which included a set of 19 CCTV cameras mounted within and outside the library building. Therefore, in order for library users to get library services they are required to register for a new library smart card which allows them to enter in the library. Thus, the process of registering library users is in progress. Table 33 presents the list of registered and activated smart cards

**Table 40: Issued activated library smart cards**

S/N	Faculty/Course	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	Total
1.	Doctor of Medicine (MD)	243	155	61	42	501
2.	Doctor of Dental Surgery (DDS)	63	39	20	40	162
3.	Environmental Health Sciences	53	65	50	0	168
4.	Biomedical Engineering (BBME)	16	25	25	0	66

5.	Bachelor of Pharmacy (B.Pharm)	62	43	17	40	162
6.	BSc. Radiation Therapy Technology	31	32	12	0	75
7.	Bachelor of Science in Nursing	109	68	67	0	244
8.	BSc. Medical Laboratory (BMLS)	67	84	62	48	261
9.	Diploma in Diagnostic Radiology	36	20	0	0	56
10.	Diploma in Environmental Health	32	19	0	0	51
	<b>Sub-Total</b>	<b>712</b>	<b>550</b>	<b>314</b>	<b>170</b>	<b>1,746</b>
11.	Postgraduates	50	31	0	0	81
12.	MUHAS Staff	0	0	0	30	30
	<b>Sub-Total</b>	<b>50</b>	<b>31</b>	<b>0</b>	<b>30</b>	<b>111</b>
	<b>GRAND TOTAL</b>	<b>762</b>	<b>581</b>	<b>314</b>	<b>200</b>	<b>1,857</b>

#### 4.12.6 Short courses conducted

##### 4.12.1.1 Training for postgraduates and staff

During the period under review, the DLS conducted various training workshops to postgraduate student and faculty as shown in Table 34.

**Table 41: Training workshops conducted**

<i>S/N</i>	<i>Training offered</i>	<i>Postgraduate students</i>	<i>Faculty member</i>	<i>Total</i>
1.	Anti-Plagiarism Software (TURNITIN)	50	112	162
2.	Scholarly content discovery	70	23	93
3.	Predatory publishing	34	14	48
4.	Citation and reference management	104	35	139
5.	Evidence-based practice (up-to-date database) and scientific writing	215	78	293
	<b>Total</b>	<b>473</b>	<b>262</b>	<b>735</b>

#### 4.12.1.2 Access to Research4Life Databases

During the period under review, the DLS continued to provide user education on the effective use of Research4Life databases especially HINARI, PubMed and Embase database. The Embase database is a multipurpose and up-to-date biomedical research. The database has over 32 million full-text articles with drug and disease indexes from 1947 to the present.

#### 4.12.7 Preparation of Research Bulletin

The preparation and editing of the Research Bulletin for the January – December 2021 year has been completed and submitted to the DRP for further procedures. All the required publications including research articles, Thesis and Dissertations have been included in the compiled draft.

#### 4.12.8 Teaching IT100 and CS100 courses

During the period under review, the DLS continued to teach Information and Learning Technologies (IT100) and Communication Skills (CS100) courses to all undergraduate students. These courses were made available to the Moodle - an e-learning management systems where learning activities and assessment were also made available. Such practices were in response to the University's strategic plan

of achieving 30% of adopting online teaching and assessment activities by June 2022. A total of 719 first-year students were enrolled into Moodle e-learning system. Students participated actively in different learning activities such as discussion forums, attempting quizzes, group assignments as well as end of module examinations. So far the DLS has attained over 90% in utilizing E-Learning system for teaching, learning and assessment.

#### 4.12.9 Publications and Grants

##### 4.12.1.3 Research publications

During the reviewing period under review, a total of four publications were produced by four library academic staff as shown below:

1. Jan van Aalst, Jin Mu, CrinaDamsa and **Sydney E. Msonde** (2022). Learning Sciences Research for Teaching. 1st edition. London: Routledge. ISBN 9781138902909, 372pp.
2. Njiro, B.J., Mutagonda, R.F., Chamani, A.T., Mwakyandile, T., **Sabas, D.** and Msonde, S. E. (2021). Revisiting the Idea of Learner-Centered Pedagogy: The Theoretical Perspective. *Journal of Education*, 00220574211031970.
3. Ruzagea, M., &**Msonde, S.** (2021). University Students' E-Resource Usage: Predictors, Problems and Practical Implications. *International Journal of Education and Development using Information and Communication Technology*, 17(2), 104-119.
4. Molecular surveillance of chloroquine-resistant Plasmodium falciparum in sub-Saharan African countries after withdrawal of chloroquine for treatment of uncomplicated malaria: a systematic review
5. Conference paper: V Silvestri<sup>1</sup>; MI Mshana<sup>1</sup>; W Bonavenature<sup>1</sup>; J Nyanda<sup>1</sup> ; D Sabas<sup>2</sup>; B Ngasala<sup>1</sup> Blood flukes and arterial damage. A review of aneurysm cases in patients with Schistosomiasis

##### 4.12.10 Research projects

During the reviewing period, a total of two research projects grant were received as outlined below:

1. SIDA seed Grant titled ‘Survey of knowledge, attitudes, skills, and practice of Evidence-based dentistry (EBD) among dental students and dentists in Tanzania’, awarded to DeodatusSabas.

2. Small grants-Award for Amne Salim Title: “Myths and Perception on Covid-19 Vaccination among adult population in Ilala district, Dar es Salaam and Moshi district in Kilimanjaro region. Principle Investigator: Ms. Leonida Kanyuma: Mentor: Dr. Rehema Chande-Mallya

#### **4.12.11 Renovation of tea room**

The university management approved funds to create (renovate) a recreation room for library staff. The recreation room is completed with the wash basin installed and the library staff are using it although there some few facilities such as coffee tables, chairs, microwaves among others are yet to be procured.

## 4.13 Directorate of Continuing Education and Professional Development

### 4.13.1 Introduction



**Prof. D.C.V. Kakoko**

**Director, Continuing  
Education and  
Professional Development**

The Directorate of Continuing Education and Professional Development (DCEPD) is a Unit of MUHAS responsible for the coordination, development, and delivery of Continuing Education (CE) programs. The unit also coordinates professional development activities.

The Vision of the DCEPD is to be a national and regional Centre of excellence in the provision of quality and sustainable Continuing Education and Professional Development (CEPD) in health and related disciplines. The directorate envisages the realization of this vision through its mission which is to provide quality, demand-driven Continuing Professional Development (CPD) through facilitation, regulation, and promotion of CEPD for the health sector and beyond. In implementing its mission, during this academic year, the DCEPD conducted several activities including the following: -

### 4.13.2 Continuing Professional Development (CPD) Short Courses

The Directorate continued to coordinate short courses that are run by Schools, Departments, or Directorates. For the reporting period, the following short courses were conducted: -

**Table 42: Continuing Professional Development (CPD) Short Courses**

<b>Facilitating department/unit</b>	<b>Title of the short course</b>	<b>Dates</b>
Clinical Oncology	An introductory course in Palliative Care, Batch No.4	02 <sup>nd</sup> to 03 <sup>rd</sup> August 2021 (MWANZA)
	An introductory course in Palliative Care, Batch No.5	14 <sup>th</sup> to 25 <sup>th</sup> March 2022 (MUHAS)

Anatomy	Mortuary Technicians	Monthly, July 2021 to June 2022
Nursing management department	Teaching methodology for education and health professionals	20 <sup>th</sup> Sept to 29 <sup>th</sup> October 2021 (MUHAS)
		11 <sup>th</sup> to 22 <sup>nd</sup> October 2021 (MCHAS)
		7 <sup>th</sup> March to 15 <sup>th</sup> April 2022 (MUHAS)
		16 <sup>th</sup> to 29 <sup>th</sup> May 2022 (MCHAS)
Clinical Pharmacy & Pharmacology	Pharmacovigilance Short Course	06 <sup>th</sup> to 10 <sup>th</sup> September 2021
		13 <sup>th</sup> to 17 <sup>th</sup> June 2022
Clinical Pharmacy & Pharmacology	Clinical Applications Assessment Training	1 <sup>st</sup> to 12 <sup>th</sup> November 2021
Clinical Pharmacy & Pharmacology	Training on Good Clinical Practice (GCP) inspection	14 <sup>th</sup> to 25 <sup>th</sup> February 2022
East Africa Centre of Excellence in Cardiovascular Sciences	Basic Echocardiography Short Course. BATCH 1	18 <sup>th</sup> October 2021 to 12 <sup>th</sup> November 2021
	Basic Echocardiography Short Course. BATCH 2	28 <sup>th</sup> March 2022 to 22 <sup>nd</sup> April 2022
Hematology and Blood Transfusion	Health Education on Nutrition in Pregnant Women and Sickle Cell Disease	17 <sup>th</sup> and 24 <sup>th</sup> November 2021
Institute of Traditional Medicine	Traditional Medicine Development Training Level II	01 <sup>st</sup> to 5 <sup>th</sup> November 2021
Radiology	Introduction course in Palliative Care for Health Care Professionals Batch 4	03 <sup>rd</sup> to 13 <sup>TH</sup> August 2021
Sida Supported Project	Basic Qualitative Short Course	14 <sup>th</sup> to 18 <sup>th</sup> March 2022
Clinical Pharmacy and Pharmacology	Clinical Pharmacy Services for in-service Pharmacists	14 <sup>TH</sup> to 25 <sup>th</sup> February 2022

Bioethics and Health Professionalism	Responsible Conduct of Research	10 <sup>th</sup> to 14 <sup>th</sup> January 2022
School of Nursing	Clinical Teaching and Simulation Lab Tech	02 <sup>nd</sup> to 06 <sup>th</sup> August 2022.
DRP	Pharmacokinetics short course	13 <sup>th</sup> to 17 <sup>th</sup> June 2022
DCEPD	Teaching and Assessment of Professionalism training	08 <sup>th</sup> June 2022
Clinical Nursing	Advanced Emergency and Critical Care	May 2022
Development Studies	Advanced qualitative research course	27 <sup>th</sup> June to 01 <sup>st</sup> July 2022.
Biostatistics and Epidemiology	Frontline public health surveillance courses	24 <sup>th</sup> January to 29 <sup>th</sup> April 2022

#### 4.13.3 Accreditation of continuing professional development Courses

The DCEPD accredited a total of 5 short courses that are for CPD. Courses accredited during the academic year were as follows: -

**Table 43: Accreditation of continuing professional development Courses**

Facilitating School	Title of the short course
Institute of Traditional Medicine	Quality Assurance and Quality Control of Herbal products
Department of Clinical Pharmacy and Pharmacology	Clinical Pharmacy Services for In-Service Pharmacists
Department of Emergency Medicine	Advanced Emergency and Critical Care
Department of Bioethics and Health Professionalism	Research Ethics
Institute of Traditional Medicine	Basic Echocardiography

#### 4.13.4 Faculty Development

DCEPD in collaboration with the THET project organized HPEGS Training in Mwanza 9<sup>th</sup> to 20<sup>th</sup> May 2022 where four academic staff attended.



#### 4.13.5 Meetings, Conferences, and Symposia

Senate Continuing Education and Professional Development Committee (SCEPD) held quarterly meetings on 15<sup>th</sup> October 2021 (for quarter 1); 18<sup>th</sup> January 2022 (for quarter 2); 25<sup>th</sup> March 2022 (for quarter 3) and 04<sup>th</sup> July 2022 (for quarter 4).

#### 4.13.6 Activities Accomplished by DCEPD Units

**Clinical Skills Laboratory Unit:** activities for the skills laboratory included preparation, scheduling, and overseeing skills laboratory demonstrations and simulated learning for both undergraduate and postgraduate students for clinical skills from different schools; Maintaining an inventory of supplies, equipment, and learning resources; Creating a conducive learning environment that enhances the student's ability to use conceptual thinking and problem-solving skills; Procurement of supplies, equipment, and learning resources for clinical skills demonstrations, simulation, and remediation; Coordinating and organizing clinical skills sessions for Short course, especially those needs clinical skills through demonstration and simulation in the skills lab from the school of Medicine and Nursing; and Conducting Objective Structured Clinical Examinations (OSCE) for both undergraduate and postgraduate students undertaking clinical courses in the university.

**Medical Illustration Unit:** this unit conducted various activities including Taking Photographs of different events; Recording videos and edited them; Taking photos for identity card Production; Producing identities for Staff and Students; Assisting in Training students about Research Poster designing, Policy Brief designing; Preparing materials for teaching; Assisting in public address system preparation and installation; and designing posters, graphics, and figures for different events and uses.

#### 4.13.7 Other Activities, Events, and Accomplishments:

DCEPD developed professionalism assessment criteria for all academic programs offered at MUHAS. Professionalism assessment criteria document for MUHAS programmers was submitted and endorsed by Senate for implementation.

## 4.14 Directorate of Quality Assurance



### 4.14.1 Introduction

The Directorate of Quality Assurance is a full directorate under the office of the Vice Chancellor. Its mandate is to ensure ‘fit for purpose’ of all University activities. During the 2021/2022 financial-year the directorate continued to push for more involvement of MUHAS community in quality assurance matters.

**Prof. Obadia Nyongole**  
**Director Quality Assurance**

Overall, the concept of quality assurance continued to slowly hold traction amongst MUHAS community members with increasing emphasis on adherence to procedures and evidenced-based decision-making. The limited number of staff and overwhelming burden of tasks and activity remain the main hindrance of full embracement of quality assurance across the University however we have been able to perform functions through different committees.

### 4.14.2 Achievement Made During the Reporting period

During the academic year 2021/2022, the directorate has been able to successfully achieve several planned activities.

- We continued with dissemination of the assessment and monitoring of teaching practices at MUHAS GUIDELINES AND TOOLS to academic staff and students.
- A committee for the University wide evaluation of teaching practices has trained teams of evaluators from departments.
- Electronic tools for assessment of teaching have been developed
- Preparation of piloting the tools is underway.
- Also our directorate is coordinating the preparation of trace study for postgraduate programs through the committee which will subsequently lead to curricula revision of Postgraduate programs in line Higher Education Economic Transformation Project(HEETproject)
- MUHAS will review its curricula for postgraduate programs after feedback from trace study report but also we conducted several market surveys which has led to the development of two curricular for undergraduate programs and Three curricula for postgraduate programs

namely Bachelor of science in occupational Therapy, Bachelor of science in audiology, speech and language pathology, Masters of Science in Nutritional Epidemiology, Masters of science in Women Imaging and Masters of science in Rhinology of which they have been submitted for accreditation after senate approval currently we are waiting accreditation from the Tanzania Commission for Universities(TCU)

- The directorate facilitated jointly with the directorate of Information and Communication (DICT) the development of the GUIDELINE FOR ONLINE TEACHING AND ASSEMENT POLICY as part improving quality in teaching. The guideline will be implemented at the university and is already being posted on the University website.
- Meetings,
  - Senate Quality Assurance Committee (SQAC) held quarterly meetings to discuss several matters including the preparation of tools for tracer studies but also analysis of external examiners reports.
  - Directorate of Quality Assurance conducted a meeting for Deans, Directors and Head of departments regarding teaching and learning at MUHAS for undergraduate and postgraduate students was held
  - Stakeholders meeting were conducted to discuss the five MUHAS curricula of five programs, the inputs from stakeholders helped to improve the curricula to fit the demand of the labor market.
  - Directorate quality assurance is coordinating the revision of the MUHAS Quality Assurance Policy and the MUHAS Assessment Handbook.
  - Our directorate continued to oversee the implementation of quality assurance activities at the University including computation of GPA by equating to MUHAS grading system.

#### 4.14.3 Capacity building

The training conducted by the Directorate of Quality Assurance for the year 2021/22 for staff and students at MUHAS are as follows: -

- Training on blue printing and question banks standards, moderation of questions for quality checks (blooms taxonomy), handling of examination results and the role of examination committee at MUHAS were conducted

but also the training were aligned with pedagogical skills to Deans, Directors and Head of Academic Departments, Quality Assurance Officer, Examination Officer and Program Coordinators at MUHAS. BUT ALSO departmental examination committees and curriculum committee have been reinforce by the establishment of MUHAS EXAMINATION COMMITTEE AND MUHAS CURRICULLUM COMMITTEE. This Committees shall oversee the implementation of curricula and assessment according to standards of Evidence Based Practice.

- Our directorate has facilitated the implementation of new grading system for undergraduate and postgraduate starting academic year 2021/2022.

#### **4.14.4 Links with National and International organizations**

The directorate has continued to work with the Tanzania Commission for Universities and other stakeholders to learn best practices in the provision of higher education and health services.

#### **4.14.5 Challenges**

In spite of these achievements, the directorate continued to carry out its activity without having an office secretary, attendant, a data programmer and Quality Assurance officer. In addition, financial resources for different activities such as tracer studies, curriculum revisions, and self-assessments need to be allocated and protected.

## 4.15 Dean of Students

### 4.15.1 Introduction



**Prof. Tumaini Nyamhanga**  
**Dean of Students**

This report outlines the events and activities of the office of the Dean of Students (DOSO) that took place from 01<sup>st</sup> July, 2021 to 30<sup>th</sup> June, 2022. During the reporting period the office continued to provide various services to students including: Orientation for 1<sup>st</sup> year students, guidance and counseling, health, accommodation, cafeteria, games and sports, counseling and guidance as well as overseeing the students' organization (MUHASSO).

### 4.15.2 Orientation for first year students

The Dean of Students Office (DOSO) organized a one week orientation for the new students for 2021/22 academic year. The event took place from 1<sup>st</sup> - 5<sup>th</sup> November, 2021. All activities were successfully accomplished as planned.

### 4.15.3 Guidance and Counseling Services

The guidance and counseling services were provided to students. A total of 112 (93 males and 19 females) from various schools and the Institute of Allied Health Sciences were guided and counselled. Matters of concern which were reported to the counseling unit were: academic, social, psychosocial, financial, spiritual, health, and psychiatric.

### 4.15.4 Care and Support to Sick Students

#### 4.15.4.1 Support to sick students

The Students Services Bureau supported sick students by facilitating availability of medical insurance membership cards and closely following up those who were hospitalized. During the reporting period, a total of One Hundred and forty-three (143) students fell sick – of whom 108 were attended to as outpatients and 35 were hospitalized.

#### **4.15.5 Students Accommodation Services**

##### **4.15.5.1 Enforcement of Students Tenancy Agreement:**

During the reporting period, the Students Services Bureau (SSB) allocated rooms to eligible

Students at Muhimbili, Chole Road, and Nursing Hostels. The SSB also enforced Students Tenancy Agreement and Students By-laws pertaining to accommodation.

##### **4.15.6 Cafeteria Services:**

The company that was, and still is, providing cafeteria services at Muhimbili and Chole Road Hostels is Villa Catering. Overall, performance of the company was satisfactory, despite some challenges that were reported and addressed accordingly.

##### **4.15.7 Security Issues at the Hostels:**

Security matters at both Muhimbili and Chole Road student's hostels are taken care by SUMA JKT. Overall, performance of the company was satisfactory, despite some challenges that were reported and addressed accordingly.

##### **4.15.8 Students' Leadership and Governance:**

MUHASSO Government continued with their activities harmoniously to a large extent. The students' government got necessary support from the University Management as need arose. The 2021/2022 MUHASSO leadership completed its term in early May, 2022. The new government was elected and assumed powers in late June, 2022. The new top MUHASSO leaders for 2022/2023 academic year were Mr. Erick Enock DDS4 (President) and Mr. David Machange, MD2 (Vice President).

##### **4.15.9 Events/Sports Activities:**

###### **4.15.9.1 Internal Sports Events**

Several Intra-University sports events - particularly football and Volleyball competitions - were organized and conducted by MUHASSO.

## 4.16 Directorate of Estates

### 4.16.1 Introduction



**Qs. Gerald L. Mwikuka**  
**Director of Estates**

The Directorate of Estates (DOE) forms part of MUHAS's Technical and Administrative Support Services, and it is the Directorate's duty to manage MUHAS's extensive portfolio of physical assets and land assets and to provide a safe, sustainable, efficient and comfortable environment for MUHAS's staff, students and visitors. The Directorate is continually improving the University Estates activities by administering new constructions and refurbishment of existing buildings and infrastructure. It also develops University lands and manages environment cleanliness,

waste disposal, grounds and building maintenance. DOE aims to provide first class services in order to deliver a high quality and value for money services to support Teaching, Learning and Research.

### 4.16.2 Works Projects

#### 4.16.2.1 Construction of the Multi-Purpose Building for the Centre of Excellence in Cardiovascular Sciences at Mloganzila Campus

The Directorate has been actively engaged as part of the building team for the Construction of the Multi-Purpose Building for the Centre of Excellence in Cardiovascular Sciences at Mloganzila Campus. To closely supervise the ongoing construction works, the Directorate's Engineer and Architect were appointed as Clerk of works for this major construction project that is being constructed by the Contractor M/S Group Six Int. at a contract sum of TZS 12,300,990,594.41 (fixed price). The project commenced on 20<sup>th</sup> February, 2018 and was scheduled to be completed on 30<sup>th</sup> November 2019, however due to various challenges beyond the contractor's ability including delays in clearance of imported.

The construction has now been completed and the building has been handed over on 11<sup>th</sup> March 2022 with a snag list.





**Figure 19: State of the Art CoECVS Building Borrows some Design Elements from the Existing Context**

#### **4.16.2.2 Design and Construction Supervision of Vertical Extension of the SPHSS Building**

Due to an acute shortage of office spaces in the University, the University through the School of Public Health decided to extend the SPHSS building (Block M) vertically to add one more floor on top of the existing single-story structure in order to reduce the problem. This project is being executed by the Contractor M/s G.E. Engineering and the total cost of the extension works is a sum of TZS 187,783,843.00 (VAT Inclusive). The Consultant for this project is A.V. Consultant.

This project commenced on 08th December, 2021 and was supposed to be completed on 08th June, 2022. However, the Contractor has requested a time extension starting from 15th June 2022 up to 9th August 2022 to finish up works.





**Figure 20: Front Views of the CoECVS Building Features Contemporary Architectural Design Elements**

#### **4.16.2.3 Rehabilitation of Staff Toilets and Corridor Floor Repair at Library Building.**

In an effort to improve students services at MUHAS's Directorate of Library Services, The Contractor M/S Sunoro Enterprises, was awarded the contract for carrying out Rehabilitation of Staff Toilets and Corridor Floor Repairs in the Library Building at contract sum of TZS 16,040,044 VAT inclusive. The works commenced on 19<sup>th</sup> May 2021 and were completed and handed over on 19<sup>th</sup> June 2021.

#### **4.16.2.4 Proposed renovation of DICT offices at MUHAS Administration Block, External Relations and Convocation Unit.**

The Directorate of Information and Computer Technology (DICT) underwent extensive renovations that included restructuring of the existing spaces to create an open pool office to cater for ICT technicians as well as creation of offices for the DICT management as well as changing of old windows into aluminium windows. The Estates supervised the contractor M/S Dazzy Building and Civil Contractors Limited, who was awarded the tender to execute the said renovation works at a contract sum of TZS 16,040,044 inclusive. The renovation works commenced on 07<sup>th</sup> May 2021 and were completed on 07<sup>th</sup> July 2021.

#### **4.16.2.5 Rehabilitation of ICT Server Room and Office on Block M Hematology Teaching Lab and Library ICT Lab**

In an effort to ensure that ICT services are rendered efficiently in the ICT server Room, the University engaged the Contractor M/S Mask and Sons to rehabilitate the ICT server Room and an Office on Block M. The contract also included the rehabilitation of the Hematology Teaching Lab and Library ICT Lab so as to create a conducive working environment in the respective laboratories. The total contract sum of the works was TZS 100,772,826 VAT Inclusive. The work commenced on 03<sup>rd</sup> September, 2021 and completed on 3<sup>rd</sup> December, 2021.



**Figure 21: The Rehabilitated DICT lab. In the Library Building**

#### **4.16.2.6 Rehabilitation of MUHAS Undergraduate Students Cafeteria Toilets, Offices at Block F, Block and Warning Signs at Mloganzila.**

The Estates supervised works for Rehabilitation of MUHAS Undergraduate Students Cafeteria Toilets, Offices at Block F, Block and Warning Signs at Mloganzila. The tender for the proposed works were awarded to the Contractor, M/S Pia Company Limited, at a contract sum of TZS. 16,854,117/= VAT inclusive. The Works commenced on 2<sup>nd</sup> December 2020 and were accomplished and handed over on 27<sup>th</sup> December 2021.

#### **4.16.2.7 Rehabilitation of School of Dentistry Building Phase II**

As a measure to uplift the appearance of the Dental building as well as improving both the staff physical working environment as well as the patients service providing areas, the Contractor M/S Dazzy Building and Civil Contractor was awarded a contract to carry out the Proposed Renovation of School of Dentistry Phase II at a contract sum of TZS 209,547,361.80 (VAT Inclusive). The Directorate of Estates has been supervising these works that commenced on 15<sup>th</sup> August, 2021 and were supposed to be completed on 15<sup>th</sup> December, 2021. However due to some additional works to the contractor, an extension of time from 15<sup>th</sup> December, 2021 to 18<sup>th</sup> January, 2022 was granted to the Contractor to finish up the works.

#### **4.16.2.8 Rehabilitation of Clean Water and Waste water system, Carpentry and Light System at Chole Road Hostels**

In an effort to solve the problem of re current leakages in sewage and clean water systems at Chole Road Student Hostels in Masaki area, the University engaged the Contractor, M/S Afri Works Co. Ltd at a contract sum of TZS 122,066,404.00 VAT Inclusive to rehabilitate the whole sewerage and clean water systems at Chole Road Students Hostels. This work commenced on 27<sup>th</sup> September, 2021 and were completed on 31<sup>st</sup> January 2022.

#### **4.16.2.9 Renovation of School of Pharmacy Teaching Facilities**

The Contractor M/S Harisini Enterprises Ltd was engaged to carry out renovations works at the School of Pharmacy teaching Facilities with an aim of uplifting the school's learning environment. The works at valued at a contract sum of TZS 125,685,340 +27,131,740.00 (VAT Inclusive). The Estates is supervising these works that commenced on 31<sup>st</sup> January, 2022 and are scheduled to be completed on 30<sup>th</sup> April, 2022.



**Figure 22: The Renovated Medicinal laboratory provides a conducive environment for experiments**



**Figure 23: Renovated Ceiling and Installed with Energy Saving Lights**

#### **4.16.2.10 Proposed extension of X-ray room at school of dentistry**

The Estates Directorate supervised works contract worth a sum of TZS 31,528,420.00 (VAT inclusive), executed by the Contractor M/S Afri-works ltd, geared at improving the physical working environment at the School of Dentistry X ray section. The works commenced on 3<sup>rd</sup> May 2022 and were completed on 20<sup>th</sup> May 2022.



**Figure 24: a): Lead X-rays protection gate b) Lead Glass protection**

#### **4.16.2.11 Construction of a Storm Water Channel at BADECO Expand satellite teaching facilities at Bagamoyo Teaching Unit (BTU).**

In an effort to control the damage that was caused by the storm water from upper lying areas of Bagamoyo township towards MUHAS's BADECO beach plot, as well as creating a conducive research and learning environment at Bagamoyo Training Unit (BTU), the contractor M/S Elite Construction Ltd was awarded a contract worth a sum of TZS 134,512,032.00 VAT inclusive to execute works. These works involved construction of the storm water to channel rain water into the Indian Ocean as well as renovation works at BTU. The works stated on 16<sup>th</sup> May 2022 and was expected to be completed on 1<sup>st</sup> August 2022.





**Figure 25: Bagamoyo Training Unit (BTU),**



**Figure 26: Construction of Stormwater Channel at Badeco Beach Plot  
Bagamoyo**

#### **4.16.2.12 Construction of Water Tank at MUHAS**

As a measure taken to ensure that MUHAS has its own water source that is connected directly at DAWASA mains, rather than the current situation whereby MUHAS gets its water through Muhimbili National Hospital (MNH), the contactor M/S Maski& Sons Construction Co. Ltd has been awarded a contract

worth a sum of TZS 924,485.743.39 VAT inclusive to construct an overhead concrete water storage tank as well as an underground concrete water storage tank. This project's construction life span is six months, and it started on 4<sup>th</sup> July 2022 and will be completed on 4<sup>th</sup> January 2023.

#### **4.16.2.13 Construction of School of Dentistry Dispensing Room.**

As a measure carried out to uplift the appearance of the School of Dentistry building as well as improving the working environment in the Dentistry Dispensing Room, the Contractor M/S Afri-works co ltd was awarded a contract worth a sum of TZS 69,894,406.00 (VAT Inclusive), to execute the mentioned works. The Directorate has been supervising these works that commenced on 6<sup>th</sup> January, 2022 and are scheduled to be completed on 6<sup>th</sup> April, 2022.



**Figure 27: School of Dentistry Dispensing Room**



**Figure 28: Main Entry into the Dispensing Room**

#### **4.16.2.14 Strengthening boundary at MAMC(Mloganzila).**

The Contractor M/S Afri Works Company Ltd was awarded a contract worth a sum of TZS 159,645,150.00 VAT inclusive to carry out boundary recovery as well as placement of heavy concrete barriers along the borders of MUHAS's Mloganzilaland that started on 13<sup>th</sup> June 2022 and will be completed on 13<sup>th</sup> August 2022. Once the project is completed it will strengthen the security of MUHAS's vast land at Mloganzila against encroachment of the rapidly mushrooming settlements and increasing human activities along MUHAS land's borderline.

#### **4.16.3 Preventive maintenance contracts**

##### **4.16.3.1 Servicing of MPL lift**

The Directorate supervised the preventive maintenance project for servicing and maintenance of MPL lift at MUHAS Campus which is being executed by the service provider M/S Derm Elevators at contact sum of TZS 500,000 per month (Incl. VAT). The preventive service among other tasks, also includes servicing of the lift's cooling fans, guide shoe, as well as the lift's automation system Blow dust (inside controller) using air. This two years' service contract commenced on 03<sup>rd</sup> May, 2021 and will end on 02<sup>nd</sup> May, 2023.



#### **4.16.3.2 Servicing of Generators**

To ensure that University standby generators' continue to operate at optimum levels, and their service lives are prolonged, the University awarded a service provider M/S M.D.I.Energy Co. a two years contract to carry out preventive maintenance of generators. The Estates Directorate supervised this contract which is worth a sum of TZS 18,762,000 per service (VAT Inclusive) per service, started in 3<sup>rd</sup> May, 2021 to will end on 2<sup>nd</sup> May, 2023.

#### **4.16.3.3 Preventive maintenance of Air conditioners at MUHAS and Kalenga and Chole Students Hostels**

During the reporting period the service provider M/S Ref Refrigeration and Air Conditioning carried out preventive maintenance of Air conditioners at MUHAS, Kalenga House and Chole Students Hostels. This two years' service contract is executed every after three months is worth a sum of TZS 11,692,000 VAT inclusive per quarter, and it commenced on 10th May, 2021 and will end on 9th May, 2023.



**Figure 29: Servicing of Central AC System at Lecture Hall 4 and Lecture Hall 5 (a)**



**Figure 30: Servicing of Central AC System at Lecture Hall 4 and Lecture Hall 5 (b)**

#### **4.16.4 Preventive Maintenance of Sewerage System at MUHAS Main Campus and Chole Road Student Hostels**

The Directorate also supervised the Preventive maintenance and repair of Sewerage System at MUHAS Campus, Kalenga House and Chole Students Hostels during the reporting period. This service contract was carried out by the service provider M/S Kisomboko Company Limited, whereby three services are executed per year at a contract sum of TZS 14,817,500 VAT inclusive per service. This two years' service contract commenced on 12th April, 2021 and will end on 11th April, 2023.



**Figure 31: Executing Preventive Maintenance of the Sewer System at MUHAS main Campus**

#### **4.16.5 Ground Maintenance and Cleaning Services Contracts**

##### **6.16.5.1 Provision of Cleaning and Gardening Services at MUHAS Main Campus, Chole Road Student Hostels and Bagamoyo Training Unit (Lot 1&2)**

To ensure the presence of an pleasant and aesthetic environment in both the University soft and hard landscape areas as well as maintaining cleanliness in students hostels, offices and lecture halls, the service provider M/S Ledso Consolidated Limited continued offering cleaning and gardening services at both MUHAS's main Campus, Bagamoyo Training Unit (BTU), Kalenga House and Chole student's hostels at a contract sum of TZS 22,900,000 VAT inclusive per month. The Directorate continued with the supervision of this two-year contract that commenced on 18th November, 2021 and will end on 31st November, 2022.



**Figure 32: DOE supervises the Maintenance of Both Soft and Hard Landscape Areas**

#### **6.16.5.2 Provision of Garbage Collection Services at MUHAS Campus and Chole Road Students Hostels.**

To ensure the proper collection and disposal of solid waste in various areas of the University Campuses, the Directorate of Estates continued supervising the service provider M/S K- Environment Sanitation Services, who has been contracted to provide garbage collection services at both MUHAS Campus, Chole students' hostels and at Kalenga Guest House at a contract sum of TZS 4,200,000 per month and the contract commenced on 03rd May, 2021 and will end on 03rd May, 2023.



**Figure 33: Solid Waste Collection Services in progress**

### **6.16.5.3 Provision of Sanitary Disposal Services at MUHAS Main Campus and Chole Road Student Hostels**

As a measure of ensuring hygienic conditions are maintained in ladies' toilet facilities in all MUHAS Campuses, the service provider M/S Envirotec Hygiene & Pest Control Ltd has been delivering sanitary disposal services at MUHAS Main Campus and Chole Road Student Hostels, at contact sum of TZS. 28,320,000/= per annum. The Estates Directorate has been supervising this two years' service contract that is worth a sum of TZS 28,320,000 VAT inclusive per annum, and it commenced on 18<sup>th</sup> November, 2021 and will end on 18th November, 2023.

### **4.16.6 In House Repairs**

During the reporting period the Directorate carried out a number of routine minor repair tasks in response to repair request from various end users at the University Campuses. A few selected minor repairs and renovation works done included:

- i. Painting of the DVC-PFA offices, VC washroom and treatment of wall that has been affected by fungus near the near BVR machine. The cost of the repair works were worth a sum of TZS 1,990,000.00, and started on 14<sup>th</sup> May 2022 and were completed on 22<sup>nd</sup> May 2022.
- ii. Painting worn out school of pharmacy corridors walls and staircases to lift the appearance. The repairs work's labor cost was TZS 3,735,000.00 and started on 17<sup>th</sup> June 2022 and were completed on 27<sup>th</sup> June 2022.
- iii. Rehabilitation of the staff house located at Mazengo Street in Upanga at a sum of TZS 4,436,760.00. Repairs started on 24<sup>th</sup> May 2022 and were completed on 28<sup>th</sup> May 2022.
- iv. Rehabilitation of ICT postgraduate classroom, the rehabilitation started on 25<sup>th</sup> May 2022 and was completed on 28<sup>th</sup> May 2022, at a cost of TZS 3,735,000.00

## 4.17 Directorate of Human Resources Management and Administration

### 4.18.1 Introduction

The Directorate of Human Resource Management and Administration is mandated to execute various Human Resource Functions at the University. Among others, the Directorate plays a pivotal role of ensuring that the University has optimum level of human resources so as to promote University performance through effective and efficient execution of the Human resource functions. The Directorate has been continuously maintaining a conducive working environment that



**Ms. Gerwalda Luoga**  
**Director, Human Resources**  
**Management and Administration**

encourages employees to achieve the University goals as well as the individual professional goals.

For the purpose of ensuring availability of required human resources at optimum level, the Directorate has been continuously planning, recruiting, developing and managing human resources so as to improve University performance towards achieving the University's strategic objectives. Basing on public service policies, rules and regulations, efficient, quality and timely Human Resources and Administration Services have been provided to MUHAS staff and other University's stakeholders in order to facilitate smooth operation of the University during the period under review.

The Directorate of Human Resource Management and Administration (DHRMA) is comprised of three departments as listed hereunder: -

- i) Department of Human Resource Planning and Development
- ii) Department of Human Resource Salaries and Benefits
- iii) Department of General Administration.



## 4.18.2 Activity Report Highlights for the Year 2021/2022

### 4.17.2.1 Staff Establishment and Recruitment

The total number of MUHAS staff is **653** where by the number of academic staff is **336** and the number of administrative staff is **317** as at 30<sup>th</sup> June, 2022.

In this financial year, President Office, Public Service Management and Good Governance issued two (2) replacement permits. The first replacement permit from PO PSM & GG with Ref. No. FA. 10/128/01/” G”/109 dated 8<sup>th</sup> January, 2021 to fill three (3) slots of which, two (2) are slots for Academic staff and one (1) slot for Administrative and Technical staff, another replacement permit with Ref. No. FA. 10/87/01/” T”/27 dated 20<sup>th</sup> September, 2021 comprised of 3 slots whereby 2 slots are for Academic staff and 1 slots for Administrative and Technical staff. The second replacement permit with Ref. No. FA. 10/87/01/” T”/22 dated 20<sup>th</sup> September, 2021 comprised of 1 slots to employ 1 Academic Staff. Be further informed that the University received One (1) Human Resource Officer II through the letter with Ref. No. CCA. 22/228/01/31 dated 04<sup>th</sup> October, 2021 from PO-PSM & GG. Also, President Office, Public Service Management and Good Governance issued new hire permit for 150 slots for Academic & Administrative and Technical staff through a letter with Ref. No. FA. 97/228/01/9 dated 13<sup>th</sup> May, 2022.

The interviews for administrative and technical staff were conducted by Public Service Recruitment Secretariat and interviews for academic staff were conducted by the University under the guidance of Public Service Recruitment Secretariat.

During the reporting period, there were employees who were transferred in and out of MUHAS. The table below shows the number of staff who have been recruited, transferred and confirmed in the Public Service.

**Table 44: Staff Recruitment, Transfer & Confirmation**

S/N	STAFF	New Hire	Transfers		Confirmed Staff
			IN	OUT	
1.	Academic Staff	4	5	0	15
2.	Administrative Staff	3	16	7	12
	<b>TOTAL</b>	<b>7</b>	<b>21</b>	<b>7</b>	<b>27</b>

## **Non - Government payroll recruitment**

In this financial year, employment contracts for 21 non-Government payroll staff from different offices were renewed as a temporary measure and strategy. The Directorate has already taken significant initiative of incorporating the respective staff needs in the MUHAS Personnel Emoluments Budget and Annual Establishment Estimates for the financial year 2022/2023.

### **4.17.2.3 Post Retirement Contract**

In this financial year, MUHAS received a permit from President Office, Public Service Management and Good Governance to renew employment contracts for 2 academic staff on Retired Rehired basis.

### **4.17.2.4 Part Time Contract Staff Recruitment**

For the purpose of retaining experienced professional health experts and implementation of succession plan, the Directorate issued part time contracts for **21** academic staff.

### **4.17.2.5 Appointment of Adjunct Staff/Honorary Lecturer**

During this financial year, **81** staff were engaged as Adjunct staff in different departments as it was recommended by Committee of Deans and Directors and approved by A&HRMC meetings. The initiative has strengthened the University by enhancing exchange of professional expertise in provision of quality education, research and consultancy as well as reducing the critical staffing gap.

### **4.17.2.6 MUHAS Personnel Emoluments Budget and Annual Establishment Estimates for Financial year 2022/2023.**

The Directorate of Human Resources Management and Administration prepared and submitted the MUHAS Personnel Emoluments Budget and Annual Establishment Estimates for the financial year 2022/2023. The budget was processed from the level of the University which has incorporated all human resources needs so as to support smooth operations. The budget was submitted to President's Office –Public Service Management & Good Governance (PO-PSM&GG) through New HCMIS and the Ministry of Finance and Planning for approval. The Directorate is waiting for approval of the establishment for the

fiscal year 2022/2023 so that it can efficiently execute the Human Resources functions and ensure availability of optimum number of qualified staff in the University.

#### **4.17.2.7 Staff Promotions and Re-categorization**

##### **4.17.2.7.1 Staff Promotion**

Following the directives of President Office, Public Service Management and Good Governance through circular with Ref. No.FA.97/228/01/04 dated 22<sup>nd</sup> April, 2022, MUHAS has promoted **71**. Basing on the above-mentioned directives, staff who were due for promotion were issued promotion letters and already uploaded in the Human Capital Management Information System, therefore awaiting approval by President's Office Public Service Management and Good Governance.

##### **Staff re-categorization for the year 2020/2021**

In the financial year 2021/2022 **13** staff have been re-categorized.

#### **4.18.3 4.17.3 Establishment of New HCMIS**

Following the government initiative of establishing the New Human Capital Management Information System so as to replace the old system. Five (**5**) Human Resources staff attended the training which was conducted by President Office, Public Service Management and Good Governance so as to ensure there is smooth transition to a new system.

Be further informed that the Directorate of Human Resources Management and Administration is still taking initiative to facilitate on job training and practice of the newly introduced New HCMIS so as to share knowledge and experience to other Human Resources Officers who are responsible in managing staff welfare in New HCMIS so as all Human Resource Officers can use the New HCMIS to execute various Human Resource functions.

##### **4.17.3.1 Staff Salaries and Benefits**

The Directorate has been continuing to manage salaries and compensation of MUHAS staff efficiently and ensure timely payment for smooth operations of University strategic objectives.



### **Staff Salaries Arrears**

In this financial year **49** salary arrears claims resulted from Harmonized scheme of service for Academic staff, promotion, new hire, corrections and salary change for transferred staff have been paid through the new HCMIS. The total amount paid was **TZS 267,493,000/=** and our Directorate has continued to submit the claims to the respective authority.

### **Staff Gratuities**

The Directorate of Human Resources Management and Administration has processed and followed up gratuities of 41 Retired Rehired staff after completion of their employment contracts. Be further informed that follow up has been made at PSSSF regarding payments of the previous submitted gratuities of Retired Rehired staff. It should be noted that all gratuities have been paid to the respective staff through electronic bank transfer, except for 2 staff which are still on process in the respective authorities. Be further informed, that continuous follow up is still ongoing to make sure PSSSF pays the beneficiaries as per regulations and procedures.

### **Staff Claims**

In this financial year, staff claims for Clinical Allowance, Housing Allowance and Subsistence Allowance were submitted to the Ministry of Finance and Planning for further processing.

Moreover, MUHAS received a team of Internal Auditors from Ministry of Finance and Planning and National Audit Office of Tanzania (NAOT) vide letter with Ref. No. HD. 142/669/01 dated 9<sup>th</sup> November, 2020 for the purpose of verifying the Housing and Clinical Allowance claims from of July, 2019 to September, 2019. The exercise was conducted from 11<sup>th</sup> November, 2020 to 19<sup>th</sup> November, 2020. However, due to the workload and interruption of external audit exercise coordinated by National Audit Office of Tanzania and LINDAM which also needed the same staff files and documents, the exercise could not be finalized within the set timeline. Therefore, MUHAS requested for an extension of the audit exercise vide letter with Ref. No. KC.126/201/01/74 dated 18<sup>th</sup> November, 2020. The exercise was finalized and the report has been submitted to Ministry of Finance and Planning for further processing of the staff claims. These staff claims have already been uploaded in the GAMIS system.

#### 4.18.4 Staff Training and Development

##### 4.17.4.1 Staff on Long Course Training

During the period under review the Directorate continued to ensure that competent human resources with appropriate skills are available at work place. In recognition of the centrality of training, the University continues to train its employees both locally and overseas to encourage and support individual efforts. In this respect, a number of employees were trained in different specialties from various learning institutions basing on University training programme. The table below describes the status of staff on training as at 30<sup>th</sup> June, 2022.

**Table 45: Staff Training and Development**

S/N		PhD	Master	Other training (Post Doc, MSc. Super Specialization)		Total
Academic Staff	Staff on Training	M = 6	M = 27	M= 3		
		F =11	F = 16	F= 2		
	Total	17	43	5		65
Admin & Technical Staff	Staff on Training	PhD	Master	Degree	Diploma & Other	Total
		M= 0	M = 1	M = 6	M = 0	
		F = 1	F = 1	F = 3	F= 0	
	Total	1	2	9	0	12

##### 4.17.4.1.1 Staff on Short Course Training

In this financial year, there were short course training that were conducted to MUHAS Staff for the purpose of raising job performance capabilities as well as awareness of staff with regard to different issues at the work place. These short course training are as follows: -

###### (i) Induction Training Course for newly employed staff

The Directorate of Human Resources Management & Administration in collaboration with the Tanzania Public Service College (TPSC) organised and conducted training to newly employed MUHAS staff for the purpose of orientation, enhancing performance skills and promoting high level of integrity. The training was conducted from 21<sup>st</sup> March, 2022 to 25<sup>th</sup> March, 2022 at CHIPE Building, DPI Room 3 on the 3<sup>rd</sup> Floor.

**(ii) Training on Preparation for Retirement to MUHAS Staff**

The training on the preparation for Retirement was conducted by Tanzania Public Service College (TPSC) to twenty (20) MUHAS Staff from 21<sup>st</sup> March, 2022 to 25<sup>th</sup> March, 2022. The training focused on enhancing staff who are expecting to retire to prepare themselves with life and the changes after retirement. The training provides entrepreneurship skills that will enhance the retired staff to understand the opportunities for investments as well as important advice on financial and health management.

**(iii) Integrity Training for all MUHAS Management and Staff**

In this financial year, training was conducted by Senior Officers and Representatives from Chief Secretary's Office (State House), President Office, Public Services Management and Good Governance; Ethics Secretariat and PCCB. The MUHAS Management attended the training held on the 14<sup>th</sup> June, 2022 and all other staff attended training on the 15<sup>th</sup> June, 2022. The training focused on directing staff to work under Public Service Rules and Regulations as provided by the Government.

**(iv) Training on HIV/AIDS and Non - Communicable Disease at the Work Place**

The Directorate of Human Resources Management and Administration organised the training on HIV/AIDS and non-communicable diseases at work place which was conducted on 24<sup>th</sup> to 27<sup>th</sup> May, 2022. The training was facilitated by President Office, Public Services Management and Good Governance and TACAIDS. The training was conducted to MUHAS HIV Committee, Peer Educators from each Directorate, Schools and Departments and to all staff. This training created awareness on the importance of preventing the spread of HIV/AIDS at work place and how to eat healthy so as to make the University meet the planned strategic objectives.

**4.18.5 Staff Performance Appraisal for 2020/2021 and 2021/2022**

Following the end of the financial year 2020/2021 263 Academic Staff and 280 Administrative and Technical staff submitted OPRAS forms. All staff that had filled in OPRAS forms were issued with a copy of their OPRAS forms with SPMAC OPRAS rating. The Directorate of Human Resource Management and Administration has provided notice to staff for submission of OPRAS forms for the financial year 2021/2022.

#### 4.18.6 Management of MUHAS Registry

In this financial year, the Directorate of Human Resources Management & Administration continued to improve MUHAS Registry Office basing on directives from President Office, Public Service Management, Records and Archives Management Department. A total of 572 confidential personal files, 20 confidential files have been entered in the system and 147 confidential subject files have been opened and is still ongoing. Be further informed that the Electronic File Tracking System for now is not used due to several challenges that have been reported to Open University Tanzania (OUT) as Supplier of the system. The Directorate of Information Communication Technology is making assessment and continuous follow-up of the system to finalize its development under guidance of eGA.

#### 4.18.7 Approved Organization Structure

During the financial year MUHAS received the approved organization structure from President's Office Public Service Management and Good Governance vide the letter with Ref.CBA.128/248/07/07 dated 20<sup>th</sup> January, 2022. The implementation of the approved organization structure is ongoing.

#### 4.18.8 Staff Turnover and Retention

In the reporting period, a total number of **15** staff left MUHAS due to resignation, retirement, end of contract, death, transfer and misconduct. The table below shows the number of staff who left MUHAS due to various reasons as follows:-

**Table 46: Staff Turnover and Retention**

S/N	STAFF	Contr act End (RR)	Resig nation	Retire ment	Misco nduct	Trans fer out	Death	TOTA L
1.	Academi c Staff	2	0	0	<b>0</b>	<b>0</b>	1	3
2.	Adminis trative Staff	0	0	3	<b>2</b>	<b>6</b>	1	12
	<b>TOTAL</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>15</b>

#### 4.18.9 Staff Disciplinary Issues

During the reporting period, we had 2 staff that were having disciplinary issues and the disciplinary authority of the University has taken appropriate action to all staff accordingly as per rules and regulations.

#### 4.18.10 Obituary

During the reporting period, 2 MUHAS staff passed away. May their Souls Rest in Peace.

**Table 47: Obituary**

S/N	Name	Position	Department	Date Died
1.	Mr. Prosper S. Tibalinda	Health Laboratory Scientist Officer I	School of Pharmacy	23 <sup>rd</sup> November, 2021
2.	Ms. Kuruthumu Issa Mgenzi	Personal Secretary II	School of Pharmacy	17 <sup>th</sup> January, 2022

#### 4.18.11 Selection of Best Workers in Departments/Schools/Directorate

In this financial year, the exercise of searching for best workers was finalized. Two (2) staff one **Dr. Francis Furia** from Academic staff and **Mr. Andrew Katemi** from Administrative and Technical staff were selected Best workers at the University level. The staff were facilitated to attend "MEI MOSI" celebrations. Moreover, Seventy Six (76) staff were selected best workers at the level of Directorate, Schools, Departments and Units.

#### 4.18.12 OSHA Compliance

During the reporting period, the University has continued the processing of occupational Safety and Health Authority regulations. Be further informed that **26** staff have attended training on safety on the working place. In this financial year also, routine inspections of the offices was carried out by OSHA. The Authority is expected to submit a report immediately after completion of inspection.

#### **4.18.13 Staff Welfare Activities**

##### **4.17.13.1 Protecting of MUHAS Staff against the CORONA Pandemic**

Following the outbreak of the Corona pandemic (Covid-19) in Tanzania, MUHAS has continuing to take significant initiatives of placing chlorine at MUHAS main entrance and hand sanitizers to various MUHAS Offices. Close follow up was made through Security Unit to ensure that SUMA JKT guards do not allow staff, students, guests or clients to enter or exit MUHAS without being sanitized. The University has also been raising awareness to the entire MUHAS Community on the various measures and initiatives to take in combating the virus such as limiting unnecessary meetings, emphasizing on social distancing among staff and other people around the community, avoidance of shaking hands, encouraging the use of water and soap or hand sanitizers.

##### **Training on the eMREJESHO System to MUHAS Staff**

Following appointment of the MUHAS Complaints Handling Committee, 5 members and 1 ICT officer were facilitated to attend training on eMREJESHO system which was conducted by President Office, Public Service Management and Good Governance. Be further informed that the system has been established by the Government of Tanzania for the purpose of responding to complaints, inquiries as well as receiving recommendations and comments from citizens, public servants, retirees and other stakeholders regarding the services provided by Government institutions and offices. Moreover, as part of the program for celebration of Public Service Week - 2022, MUHAS Complaints Committee provided training to all MUHAS Staff regarding the new system on 20<sup>th</sup> June, 2022 at Lecture Hall 5. This training will also be provided to MUHAS leaders and students as part of the key stakeholders of MUHAS Community.

##### **International Women's Day**

During the reporting period, the University Staff participated in celebrating the International Women's Day which was held on 8<sup>th</sup> March, 2022 at Uhuru grounds Dar es Salaam and later was finalized at the University in Lecture Hall 5. The guest of Honour was the MUHAS Vice Chancellor Prof. Andrea B. Pembe. In the ceremony various challenges facing Women were discussed and addressed for the welfare and betterment of MUHAS Women.

#### **4.18.14 Scheme of Service for Administrative and Technical Staff (Addendum)**

During the reporting period, we received the addendum of the MUHAS Scheme of Service for Administrative and Technical Staff vide the letter with reference number CBA.87/248/01/J/19 dated 17<sup>th</sup> January 2022 from the President's Office, Public Service Management and Good Governance for 10 administrative cadres with 105 staff. Be further informed, the implementation of the addendum has already been completed and uploaded in the New HCMIS.

#### **4.18.15 Incentive Committee**

During the reporting period, a committee consisting of eight (8) members was formulated to prepare the proposed MUHAS Incentive Scheme that will be in line with Government procedures, circulars and regulations. In the process of development of the Scheme, the Committee has also done benchmarking with other Government Institutions. The Scheme is a key guideline and expected to be used as a tool to improve staff welfare at the University.

## 4.18 Directorate of Finance



### 4.18.1 Introduction

Directorate of Finance is one of the directorates of the Muhimbili University of Health and Allied Sciences (MUHAS). The Directorate is responsible for planning, directing and controlling of the financial and accounting operations of the University. The directorate is also responsible for liaising with auditors in conducting their audit assignments, liaising with tax authority in various tax matters, and providing fundamental financial analysis and feedback on the budget performance and assessment of the financial accounting operations.

### 4.18.2 Audited Accounts for Financial Year 2020/21

The audit for the financial year 2020/2021 started in October 2021. During the reporting period MUHAS continued to comply fully with all the International Public-Sector Accounting Standards (IPSAS) and Tanzania Financial Reporting Standards where there is no relevant IPSAS in use. MUHAS statutory auditor is the Controller and Auditor General (CAG) who is currently working jointly with M/S Lindam Audit in auditing of the University operations.

### 4.18.3 Financial Statement for the year that ended on 30 June 2021

#### STATEMENT OF FINANCIAL POSITION AS AT 30<sup>TH</sup> JUNE, 2021

**Table 48: Financial Statement for the year that ended on 30 June 2021**

ASSETS	NOTES	30.06.2021	30.06.2020
		TZS	TZS
<b>Current assets</b>			
Cash and cash equivalents	14	33,802,659,542	36,904,168,189
Receivables	15	3,964,116,392	2,879,259,783
Prepayments	16	68,506,590	65,257,590
Inventories	17	183,605,018	197,362,742
		<b>38,018,887,542</b>	<b>40,046,048,304</b>



**Non-current assets**

Property, plant and equipment	22	89,629,219,068	80,721,586,153
Intangible assets	24	-	4,547,020

		<b>89,629,219,068</b>	<b>80,726,133,173</b>
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<b>TOTAL ASSETS</b>		<b>127,648,106,610</b>	<b>120,772,181,477</b>
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**LIABILITIES**

**Current liabilities**

Payables and accruals	18	12,600,448,185	13,793,667,806
Employee benefits	19	1,099,506,555	1,012,007,106
Deferred income (Revenue)	20	2,127,556,538	855,545,750

		<b>15,827,511,278</b>	<b>15,661,220,662</b>
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**Non-Current Liabilities**

Deferred income (Capital)	21	<b>46,051,352,212</b>	<b>43,200,340,173</b>
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<b>TOTAL LIABILITIES</b>		<b>61,878,863,490</b>	<b>58,861,560,835</b>
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<b>NET ASSETS</b>		<b>65,769,243,120</b>	<b>61,910,620,642</b>
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**NET ASSETS/EQUITY**

Taxpayers/share capital		29,029,722,438	29,029,722,438
Accumulated surplus		36,739,520,682	32,880,898,204

<b>TOTAL ASSETS/EQUITY</b>	<b>NET</b>	<b>65,769,243,120</b>	<b>61,910,620,642</b>
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# STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR THAT ENDED ON 30<sup>TH</sup> JUNE, 2020

**Table 49: Statement of financial performance**

	NOTES	30.06.2021	30.06.2020
REVENUE		TZS	TZS
Fees, fines, penalties and forfeits	4	149,342,924	436,107,000
Amortization of Revenue Grants with Exchequer Revenue	5	45,818,582,150	51,274,002,000
Revenue from exchange transactions	6	9,448,865,006	7,903,218,450
Other revenue	7	5,391,193,829	2,133,342,800
Gain on foreign currency translations	13	111,934,412	659,110,000
<b>TOTAL REVENUE</b>		<b>60,919,918,321</b>	<b>62,405,780,250</b>
<b>EXPENSES AND TRANSFERS</b>			
<b>Expenses</b>			
Wages, salaries and employees' benefits	8	25,493,171,058	28,396,807,225
Supplies and consumables used	9	28,433,364,112	28,637,135,886
Maintenance expenses	10	1,532,135,952	726,551,742
Other expenses	12	33,052,536	-
Depreciation of Property, plant and equipment	23	1,563,089,180	1,434,232,534
Amortization of intangible assets	25	4,547,020	3,197,466
<b>Total expenses</b>		<b>57,059,359,858</b>	<b>59,197,924,853</b>
<b>Transfers</b>			
Grants, subsidies and other transfer payments	11	1,935,985	169,078,000
<b>Total transfers</b>		<b>1,935,985</b>	<b>169,078,000</b>
<b>TOTAL EXPENSES AND</b>		<b>57,061,295,843</b>	<b>59,367,002,853</b>

**TRANSFERS**
**SURPLUSFOR THE YEAR**
**3,858,622,478**
**3,038,777,397**

The Financial Statements for the following projects were also prepared to be audited in the reporting period:

**Table 50: Audited Project Accounts for 2020/21**

S/N	Name of Project	Auditor
1	SidaProgramme	CAG/Lindam Audit
2	DOCEHTA	CAG/Lindam Audit
3	Norhed II	CAG/Lindam Audit
4	Sparco Project	CAG/Lindam Audit
5	Danish KP Project	CAG/Lindam Audit
6	GROWNUT2	CAG/Lindam Audit

**4.18.4 Financial Ratios**

Ratio analysis is the comparison of line items in the financial statements of a business. Ratio analysis is used to evaluate a number of issues with an entity, such as its liquidity, efficiency of operations, and profitability. A few ratios have been selected here

**Table 51: Selected Financial Ratios for 2012/21**

Selected Ratio	2020/21	2019/20
Current ratio	2.4	2.5
Revenue growth	2%	5%
Assets growth	5.69%	10%
Expenditure to Revenue	93.7%	95%

#### **4.18.5 Trainings, Seminars, Workshops and Conferences**

During the year the university was able to send some accountants to various training including IPSAS and Resource Mobilization training.

#### **Government Assets Management Information System (GAMIS)**

During the year 2020/21, the University continued started the exercise to verify and bar code all its non-current assets. The purpose of this exercise was to update its fixed assets register in a bid to boost control thereof. The exercise was also purported to provide a clean database of the university's assets to be used for uploading into the Government Assets Management Information System (GAMIS). The exercise is expected to be completed by end of July 2022

#### **4.18.6 Achievements**

- (i) Clean audit report (unqualified opinion) for 2020/2021
- (ii) Successful production of the first set of financial statements from MUSE
- (iii) The University curbed expenditure to 93.7% of revenue compared to 95% previous year.
- (iv) More improvement in tax administration. VAT and Withholding Tax was collected and paid in time. All returns were filed on line.
- (v) Budget planned to be financed from the university's own sources was financed
- (vi) Timely handling of student issues and complaints

#### **4.18.4 Challenges**

The following challenges were experienced during the reporting year.

- (i) Inadequate funding of the University budget.
- (ii) Inadequate staffing in terms of number and cadres in the Directorate of Finance.
- (iii) Untimely resolution of technical MUSE issues by the partner banks and MUSE team
- (iv) Scarcity of archiving facilities for documents produced in the directorate.
- (v) Inadequate funds for CPD training.

## 4.19 External Relations and Convocation Unit

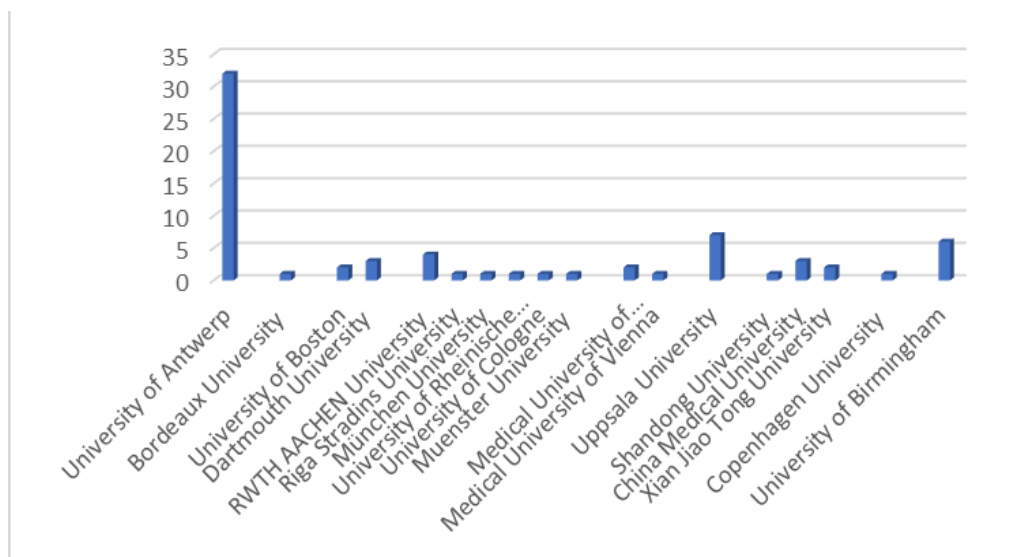
### 4.19.1 Links and Collaborations

The international students exchange activities has slowly begun to go back to normal since the outbreak of the COVID-19 pandemic. Compared to the 2020/2021 financial year in which the unit registered only 5 students; 70 elective students were received, registered and allocated in different schools in the year 2021/2022. Universities have started to open their study abroad programs and find ways to exist amidst the ongoing COVID-19 pandemic.

### 4.19.2 Elective Study Activities

In this financial year, the unit received applications from individual elective students, as well as from international coordinators of study abroad programs from home universities. Most of the students who came for electives were from the University of Antwerp (see figure 31).

Most universities where the elective students came from have a formal agreement with MUHAS. These universities have a pre-determined period that is more or less fixed to start the rotations, and specific places where they can do their elective.



**Figure 34: Number of elective students according to the university where**

### they came from

MUHAS received applications from coordinators of elective students from different universities that have an MOU with MUHAS. The following number of students came to MUHAS under such agreements:

- A group of 32 students from University of Antwerp in Belgium did 5 to 8 weeks clinical rotations at different departments in the school of medicine.
- University of Dartmouth in the United States of America (USA) sent 3 students to the School of Medicine who rotated in the Internal Medicine, Paediatrics and Child Health departments.
- The University of Boston, USA sent 2 students to the School of Medicine. They rotated in the Internal Medicine, Paediatrics and Child Health departments.
- The School of Medicine also received 1 student from Uppsala University under the Linnaeus – Palme Exchange agreement.

#### 4.19.3 Student Initiated Elective Study Arrangements

Thirty-two students applied for the elective studies individually.

#### Elective study students

In this reporting period **70** elective students were registered at MUHAS, majority of them in the school of medicine. Some of them rotated in more than one department (in the School of Medicine). As seen in table 30, the department of Surgery received most of the students (26), followed by the Obstetrics and Gynaecology department (22)

**Table 52: Total number of non-exchange and exchange students in MUHAS  
Departments: July 2021 to June 2022**

Department / School	Non-Exchange	Exchange	Total
Obstetrics &Gynaecology	9	13	22
Paediatrics& Child Health	4	11	15
Surgery	12	14	26
Internal Medicine	3	6	9

Psychiatry.		1	1
Orthopedics & Trauma		7	7
Emergency Medicine	5	2	7
School of Dentistry	5	0	5
School of Public Health		1	1
<b>Total</b>	<b>38</b>	<b>55</b>	<b>93</b>

**NB:** Some of the students in the School of Medicine rotated in more than one department.

#### 4.19.4 Student Exchange Activities

The ongoing (active) collaborative research and student exchange agreements include:

MUHAS and North South - South Higher Education Network Programme (school of Public Health and Social Sciences); Global Education in Medicine Exchange (GEMx); UMCG/FMS – Groningen University, Netherlands (School of Medicine); HAN University of Applied Sciences (School of Nursing); Wrights State University (University); The St. Radboud University College Holland (Community Medicine), UCSF (DCEPD); Mie University, Japan (Paediatrics and Child Health); University Medical Centre, The Netherlands (School of Medicine); The Linnaeus-Palme student and staff exchange program (University); The University College of London (School of Medicine); and University of Antwerp (UA) and National Institute for Medical Research (NIMR).

#### 4.19.5 Immigration support for students and staff coming to MUHAS

As per the Immigrations guidelines of Tanzania, foreign students and staff coming to MUHAS for studies or research activities are now advised to apply online (Tanzania immigration website) before coming to Tanzania. Students and staff planning to stay for less than 90 days are advised to get an ordinary visa while those planning to stay for more than 90 days to 2 years are advised to get a student pass for students; and a resident permit for staff.

#### 4.19.6 Convocation Activities

As it is customary to have MUHAS convocation 2 days before the MUHAS graduation each year, this year MUHAS through the office of External Relations and Convocation Unit held its first **MUHAS Alumni day** on 02<sup>nd</sup> December 2021 with the theme “Fitness for Health” as convocation celebrations.

The aim was to invite all MUHAS alumni to their home, have them socialize and mingle with their peers, have time to go through the university premises to reminisce about the good old days, and be reminded that they need to unite for a common goal –to make MUHAS bigger and better. The day started at 8 am and ended at 6pm, being celebrated with a range of different activities including a panel discussion, health check and various sports. A total of 160 alumni members participated



**Figure 35: Prof. Charles Mgone, chair of MUHAS convocation, giving his welcoming remarks**





**Figure 36: MUHAS football team, just before starting the football match**

#### **4.19.7 Income generation**

In the current financial year, the unit generated a total of **55,030 USD** and **4,563,400 TZS** from the student activities.

**Table 53: Income generation**

	<b>Amount (USD)</b>	<b>Amount (TZS)</b>
APPLICATION FEE	1,180	140,000
REGISTRATION FEE	5,900	700,000
TUITION FEE <sup>46</sup>	46,450	3,723,400
RESEARCH SUPERVISION FEE	1,500	
<b>TOTAL</b>	<b>55,030</b>	<b>4,563,400</b>

## Appendix I: Projects Progress Report During the reporting period (July 2021 July 2022)

No.	PI Name	Project Donor/Collaborator	Project Title	Progress Report
1	Dr. Beatrice Mwilike	Hiroshima University	Development and Evaluation of the Simple & Easy Antenatal Education Using a Mobile Phone Application in Tanzania	Good progress, completed intervention and outcome evaluation data collection. Undergoing data analysis. Currently planning for phase 2 of the study which will also involve PhD trainee.
2	Dr. Clara Chamba	University of Oxford	Evaluation and Transfer of mobile whole slide tissue scanners and liquid biopsies to deliver fast and precise diagnosis for improved outcomes of children and young adults with EBV-driven lymphoma: a joint Tanzanian and Ugandan Paediatric Oncology Network Initiative	Phase I completed, phase II started, data collected on 300 patients, sequencing done on 100 samples, Four manuscripts in the write-up stage.
3	Dr. Clara Chamba	International Working Group of Chronic Lymphocytic Leukemia and the University of Oxford	Capacity building in research and management of CLL in Tanzania	Curricular development for training of healthcare workers on the management of CLL, Funding for 3 MSc by research, ethical clearance received for study to assess TP53 mutation status in CLL in Tanzania.

4	Dr. Dickson Mkoka	University of Minnesota	Sexual Health Training for Health Professional Students	Data collection for both control and intervention group of the sexual health competencies completed; training for both control group and intervention group completed; Data analysis and manuscripts writings are in progress
5	Dr. Dickson Mkoka	Stitching Hanzenhoge School Groning	Health Literacy competencies tor improve respectful compassionate care in Tanzania(HEALCARE)	Development of training materials for Training Faculty, Clinical Instructors and Students on Health Literacy competencies to improve customer care and respectful compassionate care completed; Data collection for baseline survey (both quantitative and qualitative data) completed; analysis of data are in progress
6	Dr. Doreen Kamori	Kumamoto University	Research Support for Microbiology Department	MUHAS through the department of Microbiology & Immunology have received ABI 3500 Genetic Analyzer. The department have also received in May 2022 several other lab equipment including FAS-Digi Gel viewer + Camera (DMC LX 100), Gel electrophoresis system Atta-AE-813-II 300 (three units), Mettler Toledo Seven Easy pH meter S20, Falcon Express Pipette dispenser and Semi-Micro Analytical Balance GH-202.
7	Dr. Edwin Kayombo	University of Aberdeen	Developing Effective Rodent Control Strategies to Reduce Disease Riskin Ecologically and Culturally Diverse Rural Landscapes	Ethical clearance written, correction done and submitted -completed, Training of on how data is to be collected- completed, KAP questionnaire to the communities including traps – completed, Meeting on progress of project fortnights done, Data collection by use of focus group discussion if on progress, Meetings with communities leaders and Leaders of NGOs is in progress
8	Dr. Elisha Osati	National Research Foundation	Engaging Swahili-Speaking Communities to Access Covid-19 Factual Information Through Use of Digital Media	The project is moving toward the end . We have accomplished all objectives. We have already submitted reports twice to NRF as per the MOU. We received \$7, 924.00 twice as per agreements. We are waiting for the \$ 3, 962.00 for project evaluation and final report preparation

9	Prof. Emmanuel Balandya	NIH	SPARCO-Tanzania	Ethical clearance for the Malaria Chemoprophylaxis study has been obtained from MUHAS IRB. Two articles have been accepted for publication; (1) Ambrose E.E, Kidenya B.R, Charles M, Ndunguru J, Jonathan A, Makani J, Minja I.K, Ruggajo P, Balandya E. Outcomes of hydroxyurea accessed via various means and barriers affecting its usage among children with Sickle Cell Anaemia in North-Western Tanzania. Journal of Blood Medicine, 2022 (accepted); (2) Tutuba H, Jonathan A, Lloyd W, Luoga F, Masuma U, Marco E, Makani J, Ruggajo P, Kidenya B.R, Minja I.K, Balandya E. The Efficacy of Maternal Health Education and Maternal Screening on Knowledge and The Uptake of Infant Screening for Sickle Cell Disease in Dar-Es-Salaam, Tanzania; A Quasi Experimental Study. BMC Public Health, 2022 (accepted).
10	Dr. Ester Steven	Grand Challenge Canada	Violence against Women and Girls in Public Transportation in Dar es Salaam	We have designed and adapted a mobile app called Njiani app which will be used to report cases of Gender-Based Violence by women using public transport. We conducted a one-month qualitative/pilot study; which involved 30 participants from 3 universities i.e. MUHAS, HKMU and UDSM. Pilot participants were asked to use the app for a total of 2 weeks, and were divided into unpaid group (15 users) and paid group (15 users); who received training and payment contingent on a minimum weekly submission of perception records. A total of 35 incident records were submitted, which translates into a total of 903 incident records per year. As a comparison, in 2017, only 173 cases of sexual harassment were officially recorded by the police in Dar es Salaam.

11	Dr. FadhunAlwy	University of Birmingham	E-MOTIVE	Baseline data collection continued between June 2021 and March 2022 in all 12 facilities that are participating in the study. All facilities were randomized in February 2022; half were allocated to intervention and a half to the control arm. All intervention facilities (six) received the intervention bundle between March and May 2022. We are currently continuing with post-intervention data collection. In addition, observations are ongoing for all study sites, and a parallel process evaluation with interviews and an online survey will be carried out in November 2022. Collected data for 33,703 deliveries, and 3299 women developed postpartum haemorrhage (9.8%). Intervention facilities were 9.2%, and control facilities were 12.4%. The primary outcome of severe postpartum haemorrhage has reduced in the intervention arm, pending more analysis. Worked with the availability of medical supplies and equipment and working towards strengthening individual facilities' capacity to navigate procurement systems for maternity care supplies and medicines.
12	Dr. Mbwanbo/Dr. Jessie Linda Mlunde	NIH/RTI	Improving HIV treatment outcomes for people who use drugs	Intervention to address drug use stigma has been implemented, baseline and end-line data have been collected from people who use drugs and HIV care and treatment clinics staff.
13	Dr. Joseph Otieno	COSTECH Research Funds	Upgrading Instrumentation for Herbal Formulation Research Training Laboratory at MUHAS to Spearhead Industrialization	Procurement of research instruments is ongoing and supposed to be finalized in December 2022
14	Dr. Joseph Otieno	National Museum of Kenya	Conservation of Osyris lanceolata in Tanzania and Kenya	The project is finalized. We are waiting for final disbursement 30% that was promised to be released after submission of the final report. Final report is already submitted to CITES but funds is yet to be paid

15	Dr. Lulu Chirande	Baylor College of Medicine Foundation	Splenic function in sickle cell disease	All ethical approval for the study has been obtained, all reagents have been purchased. The study will begin in November 2022.
16	Dr. Lulu Chirande	The American Society of Haematology	Newborn Screening and Early Intervention For Sickle Cell Disease in Tanzania	We screened 11966 children for SCD. Health education and results dissemination provided to all caregivers. Feedback report and training conducted to all healthcare workers who are screening children for SCD. Conducted a health education among caregivers and healthworkers.
17	Dr. Lulu Chirande	Texas Children Operating	Global HOPE-MUHAS Paediatric Haematology and Oncology Fellowship Programme	6 PHO Fellows on board, hired 6 staff, 1 PHO Specialist from Uganda hired to support the training program. We received 4 consignments of chemotherapy and supportive medication. Conducted 4 outreach activities to raise awareness on childhood cancer and blood disorders. Supported patients with SCD access to the investigation.
18	Dr. Maryam Amour	UNICEF	COVID-19 vaccines acceptability and associated factors among healthcare workers in Tanzania	We conducted a study to determine COVID-19 vaccines acceptability and associated factors among healthcare workers in Tanzania. The study was conducted among 1370 HCWs in 7 regions in Tanzania. The uptake of vaccine was 53%. The results of the study disseminated to the key stakeholders (Ministry of Health, IVD, Professional Association, RMOs, DMOs, UNICEF, implementing partners) was on 16th of December 2021. Final report submitted to UNICEF in December 2021. Three manuscripts submitted for publication.
19	Dr. Mrema Kilonzo	NIH/Duke University	Acceptability of an Internalized Stigma Reduction Intervention among Women Living with HIV in Tanzania and Rwanda	During the period reporting period, the study managed to culturally adapt an intervention that aims at reducing HIV stigma among women. We also managed to collect data for tool validation. The study was closed on March 2022.

20	Dr. Mrema Kilonzo	NIH/Duke University	Efficacy Testing of a Culturally Relevant stigma Intervention in WLWH in Tanzania	This study started in September 2021, during this period of reporting, we managed to get ethical approvals from both MUHAS and NIMR. All final preparations of the intervention and research took place including selection of sites. Next Steps: Holding a Community Advisory Board meeting with local stakeholders, study team will be trained on the data collection procedures and will start data collection in the urban site. This will be followed by the intervention for five weeks then follow up surveys 30, 90 and 180 post intervention.
21	Dr. Mrema Kilonzo	ForagatyInternational Center/AHISA	Using implementation science research to reach out-of-school, vulnerable AGYW in Tanzania with HIV prevention and livelihood training	We managed to collect qualitative (n=12) and quantitative data (n=42) during the period of reporting. We did follow up AGYW after two years of intervention to evaluate challenges they faced. We managed to conduct a booster training on business and health focusing on norm change.
22	Dr. Mrema Kilonzo	ForagatyInternational Center/AHISA	Using Implementation Science Research to Link Stakeholders and Vulnerable AGYW in Tanzania with HIV prevention and livelihood training	This study started in April 2022. We have started with mapping and visiting of stakeholders that support AGYW. We have developed tools for measuring support. We are planning to start bootcamp early 2023.
23	Dr. PillyChillo	University of North Carolina	Investigation of rheumatic AF Treatment Using vitamin K antagonists, ribaroxaban or aspirin Studies (INVICTUS)	Final data collection is on-going. Manuscript for the main results prepared and submitted for publication

24	Dr. PillyChillo	GSK	Preganancy-Related Cardiovascular Disease in Tanzania	The research has been finalized
25	Dr. SalumLidenge	NIH	Plasma and Cellular Immune Biomarkers of Kaposi's sarcoma in HIV-1 Suppressed Patients	1. Ethical clearances have been renewed from NIMR, Muhas and ORCI. 2. Refresher training has been conducted on the study protocol and good clinical and lab practices. 3. 133 of 160 participants have been recruited. Two additional CTC sites have been included and trained on early signs of KS and early referral KS cases. 5. Career development activities are ongoing 6. Data analysis is ongoing.
26	Dr. SalumLidenge	NIH	Longitudinal characterization of anti-SARS-CoV-2 antibody responses in cancer patients	1. Ethical clearance has been obtained. 2. Participants and samples have been collected, 60 of 60 participants recruited. 3. One paper published, 1 paper submitted, additional data analysis is ongoing.
27	Dr. SianaNkya	The American Society Heamatology	ASH Global Research Award	1. Enrolment: Completed at 150 patients followed for three months. 2. Laboratory assays: Completed: HPLC, FBP, Flow cytometry, Ongoing: Gene expression and sequencing
28	Dr. SianaNkya	NIH	The role of HbF decline and its determinants on Sickel Cell Disease expression in the first three years of life	1. Enrolment: 250 babies 2. Follow up visits: V1: 248, V2: 225, V3: 188, V4: 160, V5:141, V6: 77, and V7: 40. 3. Laboratory tests performed: HPLC, FBP, Flow cytometry, Reticulocytes enrichment, separation and archive 4. Training support: Two MSc students supported, 1 BMLS student 5. Manuscripts: 1 manuscript published, 1. addressing reviewers comments, 2 under review



29	Dr. SianaNkya	ICGEB International	Comparative study of Sick Cell Disease (SCD) modifiers in Ghana, Nigeria and Tanzania	<ol style="list-style-type: none"> <li>1. Ethical clearance: granted for year Two</li> <li>2. Transfer of funds to Ghana and Nigeria for year two completed.</li> <li>3. Submitted and approved progress report for year 2, funds for year 3 received</li> <li>4. Completed recruitment in Tanzania 108 patients, Ghana 60 patients, and Nigeria 100 patients.</li> <li>5. Finalizing procurement of lab reagents/consumables for haplotyping and sequencing</li> </ol>
30	Prof Karim Manji	WHO	Optimizing place of treatment and antibiotic regimens for young infants presenting with 2 or more signs of clinical severe infection or any single high-mortality -risk sign of clinical infectious. PSBI	The study is ongoing. There are 2 components of the study. The RCT 1 for Low mortality signs : 70% recruitment done. RCT2 is Moderately Mortality Signs, we have 60% recruited. We envisage to complete the field activities sometime in June 2023.
31	Prof Said Aboud	EU/Imperial College of Science, Technology and Medicine	A combination efficacy study in Africa of two DNA-MVA-or DNAEnv protein HIV-1 vaccine regimens with pre-exposure prophylaxis (PrEPVacc)	A total of 283 participants were screened and 100 were screened out because of various reasons of ineligibility. One hundred seventy four out of targeted 175 participants have been enrolled to date in the PrEPVacc trial. Follow up of enrolled participants is ongoing and it will continue until December 2024.
32	Prof. Bruno Sunguya	ICAP- Columbia University	Biobehavior survey among key populations for HIV	Data collection, data cleaning, data analysis, summary sheets preparations, and preliminary dissemination completed by the contract due date (30th September 2022). This was a service agreement contact that ended on 30th September 2022.

33	Prof. Bruno Sunguya	NIH/UCFS	Programatic Assessment to Inform The Scaling up of U=U Intervention and COVID-19 Vaccine Uptake among People Living with HIV and Health Care Workers in CDC-Supported HIV Care and Treatment Centers in Tanzania.	Data collection, data cleaning, data analysis, and draft report completed by 30th September 2022. Awaits comments from the funder.
34	Prof. Hendry Sawe	Laerdal Foundation	The Magnitude, Aetiology and Outcomes of Patients Presenting with Respiratory and Critical Illnesses in Selected Hospitals in Tanzania	Data collection was completed and phase I of study has ended
35	Prof. Hendry Sawe	NIH/UCSF	University of California Lauching Future Leaders in Global Health Research Training Program	Data collection is ongoing.
36	Prof. Hendry Sawe	Liverpool School of Tropical Medicine	Multimorbidity-Associated Emergency Hospital Admissions: A “Screen and Link” Strategy to Improve Outcomes for High-Risk Patients in Sub-Saharan Africa	Applications for prospective fellows are open and candidates are applying.
37	Prof. Hendy Sawe	MAHIDOL Oxford Tropical Medicine	Respiratory and Critical Care Registry	Pilot is currently underway, and refining will be done after early results

38	Prof. J. Makani	University of Capetown	H3ABioNet: a sustainable African Bioinformatics Network for H3Africa	Data collection for this phase of study has ended.
39	Prof. Japhet Killewo	Ku Leuven University (VLIR-UOS)	Strengthening and Transdisciplinary Patient Centered Approach for the Prevention of HIV Drug Resistance in Dar es Salaam (SI)	This study was called South Initiative or small initiative which was meant to be a starting point for continued collaboration with Belgian universities to find causes of HIV drug resistance. The study ended in 2020 but due to COVID 19 pandemic we were granted a no-cost extension to complete the work.
40	Prof. Japhet Killewo	Ku Leuven University (VLIR-UOS)	Strengthening and Transdisciplinary Patient Centered Approach for the Prevention of HIV Drug Resistance in Dar es Salaam (JOINT)	This study was called JOINT as a joining link to the previous SI project which was meant to be a continuation of the collaboration with Belgian universities to find causes of HIV drug resistance and to study the last mile of the HIV drug resistance and to identify key indicators of HIV drug resistance. This study ended in August 2022 and gave way to a new project called TEAM funded by the same donor
41	Prof. Japhet Killewo	Ku Leuven University (VLIR-UOS)	HIVDR-Prevent: Design and evaluation of interventions for preventing HIV drug resistance in Dar es salaam urban cohort study (DUCS) area in Tanzania, using a transdisciplinary human centered approach (TEAM)	This study is an upgrade of the JOINT project and the SI project which is called TEAM. It started on 1st September 2022 and will continue for five years until 2027. Still a collaboration with Belgian universities to measure key performance indicators and to implement interventions and to test their effectiveness. It will also strengthen capacity of MUHAS through PhD and Masters training.

42	Prof. Japhet Killewo	Harvard School of Public Health and Africa Academy of Public Health	Dar es Salaam Urban Cohort Study	This study started in 2011 to collect accurate and reliable data from Ukonga and Gongolamboto wards of Ilala, Dar es salaam. It is currently a research platform that nests several studies on NCDs, Demographic Dividend, Nutrition and HIV drug resistance. There are more than 100,000 individuals being followed up for health and demographic surveillance. The Platform will continue to exist as long as there are nested studies to be nested within it. It aspires to be a centre of excellence for population studies in future.
43	Prof. Japhet Killewo	Mastercard Foundation (USA and Canada) and Tufts University, USA	Youth Economic Participation Initiative - Solve the Equestion East Africa (YEPI-SEE)	This project started in 2013 to develop and integrated entrepreneurship content into existing university curriculum and to run short causes for staff and other interested parties as part of corporate responsibility of the university. The project started a business incubation centre for various products such as ice cream, milk and milk products etc as an attempt to sustain itself after donor withdrawal in 2017. To date the project is still running the incubation centre with occasional short courses using funds generated from the centre.

44	Prof. Julie Makani	NIH	SPARCO Hub	<p><b>Management and Sustainability:</b> Ongoing recruitment of project team. Ongoing Project Audit preparations for Y5 and preparations for the FFR reports are ongoing Y5. Ongoing monthly management project consortium meetings. Submission of Interim RPPR for Phase 1 and the Y5 RPPR done and Y6 grants secured. Site visits to new sites have been completed and project personnel participated in the 77th UNGA summit in New York in September for high-level engagements and partnerships. <b>Data:</b> Enrollment numbers into the registry, by September a total of 6,441 patients have been registered for phase II. Conducted a database workshop which resulted in a number of drafted SOPs on data management and data management plan. Contribute to the development of consortium-level research protocols on aspects of data collection and management. Conducted site visits to the new sites (Uganda, Mali and Zimbabwe) to assess their server infrastructure and implementation of data management plans. Attended and chaired database working group meetings every month. One-to-one orientation meeting with sites on SickleInAfrica data dashboard orientation is ongoing. <b>SoC:</b> Standards guidelines developed in SPARCo 1, shared and the last batch of guidelines submitted for internal review and branding and publication of Standardized Guidelines is ongoing. <b>Research:</b> Coordinated research activities across the consortium. Coordinated and contributed to the development of protocols for the consortium-level projects. Attended and chaired research working group meetings. Conducted site visits to the new sites (Uganda, Mali and Zimbabwe) to evaluate the status of plans and capacity to implement and sustain SickleInAfrica research studies and related activities. Designed research coordination tools such as research tracker and reporting template. Provided expertise on cohort and implementation studies expertise to the cross-consortium studies. Coordinated and contributed to the development of cross-consortium studies SOPs. <b>Skills:</b> Development of curriculum for Essentials of Project Management to the level of stakeholder meeting.</p>
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45	Prof. Karim Manji	The World Health Organization	Nutritional Management of Moderate Wasting in Children 6-26m of Age with acute illness	The NUTRIMAM study has 3 arms. The Locally Available Foods, The Ready to Use Supplemental Food, and the Microbiome Directed Supplemental Food. The study has started a Formative component. The regimens have been piloted. There are number of hurdles , including shipment of the pre-mix MV and Minerals from WHO, and availability of space for MDSF manufacture. ( We are forging ahead with discussions with NHC and MUHAS for housing). We expect to start the field activities early January. 2023.
46	Prof. Karim Manji/Prof. Said Aboud	MDH/TH Chan Harvard SPH	TOV5 Design: Randomized, double-blind, placebo-controlled trial of Vitamin D supplements for HIV-infected pregnant women (ALL on ART due to Option B+)	The main maternal and perinatal outcome study has been completed. Protocol Paper has been published. The Main study Outcomes published and the Microbiome paper published in Lancet group: E Biomedicine. This study was administered by MDH . It is now completed. <a href="https://pubmed.ncbi.nlm.nih.gov/28870263/">https://pubmed.ncbi.nlm.nih.gov/28870263/</a> <a href="https://pubmed.ncbi.nlm.nih.gov/35427363/">https://pubmed.ncbi.nlm.nih.gov/35427363/</a> <a href="https://pubmed.ncbi.nlm.nih.gov/36130475/">https://pubmed.ncbi.nlm.nih.gov/36130475/</a>
47	Prof. M.T.Leshabari	University of OSLO	Strengthening of Doctoral Education for Health in Tanzania (DOCEHTA)	The postgraduate room has been renovated and inaugurated two weeks ago. Only 21 computers out of the proposed 30 have been purchased. Four out of the proposed eight foundation courses have been developed and two have already been conducted. PhD supervisors will be trained next year. Support for PhD students is in progress and four have been identified. Development of communities of learning is in progress. Facilitation of international accreditation of PhD Program is in progress
48	Prof. Muhsin Aboud	NIH/ Dartmouth College	DMRET- Dartmouth-MUHAS Research Ethics Training Programme	The project is in the third 3 <sup>rd</sup> year with no cost extension. MBE students training continues with the DMRET grant support. Efforts to reapply for next funding continues

49	Prof. ProgestineMuganyizi	London School of Hygiene & Tropical Medicine	Tranexamic acid for reducing postpartum bleeding in women with anaemia: An International Randomized Double-Blind, Placebo Controlled Trial (Woman-2 Trial)	Project is ongoing with 498 women randomised at four sites: MNH, Mwananyamala Hospital, Dodoma Hospital and Mount Meru Hospital. One site (Mbeya Zonal Referral Hospital) was closed due to paucity of Anemic cases. Three new sites have been added but not yet started recruitment. These are Tumbi Hospital, Amana Hospital and Temeke Hospital. So far no SAEs, SARs and SUSARs have been reported.The duration of trial has been extended to 31 October, 2024
50	Prof. David P Urassa/Prof. Bruno Sunguya	The trustee of the University of pennsyvan	Educating and Developing Bioethicists in Tanzania (ENGAGE)	Three PhD candidates were selected during Year 1 of the project. The candidates are fully registered and collecting data. Three more were selected in Year 2 of the project and are currently working on their proposals for ethical clearance
51	Prof. Eligius Lyamuya	North Western University	The Centre for Innovation in Point of Care Technologies for HIV/AIDS at Northwestern University (C-THAN)	b. Progress: Project now in year 5. During the reporting period (July 2021 to June 2022) the following were accomplished: <ul style="list-style-type: none"> <li>• The MUHAS site PI attended the fourth Annual C-THAN symposium that was held virtually on 3rd and 4th March 2022. The meeting received and discussed Clinical Core updates.</li> <li>• The site disseminated the C-THAN solicitation 2022 Award Competition in February 2022: Development of Point-of-Care Testing for HIV and Co-Morbidities for Use in Low- and Middle-Income Countries to as many as possible potential stakeholders in Tanzania.</li> <li>• In response to the Solicitations for 2022, innovative students were supported to prepare and submit an expression of interest (EOI) titled “Developing an Artificial Intelligence (AI) based Algorithm for Screening of Cervical Cancer among Women Living with HIV/AIDS at point-of-care in Lower- and Middle-Income Countries”. This EOI was selected for full proposal development. A full proposal was developed and submitted on 16th May 2022. The proposal was selected for award of US \$50,000/-. The project is now processing the grant award procedures ready for implementation.</li> </ul>

				<ul style="list-style-type: none"> <li>• During the reporting period the site participated in needs assessment discussions with North Western University partners:</li> <li>-The site held needs assessment discussions with US team coordinated by Kara Palamountain on 9th March 2022 on newly developed concepts for concepts for Hepatitis B and C as well as Cervical Cancer Screening.</li> <li>- Participated in the C-THAN Site Assessment Survey and submitted report for the MUHAS site on 24th May 2022.</li> <li>c. Plans:</li> <li>• To continue with stakeholders needs assessment discussions with North Western University partners to provide inputs that can facilitate finalization of development of new POC technologies as well as inputs for commercialization.</li> <li>• To continue engaging stakeholders in Tanzania to submit proposals in response to the Solicitation calls disseminated annually by C-THAN and continue disseminating C-THAN funding opportunities</li> <li>• To continue collaborating with the University Biorepository Committee to develop a plan for establishing a centralized Biorepository facility at MUHAS new University Campus.</li> <li>• To collaborate with the MUHAS Unit of Biomedical Engineering in developing the Artificial Intelligence Research Laboratory for the University</li> <li>• To conduct field-testing of newly innovated POC technologies whenever opportunities arise.</li> <li>• To work with the MUHAS Unit of Biomedical Engineering to develop Continuing Education and Professional Development short course for POC Technologies.</li> </ul>
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52	Prof. GastoFrumence	Billy and Melinda Gates Foundation	African leadership and management Training for Impact in Malaria-eradication (ALAMIME)	The project completed the training of the first cohort of 20 Malaria control coordinators from all three administrative levels in the country (national, regional, and district). Furthermore, we developed and registered a short course on leadership and management for malaria elimination at the University (MUHAS). The course was officially accredited on 14.09.2022.
53	Prof. Andrea Pembe	European Union	Action Leveraging Evidence to Reduce perinatal mortality and morbidity in sub-Saharan Africa (ALERT)	Preliminary data collection was done and a co-design intervention developed. We have enrolled the first two hospitals and the third will be in January 2023 and fourth July 2023. The field work is expected to be completed by 2024. Three protocol papers have been published and one paper from the dta collected.
54	Prof. Andrea Pembe	Clinton Health Access	Reproductive Health Implementation Research (RHIR)	This study was postponed due to COVID-19 pandemic. We are about to re-start after signing a new contract.
55	Prof. Andrea B. Pembe	Harvard School of Public Health	Demonstrating Non-Inferiority of Lower dose (500mg) calcium supplementation during pregnancy for reducing pre-eclampsia and neo-natal outcomes	The project is in its final year. Planning to request for a No Cost Extension to complete activities
56	Dr. KasusuNyamuryekung'e	NIH/ University of California San Francisco	Determinants of provision and utilization of tooth fillings in a low-income setting	This project is now completed. All planned activities have been carried out, and a scientific manuscript published. Nyamuryekung'e, K. K., M. M. Mlangwa, and B. W. Chaffee. "Perceived Patient Barriers to Tooth-Retaining Treatment in Tanzania." JDR Clinical & Translational Research (2022): 23800844221121262.

57	Dr. KasusuNyamuryekung'e	UNICEF	Implementation Research Collaboration on Community Based Health Systems (UNICEF CHW)	The first phase of the implementation project has been carried out, followed by dissemination of the results and recommendations to both regional (Kigoma) and national (Dodoma) stakeholders. Furthermore, the first institutional Implementation Research Symposium was carried out in September 2022. Currently, two scientific manuscripts are in their final stages of development.
58	Dr. Joyce Rose Masalu	Miracle Corners of Tanzania	Oral diseases, conditions and associated factors among Tanzanians: A National Pathfinder Survey	This project has been completed
59	Prof. OmaryMinzi	Karolinska Institute	EDCTP PROFORMA	Ongoing. One master student (mrMasunga)mrecruited in 2019 from TMDA graduated in pharmacovigilance and pharmacoepidemiology in September, 2022 at the University of Nairobi, The PhD candidate (Mr Adam Fimbo) also from TMDA has published one paper and has submitted 2 manuscripts for review to Journals. He plans to graduate in August 2023
60	Prof. Elia Mmbaga	University of Oslo	Pragmatic Trial for HIV Pre-exposure prophylaxis Roll Out in Tanzania	Development and testing of the Jichunge mHealth app was completed and provided to study participants in the intervention region of Dar es salaam. Baseline, 6-months and 12- months follow up data collection havd been completed in Dar es salaam ( Imntervention site). Basline and 6-months data collection have been completed in the control region of Tanga. 12-months follow up in Tanga is planned to start in April, 2023. Four (4 PhD students were recruited and progressing with their studies. One master student has completed his degree at the University of Oslo. Eleven (11) conference presentation and 2 papers have been published in the internetal peer review journal.

61	Prof. Elia Mmbaga	NIH/ University of California San Francisco	Cancer Research Training Programme (CRTP-TZ)	Three PhD students have been recruited and are attending courses at UCSF as part of their first year of the programme. Two cohorts of clinician track have been recruited and received training at UCSF and all are implementing pilot small project awards. Two cohorts of MMed track have been recruited. First MMed track cohort received Work in Progress (WIP) seminars and the second cohort attended orientation seminar in November, 2022.
62	Prof. Elia Mmbaga	NIH/University of California San Francisco	Breast Cancer FNA	Baseline recruitment of breast cancer patients at ORCI have been completed and follow up is ongoing to be completed in June 2023. Data entry and cleaning on going.
63	Prof. Simon Mamuya	University of Bergen	Safe Working Conditions By Innovative Research and Education (SAFEWORKERS)	5 PhD student were fully registered at MUHAS most of them are in the data collection and analysis AND 2post Doc were registered and were in data collection.Mid annual meeting involving scientific and management was held in May 202 in Dar es Salaam and November 2022 in Bergen Norway

64	Prof. Gideon Kwesigabo	NIH	To Reach the People: Transforming Health Professions Education in Tanzania (THET)	The project is going on well, its in its five year of implementation and the last year. The harmonized curricula for Medicine and Nursing programs were developed, accredited and started to be implemented in the three consortium institutions (MUHAS, CUHAS &KCMUCo). Benchmarks of the curricula were developed and endorsed by TCU as national benchmarks for training Doctors and Nurses. Curriculum implementation monitoring tool is currently being developed. Uploading course materials to LMS is ongoing and on differently level of completion the 3 institutions (the targeted 30% of the courses). Faculty and students are continued to be trained on the use of e-Learning through the LMS platform. 1st & 2nd cohort of 12 faculty each trained as Trainers of Trainers (HPEG) for faculty development. Two Health Professions Education units at CUHAS and KCMUCo. 1st & established. The 1st cohort of HPEGs have developed and are finalizing the inter institutional educational research projects. 1st & 2nd cohort of 12 Young Research peers (YRP) each established and continued to be mentored on inter-professional and inter-institutional research collaborations by Senior research leaders. Several stakeholders involved in dissemination activities. The installation of the alumni tracking system the 3 institutions is completed. So far 10 papers have been published (7 from the YRP)
65	Abdallah Zakaria	COR-NTD through ARNTD	Development and validation of dried urine spot method for detection of <i>Schistosoma</i> circulating antigens from a resource limited archetype in Tanzania	Completed
66	Dr. Nahya Salim Masoud	Ada Health GmbH	Ada Health CWR Evaluation	Data collection completed in 2022. Analysis is ongoing and we are expecting to present initial results at Reuben Collage, University of Oxford march 2023. Protocol papers have been published

67	Dr. Billy Ngasala	University of North Carolina	Trans from Submicroscopic Malaria in Tanzania (TranSMIT)	The project is on the fifth year of implementation mainly with molecular analysis and data analysis
68	Dr. George MugambageRuhago	Palladium International LTD	Activity Based Costing and Management of HIV Tanzania	Final Report submitted and the project is over
69	Dr. George MugambageRuhago	Guttmacher Institute	Capacity Building on Costing Post abortion care in Tanzania	Contract Signed
70	Dr Helga Naburi	World Health Organization	Care of the small babies (including kangaroo mother care) in the covid-19 Pandemic: a multicountry survey and qualitative analysis	<p>The primary objective of the study is to determine the barriers and enablers for optimal care for the small baby (including KMC) during the COVID -19 pandemic and the secondary objective is to develop feasible and effective solutions to facilitate the recommended care for the small baby during the COVID-19 pandemic</p> <p>Progress by <b>June 2021:</b> Ethical clearance had been obtained from MUHAS, awaiting ethical clearance from NIMR, meanwhile preparations for Data collection were in place.</p>

71	Dr. Helga Naburi	World Health Organization	Immediate Kangaroo Mother Care	<p>Primary objective: To measure the effect of continuous KMC initiated immediately after birth on post-randomization mortality during the first 72 hours of life and during the neonatal period, compared with continuous KMC initiated after stabilization, in infants with birth weight 1.0 to &lt;1.8kg born in hospitals of low- and middle-income countries.</p> <p>Secondary objectives: To determine the effect of the intervention on time to stabilization, risk of hypothermia, risk of infection during hospital stay, weight gain, time to hospital discharge, time taken to reach full breastfeeding, and exclusive breastfeeding at the end of the neonatal period.</p> <p>Recruitment started on 5th February 2018 and stopped by DSMB in January 2020 because of benefits after enrolling .80% of the targeted sample. Main paper: was published July 2021 in New England medical journal; WHO Immediate KMC Study Group. Immediate “Kangaroo Mother Care” and Survival of Infants with Low Birth Weight. New England Journal of Medicine. 2021 May 27;384(21):2028-38.</p>
				<p>Dissemination in various forums locally and globally is ongoing including a recent presentation to the 7th MUHAS scientific conference 27th July 2021, the NEJM Resident 360 online discussion forum (18 -25 June 2021), MOH TWG for maternal and child health and the WHO Series 3- Webinar 17: New evidence on Kangaroo Mother Care (21 July 2021)</p> <p>Analysis has been completed and the main paper published in NEMJ in June 17<sup>th</sup> 2021. At the moment data analysis is ongoing for secondary papers.</p>

72	Dr. Helga Naburi	World Health Organization	The follow-up study to evaluate the impact of continuous KMC initiated immediately after birth compared to KMC initiated after stabilization in newborns with birth weight 1.0 to <1.8 kg on their neurodevelopmental outcomes in low-resource setting	<p>“The follow-up study to evaluate the impact of continuous KMC initiated immediately after birth compared to KMC initiated after stabilization in newborns with birth weight 1.0 to &lt;1.8 kg on their neurodevelopmental outcomes in low-resource settings”.</p> <p>Primary objective of the sub study is to assess the impact of immediate KMC on neurodevelopmental impairment by 2 years of age. Specifically, this includes risk of cerebral palsy, hearing impairment, vision impairment, mental and motor impairments, and epilepsy, assessed using standardized assessments.</p> <p>Secondary objectives include assessing growth, mortality and morbidity (assessed by hospital admissions) beyond neonatal period and up to 2 years of age, home environment, including maternal depression and parent-child interactions. Assessment time points scheduled at months 3,6,9,15, 18, 21 and 24.</p> <p>The neurodevelopmental sub study started on October 2019 and by July 2020, 522 babies out of 653 babies enrolled in the main study who were eligible for follow up, had been followed up with at least one assessment performed. Due to the delay of the hearing assessment machine the assessment was delayed and was started on March, 2021. Until July 2021 a total of 597 babies had been followed up and 239 (40%) had completed all the required assessments scheduled at scheduled at months 3,6,9,15, 18, 21 and 24 months of age.</p>
73	Dr Helga Naburi	World Health Organization	Care of the small babies (including kangaroo mother care) in the covid-19 Pandemic: a multicountry survey and qualitative analysis	<p>The primary objective of the study is to determine the barriers and enablers for optimal care for the small baby (including KMC) during the COVID -19 pandemic and the secondary objective is to develop feasible and effective solutions to facilitate the recommended care for the small baby during the COVID-19 pandemic Progress by <b>June 2021:</b></p> <p>Ethical clearance had been obtained from MUHAS, awaiting ethical clearance from NIMR, meanwhile preparations for Data collection were in place.</p>

74	Dr Helga Naburi	Swedish research Council	Identification of ESBL-producing bacteria in the neonatal unit using smartphone-based fluorescent microscopy and optical DNA mapping at Muhimbili National Hospital,” for ethical clearance.	The goal of this project is to evaluate the prevalence of drug resistant bacteria and associated factors at MNH, and to demonstrate the use of smartphone-based fluorescent microscopy assay and optical DNA mapping methods on simple microscope setups and verify that they can be used in the LMIC settings Progress by June 2021 Ethical clearance from MUHAS and NIMR had been obtained, Logistics for purchase of study equipments and fund transfer were in palce. MTA and DTA application from NIMR was in progress.
75	Dr. Lilian Mselle	Ethiopia Ministry of Education	MUHAS-Makelle Universities Capacity Building	This project ended in 2020 following leadership change and political instability in Ethiopia
76	DRP	Sida	Health Research, Training and Innovation for Sustainable Development	Program ongoing: A total of 31 PhD candidates and 9 MSc students have graduated. Seven subprograms are continuing to implement planned research activities.
77	DRP	Amne Salim Fund	Amne Salim COVID-19 Research Fund at MUHAS	8 grantees were awarded a total of 100,000,000. Most of the studies are at the final stage of implementation
78	Prof Sylvia Kaaya	University fo Basel	Using Technology to Facilitate International Research in Diagnosis and Treatment of Boardeline Personality Disorder in Adolescents Including Low and Middle Income Countries	Block. A Masters holding mental health nurse has applied for a small grant from a related project and will be condcting qualitative research to document and manage for stakeholders, changes in work flow patterns as a result of MHIworkflowRA. The Project at MNH Psychiatry Department is also listed as a quality improvement project.



79	Prof. Billy Ngasala	NIH/University of North Carolina	Importation and transmission of Malaria in Zanzibar	This Five year project funded by NIH :implemmentation activities are ongoing in the Mainland Tanzania and Zanzibar (The first year of study completed) . Now entering second year of implemmentation
80	Prof. Sylvia Kaaya	University of Kwa Zulu Natal	Southern African Research Consortium for Health Intergration (S-MhINT)	Southern African Research Consortium for Mental health INTeGration (S-MhINT) -Research building consortium to strengthen mental health integration in South Africa, Mozambique and Tanzania: This capacity-building grant is a collaboration between KwaZulu Natal University (RSA) and the Muhimbilli University of Health and Allied Sciences (MUHAS) in Tanzania. The Tanzania site will engage in the capacity-building core component addressing the objective to build implementation science and dissemination research (ISDR) capacity in South Africa, Mozambique, and Tanzania, recruiting service providers, managers, and policymakers as trainees, providing real-world opportunities, mentorship and necessary knowledge to conduct optimal scale-up of evidence-based integrated mental health care. Role: Local PI. The project is in a no-cost extension period that ends end of April 2022. The project recruited 7 pre-doctoral trainees, (2 this year), most implementing small integration of depression screening programs
				in HIV services (n=3), while 2 have conducted situational analyses and used data to develop district/regional level mental health plans (n=3) most of whom work in public service or with NIMR. The remaining 2 projects are implementing MHIRA - an evidence-based assessment open source platform for child and adolescent mental health services based at MNH. All trainees but one have completed data collection and are in various stages of manuscript development.

81	Prof. Sylvia Kaaya	NIH/Fogarty & Prime North Western University	Building Capacity for Patient-Centered Outcomes Research to Improve the Quality and impact of HIV Care in Tanzania	<p>The HIV Patient-Centered Outcomes Research (PCOR) training program is a collaboration between Northwestern University and the Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania. The program will build capacity among Tanzanian investigators to lead PCOR in HIV disease prevention, care and treatment, and HIV-related comorbidities. The program will foster timely and clinically relevant patient-centered research designed to measure and improve clinical and patient-centered outcomes while strengthening established collaborations between researchers at MUHAS and Northwestern University. Role: Local PI. To date the program has awarded 2 PhD's, 2 Masters in Health Services Operations Research (NU, First graduate (NIMR junior scientist in 2022); 2 pre-doctoral trainees and; 4 post-doctoral trainees as per plan and budget. All trainees have undertaken courses at Northwestern University and are in various stages of data collection or publication. The grant ends this year and the MUHAS and NU team are in the process of applying for a renewal.</p>
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82	Prof. Sylvia Kaaya	University of North Carolina at Chapel Hill; Funding NIMH	Adolescent Wellness Visits (AWVs)	This study is evaluating the impact of Adolescent Wellness Visits (AWV), which we also call--VITAA or VijanaTambua Afya (English to Swahili translation is "Youth Health Check"). VITAA is a new health service platform for reaching young adolescents with HIV testing and counseling (HTC) and other evidence-based prevention services, which are clinic-based and school-facilitated. Specific Aims are: 1) To assess the impact of VITAA on HTC (primary outcome for all adolescents) and contraceptive uptake (secondary outcome for sexually active adolescents) up to two years post-primary school via a cluster randomized controlled trial (24 school-clinic pairs: 12 intervention + 12 control; n=552 adolescents); 2) To evaluate factors that support or limit the implementation of the evidence-based practices included in the AWV; and 3) To determine the cost-effectiveness of the AWV model for increased HIV testing, reaching PEPFAR diagnostic targets, and reductions in unmet need for contraception. Role: Local PIDuring this reporting period, baseline quantitative data collection (N=1,184) from 10 each/school-primary health care facility pairs in Kinondoni and Bagamoyo Districts. Ongoing qualitative data collection with parents, teachers, and health care providers to determine implementation barriers and facilitators. Semiannual progress reports have been submitted to office of the DRP as per procedure. Followup data collection is scheduled to start in May 2023. This project supports 1 PhD-MUHAS (Clinical Psychology) in the department
83	Prof. Bruno Sunguya	University of Bergen	GROWNUT II	Two PhD students have been recruited. MSc Nutritionpidemiology curriculum was developed, submitted to TCU for accreditation
84	Prof. Bruno Sunguya	Touch Foundation Tanzania LTD	Mobilizing Maternal Health-End Line Evaluation	Finalized

85	Prof. Bruno Sunguya	WRAIR-DOD	DQA In Southern Highlands regions	DQA has been done in all tier one facilities in Mbeya, Songwe, Rukwa, and Katavi regions. CQI plan is ongoing
86	Dr. Felix K Sukums	Public Sector Service (GHSC-TA)	Zanzibar Health Supply Chain Management Information Systems Review	The project was completed in June 2021. We submitted the final report of the holistic review of Health Supply Chain Management Information Systems in Zanzibar
87	Dr. Felix Sukums	D-Tree International	Development of a Blueprint for a Digitalized Primary Health System with a Strengthened Connection to the Community Health Programme in Zanzibar	The project was concluded in April 2022. MUHAS team delivered the final documents on Blueprint for a Digitalized Primary Health System with a Strengthened Connection to the Community Health Program in Zanzibar.
88	Dr. Nahya Salim	Ifakara Health Institute	Implementation study to improve the quality of comprehensive newborn care through introduction of the package of Newborn Essential Solutions and Technologies (NEST) in Tanzania	EN-SMILING extension approval has been received and Endline measurement assesement will be collected starting end of Feb 2023 as part of baseline data of ENREACH study. All children will be invited and eveluated using the structured tools per protocol at Temeke Regional Referral Hospital. A total of 500 children are estimated to attend as per initial follow up of the cohort.

89	Dr. Nahya Salim	Ifakara Health Institute	Implementation study to improve the quality of comprehensive newborn care through introduction of the package of Newborn Essential Solutions and Technologies (NEST) in Tanzania	Seven facilities within 3 regions of Tanzania (Dar es Salaam, Mbeya and Kilimanjaro) are implementing NEST phase 1 in Tanzania. Sustainability is a priority for the year 5 before we start phase 2 (2024- 2029). Each facility has to have sustainability plans to maintain quality SSNC. Phase 2 plans are discussed, and 2 new regions will be added with extension to cover tertiary, regional and district levels, linking maternal and newborn care plus strengthening referral system
90	Dr. Nahya Salim	London School of Hygiene & Tropical Medicine	EN - REACH; Every New Born - Reach up Early Education Intervention for all Children in Bangladesh, Nepal and Tanzania	ENREACH is a continuation of ENSMILING cohort - A cluster randomised trial in Bangladesh, Nepal and Tanzania of a parent group intervention for school readiness. MUHAS approval has been received on 13th Feb 2023. A pilot study is planned to start while submitting to NIMR.
91	Prof. EliangiringaKaale	University of Bergen/NORPART	Muhimbili-Bergen University Partnership to Enhance Pharmacy Education and Research (PEPER), NORPART-2018/10207	<ul style="list-style-type: none"> <li>• Five faculty travelled to Norway at the end of November 2022 to give guest lectures.</li> <li>• This year a total of seven students travelled to Norway to develop their research proposal and to learn other relevant skills. Their research title and their supervisors from MUHAS and UiB are as indicated below:</li> </ul> <p>(i) Name of student: KITTINGA FRANCIS WILSON Research Title: Registration of finished pharmaceutical products in Tanzania: Evaluation of common dossier deficiencies and associated factors. Supervisors: Dr. Mathias Elambius and Ragnhild Hauge</p> <p>(ii) Name of Student: JIHINGA KIJA MEDARD Research Title: Biofilm production and disinfectants susceptibility profile of UTI bacterial E. coli isolates from patients attending urology/dialysis section with prostate carcinoma and prostate hyperplasia at Muhimbili National Hospital in Dar es Salaam</p>

			<p>Supervisors: Dr. Doreen Mloka&amp; Dr. LiberataMwita and Dr. Amani Thomas Mori</p> <p>(iii) Name of student: SOMAIYA SAYYEDA PRASAN Research Title: Formulation Development of Dry Dosage form of Furosemide for the Management of Congential Heart Disease in Peadiatrics Supervisors: Dr. Mathias Elambius and Mr Dickson Wande and Prof. Wei Wang</p> <p>(iv) Name of student: LALAMA BICHU Research Title: Evaluation of in vitro Antimalarial Activity, Antioxidant Activies of the Extract and Fractions of Tetradeniaurticifolia (Baker) Philipson Leaves; A Bioassay-guided Fractionation Supervisors: Dr. Rodgers Mwakalukwa and Torgils Fossen</p> <p>(v) Name of student: KIBERENG ANDREA LEONARD Research Title: Thromboprophylaxis Prescribing Practice and Guideline Concordance for Patients Hospitalized at Muhimbili National Hospital</p> <p>Supervisors: Prof. RitahMutagonda, Prof OmaryMinzi and ReidunKjome</p> <p>(vi) Name of student: MASSAWE SUZANA EPHREM Research Title: Factors affecting Adverse Drug Reaction reporting of Health Care Professionals and their Knowledge, Attitude and Practice towards ARD Reporting and Pharmacovigilance in Tanzania Supervisors: RitahMutagonda and Associate professor Lone Holst</p>
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				<p>(vii) Name of student: RAJABU HAMIDU NDUTWE  Research Title: Predictors of treatment outcome of tuberculosis in children in Tanzania  Supervisors: Dr Ritah Mutagonda and Prof. Sven Gudmund Hinderaker</p> <p>i. A one day workshop on 04/01/2022 to review seven Mpharm research proposals Cohort 2021-22. A total of 60 people attended including undergraduate students especially Bpharm IV students and Master candidates from other schools.</p> <p>ii. A one day pre-defense workshop was conducted on 22/06/2022 where six candidate were given 10 minutes each to present her/his work before audience. Recommendation/suggestions from the selected reviewers and other faculty were given where necessary to finetune the dissertations. All candidates were able to defend their dissertation and will graduate in December 2022. One had not completed data collection and was awarded an extension.</p> <p>iii. One day workshop was on 19/09/2022 to review Concept notes /research proposals of 11 MPharm candidates Cohort 2022-2023. The workshop was well attended by 30 undergraduate students especially Bpharm IV students and 2 members from the Institute of Traditional medicine - MUHAS. During the workshop it was noted that two candidates same study with different titles and were advised to work on the same main topic with different scope.  § About 5,000 patients/clients and 500 healthcare workers were sensitized  § About 347 yellow forms were filled in  1 published paper  Mohamedi, J.A., Maganda, B., Shemdoe, S., Wang, W., Balandya, E., Mugoyela, V. and Kaale, E., 2021. Formulation Development and Evaluation of Hydroxyurea Dry Syrup for the Management of Pediatric Patients with Sick Cell Disease in Tanzania. East and Central African Journal of Pharmaceutical Sciences, 24(3), pp.111-120.  Annual project meeting in Bergen 1 Dec 2022</p>
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92	Prof. EliangiringaKaale	EDCTP/Tanzania Medicines & Medical Device	Moving Tanzania Clinical Ethics and Medicines Regulatory Capacity to the next level:Fostering Medicine Quality and Safety and GCP Clinical Trials (ASCEND)	<p>A. Development the Short course training module Lead: MUHAS, St. Andrews University and KCRI with TMDA Two curricular Developed and accredited with University Clinical Trials assessment Application and GCP inspectors Curriculum for two 70 hours (7 credits) short courses 1) Good Clinical Practice (GCP) Inspection 2) Clinical Trial Assessment (CTA) have been developed jointly and submitted to Directorate for Continued d Professional development for Accreditation The two courses have been fully ACCREDITED by DCEPD –MUHAS</p> <p>B. Conduct Short course trainings of clinical trials assessors and GCP inspectors Lead: MUHAS, St. Andrews University and KCRI with TMDA 2 cohort of clinical trials assessors and GCP inspectors conducted at The Regional Centre of Regulatory Excellence, Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam, Tanzania. /February 14—25, 2022 CTA= 30 participants were trained November 01—12, 2021 GCP =24 participants were trained February 14—25, 2022 §Participants from [MUHAS/TMDA/ZAHIR/NIMR/ZFDA/KCRI]</p> <p>C. PhD student Presented half seminar PhD student continued with her field studies. She conducted data collection visits to seven (7) pharmacovigilance centers located at Dodoma (Dodoma Regional Hospital), Tabora (Kitete Regional Hospital), Mtwara (Ligula Regional Hospital), Mwanza (Bugando Hospital), Kilimanjaro (KCMC), Mbeya (Mbeya Zonal Referral Hospital) and Dar es Salaam (Muhimbili National Hospital)</p> <p>D. Conducted a Training Workshop to early and mid-career researchers on ethical and clinical trial guidelines, application processes and on how to comply with national and international standards</p> <p>• A total = 35 participants were trained 31st-October to 1st November 2022</p>
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93	Prof. EliangiringaKaale	United States Pharmacopeia (USP)/USAID	Promoting The Quality of Medicines Plus (PQM+)	The project was implemented only in year 1 and canceled for some technical reasons
94	Prof. EliangiringaKaale		Medicine Quality, Maternal Health and the Final Mile – Tanzania arm	<p>The RECAP project conducted sample and data collection in Dar/Mbagala, Rufiji District, Tanga District, Muheza District, Zanzibar CBD and Pemba CBD</p> <p>i). Conducted interviews with a wide group of stakeholders involved in medicine supply chains.</p> <p>ii). Visited and mounted temperature and humidity loggers at selected sited.</p> <p>iii). Visited and collected medicine samples from various drug dispensing outlets in the medicine supply and distribution points.</p> <p>iv). Conducted training of research assistants</p> <p>v). Visited and demounted temperature and humidity loggers at selected sited.</p> <p>vi). Data analysis</p> <p>vii). Drafted preliminary report.</p> <p>viii). Presented the finding in the 52nd Annual scientific conference of the Pharmaceutical Society of Tanzania in Dodoma</p>

95	Prof. Nathanael Sirili	Karolinska Institute	Global Health Course	The course still receives students from Karolinska, who stay for two weeks in Tanzania. Because we receive a more significant number of students, we normally divide them into two groups of at least 20 groups each. These groups rotate in Dar Es Salaam and Mlandizi-Coast region for one week. The last batch we received them during January 2-13/2023. We expect to receive another batch on May 2023.
96	Dr. Deogratias Mzurikwao	Google Ireland	Application of Artificial Intelligence (AI) in Early Detection and Diagnosis of Breast Cancer by using breast ultrasound images and mammography.	
97	Dr. Edward Kija	University of Antwerp	Childhood Onset Epilepsies Study	
98	Dr. Frederick Mashili	Vital Strategies Inc.	Assessment of Trans Fat Acid in Street Food and Edible Oil to Spur Action Towards the Elimination of Trans Fat Acids in Tanzania	Sample collection and laboratory analysis of trans fatty has been completed. Data analysis is also complete. Currently we are finalising reports and manuscript for dissemination. The study is projected to close at the end of February 2023
99	Dr. Fredrick Mashili	GSK	Prospective Exploration of the Effect of Adiposity and Associated Microbial Factors on Healing and Progression of Diabetic Foot Ulcers in Tanzania	Baseline patient recruitment has been completed. Currently data analysis and follow up is ongoing

100	Dr. Fredrick Mashili	Campaign for Tobacco Free Kids	Global Heath Advocacy Incubator	Completed
101	Dr. Irene Kida Minja	University of Bergen	Establishment of a joint research-based education in Dentistry in Norway and East Africa	
102	Prof. Julie Makani	NIH/University of Ghana	Sickle Cell Disease Genomics Network of Africa (SickleGenAfrica)	
103	Dr. Agricola Joachim	American Society of Microbiology	Fleming Fund Country Grand 2	
104	Dr. Renatha Joseph	Uganda National Council	Consortium for Clinical Research Regulation and Ethics Capacity in the Eastern Africa Region (CCRREEA)	
105	Dr. Rose Mpembeni	Global Fund	Partnership to Enhance Country Analytical Capacity and Data use	The project is delayed . We faced a delay in obtaining the source of PrEP drugs to use during the trial. We had to request for a collaboration with MDH who are the partners implementing PrEP program in Dar Es Salaam region and they accepted. At the time when we were about to start, the Government issued a national PREP framework and so we had to review the protocol to align with the GovernmentPrEP framework. Following these revisions we had to submit the protocol to both NIMR and MUHAS for amendment. We have submitted to NIMR for amendment and are now in the process of submission to MUHAS but facing delays in payment to MUHAS IRB from the project code.

106	Dr.TumainiNyamhanga	Write State University	Breast Cancer Awareness	The project has almost ended. We finished data collection, entry, and transcription last year. So currently we striving to publish at least two papers. The first manuscript has been submitted the Journal of Global Oncology. The second manuscript is being developed.
107	Prof. Emmanuel Balandya	NIH/Dartmouth College	MUHAS Infectious Disease Institute (MIDI)	
108	Prof. Larry Akoko	UCSF	ExplolatoryLaparatomy Outcomes for Surgical Quality Improvement at Tetiary Care Facility in Tanzania (EX-LAP)	The project was delayed by approvals from both the NIMR and COSTEC but we managed to hire a data collector and start data collection in August and the progress is thus satisfactory. So far we have recruited 150 patients with 100 having a complete 30 days follow up.
109	Prof. Mary Justin	Martin Luther University	Economical, ecological and therapeutic sustainability in the development of phytopharmaceuticals for Sub-Saharan Africa	
110	Prof. MeckyMatee	Medical Research Council (MRC)	Policy analysis of the drivers of antimicrobial resistance within Tanzania's One Health Care Systems	
111	Prof. Muhammad Bakari	NIH/Harvard University	HIS: Training Tanzanian Researchers for HIV/AIDS Implementation Science	

112	Dr. Jessie KazeniMbwambo	John Hopkins University	Understanding the role of social networks in methadone maintenance treatment retention and antiretroviral therapy adherence among people who use drugs in Tanzania	
113	Dr. LwidikoMhamilawa	UNICEF	SES-EIS	
114	Dr. MughwiraMwangu	University of Bergen	NORPART	
115	Prof. Ndeserua Moshi	NIH/ Dartmoth College	Novel Pediatric Neurocognitive screen (Pedi Neuro)	
116	Prof. Rose Mpembeni	Heidelberg University	Demonstrating service delivery models for effective initiation and retention on PrEP among Barmaids in Dar es Salaam	

## Appendix II: Summary of papers published by staff during July 2021 to June 2022

During the period July 2021 to June 2022, the university published a total of 265 Journal article publications. The following is the list of some publications produced in local, regional and international journals during the reporting period.

**Table 54: Journal Articles**

S/N	AUTHORS	TITLES OF PUBLICATION
1.	Ahmed. T., M. J. Chisti, M. W. Rahman, etl.,	Effect of 3 Days of Oral Azithromycin on Young Children With Acute Diarrhea in Low-Resource Settings: A Randomized Clinical Trial." <i>JAMA Netw Open</i> 4(12): e2136726.
2.	Akuze. J, K. S. Annerstedt, L. Benova, etl.,	"Action leveraging evidence to reduce perinatal mortality and morbidity (ALERT): study protocol for a stepped wedge cluster-randomised trial in Benin, Malawi, Tanzania and Uganda." <i>BMC Health Serv Res</i>
3.	Amiji IA, Naburi HE, Kija E, Mumburi LP.	Peripheral neuropathy in HIV-infected children attending care and treatment clinic, at Muhimbili National Hospital, Dar es Salaam: a cross sectional study. <i>BMC Neurol</i> . doi: 10.1186/s12883-021-02335-0. PMID: 34388988; PMCID: PMC8361625.
4.	Amour M, von Reyn CF.	A new paradigm: testing household contacts of adolescents with incident TB infection. <i>Int J of Tuberc Lung Dis</i> . <a href="http://dx.doi.org/10.5588/ijtld.21.0134">http://dx.doi.org/10.5588/ijtld.21.0134</a>
5.	Anie KA, Olayemi E, Paintsil V, Owusu-Dabo E, Adeyemo TA, iiss MU, Galadanci NA, Nnodu O, Tluway F, Adjei DN, Mensah P, Sarfo-Antwi J, Nwokobia H, Gambo A, Benjamin	; SickGenAfrica Network. Sick Cell Disease Genomics of Africa (SickGenAfrica) Network: ethical framework and initial qualitative findings from community engagement in Ghana, Nigeria and Tanzania. <i>BMJ Open</i> . doi: 10.1136/bmjopen-2020-048208. PMID: 34301659; PMCID: PMC8311318.

	A, Salim A, Osae-Larbi JA, Ofori-Acquah SF	
6.	Anna Durrance-Bagale Anne-Sophie Jung, GastoFrumence, Leonard Mboera, Stephen E Mshana, Calvin Sindato, Taane G Clark, MeckyMatee and Helena Legido-Quigley. .	Framing the Drivers of Antimicrobial Resistance in Tanzania. Antibiotics (Basel) .doi: 10.3390/antibiotics10080991,
7.	Awadh. N, H. Nyawale, E. Chibwe, etl., (2021).	"Serological Markers of Viral Infections (Rubella Virus, Human Cytomegalovirus and Arboviruses) among Symptomatic Pregnant Women in Rural and Urban Areas of Mwanza, Tanzania." <i>Trop Med Infect Dis</i> 6(4
8.	Bacha J, Mayalla B, Chodota M, Jiwa N, Mwita L, Campbell L.	Obsession with suppression: comparison of virally suppressed and unsuppressed children and adolescents living with HIV (CALHIV) treated with dolutegravir regimens in Mbeya and Mwanza, Tanzania. <i>Journal of the International AIDS Society</i> . PMID: 32739321
9.	Bacha J, Mayalla B, Chodota M, Jiwa N, Mwita L, Campbell L.	The road to success is paved with dolutegravir: Dolutegravir treatment success among in children and adolescents living with HIV (CALHIV) at the Baylor Tanzania Centres of Excellence. <i>Journal of the International AIDS Society</i> .
10.	Barabona G, Mahiti M, Toyoda M, Kamori D, Masoud S, Judicate GP, Sunguya B, Lyamuya E, Ueno T.	Advanced baseline immunosuppression is associated with elevated levels of plasma markers of fungal translocation and inflammation in long-term treated HIV-infected Tanzanians. <i>AIDS Res Ther</i> . doi: 10.1186/s12981-021-00381-9. PMID: 34446039.

11.	Barabona G, Mahiti M, Toyoda M, Kamori D, Masoud S, Judicate GP, Sunguya B, Lyamuya E, Ueno T.	Advanced baseline immunosuppression is associated with elevated levels of plasma markers of fungal translocation and inflammation in long-term treated HIV-infected Tanzanians. <i>AIDS Res Ther</i> . doi: 10.1186/s12981-021-00381-9. PMID: 34446039; PMCID: PMC8394626.
12.	Beckham SW, Stockton M, Galai N, Davis W, Mwambo J, Likindikoki S, Kerrigan D.	Family planning use and correlates among female sex workers in a community empowerment HIV prevention intervention in Iringa, Tanzania: a case for tailored programming. <i>BMC Public Health</i> . doi: 10.1186/s12889-021-11426-z. PMID: 34247614; PMCID: PMC8274018.
13.	Bohren MA, Lorencatto F, Coomarasamy A, Althabe F, Devall AJ, Evans C, Oladapo OT, Lissauer D, Akter S, Forbes G, Thomas E, Galadanci H, Qureshi Z, Fawcus S, Hofmeyr GJ, Al-Beity FA, Kasturiratne A, Kumarendran B, Mammoliti KM, Vogel JP, Gallos I, Miller S.	Formative research to design an implementation strategy for a postpartum hemorrhage initial response treatment bundle (E-MOTIVE): study protocol. <i>Reprod Health</i> . doi: 10.1186/s12978-021-01162-3. PMID: 34261508; PMCID:
14.	Bramania. P. K, P. J. Ruggajo, and F. F. Furia (2021).	"Prevalence and predictors of heart failure among patients on maintenance hemodialysis therapy at Muhimbili National Hospital in Tanzania: a cross-sectional study." <i>Egypt Heart J</i> 73(1): 97.
15.	Bråtveit M, Abaya SW, Sakwari G and Moen BE (2021)	Dust Exposure and Respiratory Health Among Workers in Primary Coffee Processing Factories in Tanzania and Ethiopia. <i>Front. Public Health</i> doi: 10.3389/fpubh.2021.730201.
16.	Brown BJ, Madu A,	Utilization of Pneumococcal Vaccine and



	Sangeda RZ, Nkya S, Peprah E, Paintsil V, Mmbando BP, Gyamfi J, Okocha CE, Asala SA, Nembaware V	Penicillin Prophylaxis in Sickle Cell Disease in Three African Countries: Assessment among Healthcare Providers in SickleInAfrica. Hemoglobin.
17.	Bukhman. G, A. O. Mocumbi, N. Gupta, etl., (2021). "	From a Lancet Commission to the NCDI Poverty Network: reaching the poorest billion through integration science." <i>Lancet</i> 398(10318): 2217-22
18.	Bukundi EM, Mhimbira F, Kishimba R, Kondo Z, Moshiro C.	Mortality and associated factors among adult patients on tuberculosis treatment in Tanzania: A retrospective cohort study. <i>J Clin Tuberc Other Mycobact Dis</i> .  doi: 10.1016/j.jctube.2021.100263. PMID: 34355068; PMCID: PMC8322306.
19.	Catherine Gale Gitige, Gideon Paul Kwesigabo, OnnaDuuma Panga, Florence George Samizi, Ahmed Mohamed Abade, Peter MasungaMbelele, RogathSaikaKishimba.	Factors associated with Partners Elicitation during HIV Index client´s testing in Dar es Salaam Region, Tanzania. <i>Journal of Interventional Epidemiology and Public Health</i> .
20.	Christopher. H, A. Burns, E. Josephat, etl.,	Using DNA testing for the precise, definite, and low-cost diagnosis of sickle cell disease and other Haemoglobinopathies: findings from Tanzania." <i>BMC Genomics</i> 22(1): 902.
21.	Dionis I, Chillo O, Bwire GM, Ulomi C, Kilonzi M, Balandya E.	Reliability of visual assessment of neonatal jaundice among neonates of black descent: a cross-sectional study from Tanzania. <i>BMC pediatrics</i> .
22.	Dionis I, Chillo O, Bwire GM, Ulomi C, Kilonzi M, Balandya E.	Reliability of visual assessment of neonatal jaundice among neonates of black descent: a cross-sectional study from Tanzania. <i>BMC Pediatr</i> . .  doi: 10.1186/s12887-021-02859-x. PMID:

		34479515; PMCID: PMC8414712. Dis 2021;11(4):369-381 Doi: 10.2196/23204. PMID: 34617904; PMCID: PMC8532018.
23.	Dotto, J. M., &Abihudi, S. A. S., Van Loon, K.	Nutraceutical value of Carica papaya : A review. Scientific African, Doi: 10.1002/ijc.33299.
24.	Dozois. A, P. Nkondora, E. Noste, etl.,	Drug and alcohol use in Tanzanian road traffic collision drivers." <i>Afr J Emerg Med</i> 11(4): 390-395.
25.	Duggan CP, Sunguya B, Stanford FC.	Reporting of Race and Ethnicity in Medical and Scientific Journals. JAMA.  doi:10.1001/jama.2021.9268
26.	Durrance-Bagale A, Jung AS, Frumence G, Mboera L, Mshana SE, Sindato C, Clark TG, Matee M, Legido-Quigley H.	Framing the Drivers of Antimicrobial Resistance in Tanzania. Antibiotics (Basel).  doi: 10.3390/antibiotics10080991. PMID: 34439041; PMCID: PMC8389026.
27.	Dwarkanat. P, A. Muhihi, C. R. Sudfeld, etl.,	Non-inferiority of low-dose compared to standard high-dose calcium supplementation in pregnancy: study protocol for two randomized, parallel group, non-inferiority trials in India and Tanzania." <i>Trials</i> 22(1): 838.
28.	Emanuel B. Deogratias& Kennedy D. Mwambete.	Prevalence and Risk Factors for Cutaneous Mycoses Among Boarding Secondary Schools Students in Coast Region, Tanzania. <i>Asian Journal of Medicine &amp; Health</i> , 19(8):11-19
29.	Ernest. E. C, A. Hellar, J. Varallo, etl.,	Reducing surgical site infections and mortality among obstetric surgical patients in Tanzania: a pre-evaluation and postevaluation of a multicomponent safe surgery intervention." <i>BMJ Glob Health</i> 6(12).
30.	Fine. S. L, A. Malik, M. F. Guimond, etl.,	Improving mental health in low-resource settings: A feasibility randomized controlled trial of a transdiagnostic psychological intervention among Burundian refugee adolescents and their caregivers." <i>Behav Res Ther</i> 145: 103944.

31.	Gahamanyi N, Song DG, Yoon KY, Mboera LEG, Matee MI, MutanganaD, Komba EVG, Pan CH, Amachawadi RG.	Genomic Characterization of Fluoroquinolone-Resistant Thermophilic Campylobacter Strains Isolated from Layer Chicken Feces in Gangneung, South Korea by Whole-Genome Sequencing. <i>Genes</i> (Basel).  doi: 10.3390/genes12081131. PMID: 34440305; PMCID: PMC8391547.Doi: 10.1002/jmv.26622.
32.	Gangji, A. ., Masamu, U. ., Mgaya, J. ., Ndunguru, J. ., Jonathan, A. Minja, I. K. ., Makani, J., Balandya, E. ., Ruggjao, P. ., &Nkya, S. .	Effects of Hydroxyurea Treatment on Haemolysis in Patients with Sick Cell Disease at Muhimbili National Hospital, Tanzania. <i>Tanzania Journal of Science</i> , .
33.	Greene. M. C, C. Bencomo, S. Rees, etl.,	Multilevel Determinants of Integrated Service Delivery for Intimate Partner Violence and Mental Health in Humanitarian Settings." <i>Int J Environ Res Public Health</i>
34.	Habib Abboud, Varley Dias Sousa, Petra Dörr (Chair), Ines FradiDridi, Johannes Gaeseb, Mónica Hirschhorn, Eliangiringa Amos Kaale, (Rapporteur), Adrian Krauss et al.	WHO Expert Committee on Specifications for Pharmaceutical Preparations: Fifty-fifth report. Geneva: World Health Organization; (WHO Technical Report Series, No. 1033). Licence: CC BY-NC-SA 3.0 IGO.
35.	Haruna T, Somba M, Siril H, Mahiti G, August F, Minja A, et al.	Factors hindering integration of care for non-communicable diseases within HIV care services in Dar es Salaam, Tanzania: The perspectives of health workers and people living with HIV. <i>PLoS ONE</i>  <a href="https://doi.org/10.1371/journal.pone.0254436">https://doi.org/10.1371/journal.pone.0254436</a>
36.	Haruna T, Somba M, Siril H, Mahiti G, August F, Minja A, Urassa D, Tarimo E, Mugusi F.	Factors hindering integration of care for non-communicable diseases within HIV care services in Dar es Salaam, Tanzania: The perspectives of health workers and people living with HIV. <i>PLoS One</i> .

		doi: 10.1371/journal.pone.0254436. PMID: 34383765; PMCID: PMC8360604.
37.	Hyuha. G. M, H. R. Sawe, S. Kilindimo, etl., (2021).	"Feasibility and efficacy of text messaging to promote care among trauma patients screened for HIV at an urban emergency department in Tanzania." <i>Int J Emerg Med</i> 14(1): 72.
38.	Isa H, Adegoke S, Madu A, Hassan AA, Ohiaeri C, Chianumba R, Brown B, Okocha E, Ugwu N, Diaku-Akinwumi I, Adeyemo Sangeda RZ.	Corrigendum to" Sickle cell disease clinical phenotypes in Nigeria: A preliminary analysis of the Sickle Pan Africa Research Consortium Nigeria database"[Blood Cells, Molecules and Diseases (2020) Start page-End page/202438]. Blood cells, molecules & diseases. phytochemical contents of three.  Tanzanian medicinal plants. <i>International Journal of Herbal Medicine</i> .Vol. 8(1):58-62. URL: <a href="https://www.researchgate.net/publication/339000443">https://www.researchgate.net/publication/339000443</a> .
39.	Ishungisa. A. M, M. Mizinduko, S. Likindikoki, etl., (2021).	Health services we can trust: how same-sex attracted men in Dar Es Salaam, Tanzania would like their HIV healthcare to be organised." <i>Cult Health Sex</i>
40.	Judicate GP, Barabona G, Kamori D, Mahiti M, Tan TS, Ozono S, Mgunya AS, Kuwata T, Matsushita S, Sunguya B, Lyamuya E, Tokunaga K, Ueno T.	Phenotypic and Genotypic Co-receptor Tropism Testing in HIV-1 Epidemic Region of Tanzania Where Multiple Non-B Subtypes Co-circulate. <i>Front Microbiol</i> .  doi: 10.3389/fmicb.2021.703041. PMID: 34305873; PMCID: PMC8292895.
41.	Kabanangi F, Joachim A, Nkuwi EJ, Manyahi J, Moyo S, Majigo M	. High Level of Multidrug-Resistant Gram-Negative Pathogens Causing Burn Wound Infections in Hospitalized Children in Dar es Salaam, Tanzania. <i>Int J Microb</i>  doi: 10.1155/2021/6644185. PMID: 34306091; PMCID: PMC8270727.

42.	Kamori D, Joachim A, Mizinduko M, Barabona G, Mahiti M, Kibwana U, Majigo M, Masoud S, Mwandigha AM, Ueno T, Mmbaga E, Lyamuya E	Seroprevalence of Human Herpesvirus Infections in Newly Diagnosed HIV-Infected Key Populations in Dar es Salaam, Tanzania. <i>Int J Microbiol</i> . doi: 10.1155/2021/4608549. PMID: 34484345; PMCID: PMC8410440.
43.	Khamis AG, Mwanri AW, Ntwenya JE, Senkoro M, Kreppel K, Bonfoh B, Mfinanga SG, Kwesigabo G.	Design and validation of a food frequency questionnaire to assess the dietary intake for adults in pastoral settings in Northern Tanzania. <i>BMC Res Notes</i> . doi: 10.1186/s13104-021-05692-8. PMID: 34274021; PMCID: PMC8285883.
44.	Kisanga E, Mutagonda R, Myemba DT, Njiro BJ, Simon F, Marealle AI, Mikomangwa WP, Kilonzi M, Sambayi G, Bwire GM.	Premarital genetic screening and care of Tanzanian children with sickle cell disease: a qualitative study on parents' views and experiences. <i>Journal of Community Genetics</i>
45.	Mollel, N. P., Otieno, J. N., & Sitoni, D. K. Githendu P	Medicinal plants traded in Arusha city, Tanzania. <i>Journal of Medicinal Plants</i> , 10(1), 175-182 Managers in Tanzania. <i>JMIR</i> . doi:10.2196/29469.
46.	Mushy, S. E., Shishido, E., & Horiuchi, S.	Does a postpartum —Green Star® family planning decision aid for adolescent mothers reduce decisional conflict?: A quasiexperimental study. medRxiv.
47.	Jansen, L., Outwater, A. H., Lowery Wilson, M., Iseselo, M. K., &Bärnighausen, T.	A controlled pilot intervention on community violence prevention, financial and social capital generation in Dar Es Salaam, Tanzania. <i>BMC public health</i> , 22(1), 1-10.
48.	Jonathan, A., Tutuba, H., Lloyd, W., Ndunguru, J.,	Healthcare Workers' Knowledge and Resource

	Makani, J., Ruggajo, P., & Balandya, E.	Availability for Care of Sickle Cell Disease in Dar es Salaam, Tanzania. <i>Frontiers in Genetics</i> , 12.
49.	Joseph, R.S., Mahiti, G.R., Frumence, G. et al.	Qualitative inquiry into adolescents' experience of ethical challenges during enrollment and adherence to antiretroviral therapy (ART) in Temeke Regional Referral Hospital, Tanzania. <i>BMC Medical Ethics</i> ( <a href="https://doi.org/10.1186/s12910-022-00762-3">https://doi.org/10.1186/s12910-022-00762-3</a> ).
50.	Tesha, N., Tungu, M., Kagaigai, A., Yohana, B., & Paulo, H. A.	The paradox of food production, consumption, poverty and malnutrition in Tanzania: an ecological study design. <i>F1000Research</i> , 11(32), 32.
51.	Mutagonda RF, Marealle AI, Nkinda L, et al.	Determinants of misuse of antibiotics among parents of children attending clinics in regional referral hospitals in Tanzania. <i>Scientific Reports</i> . 22;12(1):1-1.
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