

# ANNUAL REPORT 2019



SAFER PLANET, PROSPEROUS  
COMMUNITIES



COLLEGE OF VETERINARY MEDICINE  
ANIMAL RESOURCES AND BIOSECURITY  
MAKERERE UNIVERSITY

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## About Us

The College of Veterinary Medicine Animal Resources and Biosecurity (COVAB) is a new generation of veterinary colleges in Africa with a mandate to advance higher education, Science, Technology and Innovations for;

- Transformative Veterinary Sciences
- Animal Resources Development and
- Biosecurity for sustainability of healthier and wealthier societies

## Our Vision

Healthier, Wealthier and Safer societies through animal Value

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## Mission

To drive transformative knowledge, skills, innovations and services for continuous improvement of society

# Contents

# List Of Accronyms

# Principal's Foreword



**Prof. J.D KABASA**  
*College Of Veterinary Medicine  
Animal Resources And Biosecurity*

Welcome to the Special Issue of the COVAB 2019 Annual Report. Thank you for sharing the memorable journey with us as we retain the position of the College of Veterinary Medicine and Animal Resources (COVAB) as flag bearer for the new generation of comprehensive Veterinary colleges.

In a bid to attain and sustain our vision; to create healthier, wealthier and safer societies through animal value, the college has continued to place emphasis on improving human capacity in innovation and research in the human-animal world, and transforming this into sustainable livelihoods. I am very confident that through this, we are also generally contributing to Makerere University's vision; to be the leading institution of academic excellence and innovations in Africa.

Therefore in this issue, we present to you COVAB's 2019 achievements and new innovations which will continue to convey CoVAB's capacity to nurture our students in science, enterprise development and technology, with total consideration of Global Health Security.

Through our developed innovations, our mandate is to take science and technology to the house hold, so that it begins to produce for both the local and international markets.

With great pleasure, I would like to thank all our partners, funders, alumni, stakeholders, friends, well-wishers and the whole Makerere University community, for your abundant contributions towards positioning COVAB as a new generation of colleges, with focus on medicine and the total animal-human welfare.

Well done everyone!

Prof. J.D KABASA

## 1.0 INTRODUCTION

COVAB Development Strategy and Investment Plan (DSIP) was, endorsed by Makerere University Senate and Council in 2011 and now forms the dominant logic for COVAB's structural and functional transformation. The restructuring repositioned COVAB as a new generation of Comprehensive Veterinary Colleges, with a unique capability to harness Africa's animal heritage and function as a fulcrum for national and regional transformation.

In 2007, the College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB) upgraded from the Faculty of Veterinary Medicine (FVM) as a result of a directive by HE the President of the Republic of Uganda.

CoVAB, which is under the leadership of the Principal and Deputy Principal has two (2) schools; School of Biotechnical and Laboratory Sciences (SBLS) and School of Veterinary Medicine and Animal Resources (SVAR).

## 1.1 College Administration



Prof. John David Kabasa  
PRINCIPAL, COVAB



Dr. Samuel Majalija  
DEPUTY PRINCIPAL, COVAB



Dr. Tweyongyere Robert  
DEAN, SVAR



Dr. Frank Mwiine  
DEAN, SBLS

### HEADS OF DEPARTMENTS



Dr. Nakakalembe  
Immaculate



Dr. Nyatia  
Edward



Dr. Acai James



Prof. Ocaido  
Michael



Dr. Kankya  
Clovice



Dr. Azuba  
Rose



# Research Projects

1.3

## 1.3.1: JAILU Project's Sensitization Program of Policy Makers who are critical to the Promotion of AI Services in Uganda



Mr. Kajja, a smallholder farmer from Luwero giving his testimony on rearing the jersey cattle breed.

**JAILU** is a project, part of the Agriculture for Food Security 2030 (AgriFoSe2030) Program with focus on translating science into policy and practice as it addresses the issues of food security which will become a great challenge in Asia and Sub-Saharan Africa due to the high population growth in the coming decades together with the impacts of climatic change.

On 5th February 2019 the JAILU (promotion of Jersey breed AI services for improved Livelihoods in smallholder dairy farming households Central Uganda) Project held a sensitization event for policy makers who are critical to the promotion of AI services in Uganda at the College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB) - Makerere University.

The event which brought together various experts in promoting Artificial Insemination in Livestock, academia, farmers, researchers, CoVAB students as well as representatives from various sectors, was organized by the JAILU team under the coordination of the project's Principal Investigator, Dr. Maria Nassuna Musoke.

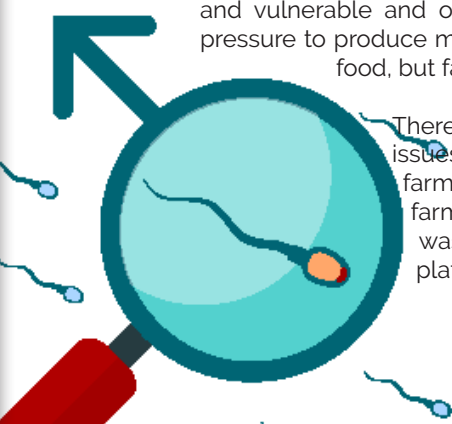
JAILU is a project part of the Agriculture for Food Security 2030 (AgriFoSe2030) Program with focus on translating science into policy and practice as it addresses the issues of food security which will become a great challenge in Asia and Sub-Saharan Africa due to the high population growth in the coming decades together with the impacts of climatic change.

According to the AgriFoSe2030 brief, people found in low income countries of Asia and Sub-Saharan Africa, who are mainly smallholder farmers are poor and vulnerable and often under increasing pressure to produce more and better quality food, but face great challenges.

Therefore, the JAILU Project, with its focus on the Jersey cattle breed rearing to address the pressing issues in food security prioritizes the Jersey as an appropriate dairy breed for dairy small holder farmers in Uganda due to its various favorable aspects ranging from its feeding behavior, less Jersey farm input, the breed's reproductive efficiency, good milk quality among others. The sensitization was therefore a platform to reach out to the various partners, policy makers as well as farmers as a platform to promote the Jersey breed as appropriate for smallholder dairy farmers



Dr. Nassuna introducing JAILU to the participants during the project launch on 5th February, 2019





Prof. William Bazeyo, Prof. Sung Jong Oh, Prof. J. D. Kabasa and other officials at the launch of KUDaP

# KUDaP LAUNCH

## 1.3.2: The Korea- Uganda Dairy Project (KUDaP) LAUNCH

**COVAB, NAGRIC& DB, CBNU Embark on Enhancing Productivity in the Dairy Sector**

The Korea- Uganda Dairy Project KUDaP was launched on 8th November 2019 at the Nakyesasa Incubation Center for Industrial Livestock Research and Business Innovations, Wakiso District, to improve dairy productivity by using modern dairy technology and infrastructure.



*Details on the next page*

### 1.3.3: COVAB, NAGRIC& DB, CBNU Embark on Enhancing Productivity in the Dairy Sector



**Prof. Sung Jong Oh**  
KUDaP Project  
manager,

The project is being implemented through a tri-partnership of Makerere University- College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB), National Animal Genetic Resource and Data Bank (NAGRC&DB) and Chonbuk National University (CBNU).

The modern demonstration farm will be a training ground in quality dairy production for students, dairy farmers, extension workers and Artificial Insemination Technicians. It will also be dispatched with Korean experts in dairy processing and value addition.

During the event, the KUDaP Project manager, Prof. Sung Jong Oh said that after completion, high genetic Holstein semen and 200 embryos will also be provided to produce high quality Holstein bulls.

The South Korean government is contributing a total of 2.3 million dollars towards this development. The demonstration farm will have an enormous cattle pen, a milking parlor with modern equipment, a livestock spray race, a staff house, a storied silo area that will be used to store feeds, and a modern cattle loading and offloading area.

Prof. Barnabas Nawangwe, the Vice Chancellor, Makerere University made emphasis on the University's mandate of using research and the community to support, and as well improve the dairy sector.

In his congratulatory remarks, the Ambassador of South Korea to Uganda, Byung Kyoo Ha highlighted on the Korean support towards Makerere University in building capacity of students in dairy productivity.

"The project will be very vital in capacity building and training of technicians, students, value addition and Makerere will be in position to produce quality products. The Korean government will continue to provide all the necessary support for the success of the project," said Byung.

While highlighting on the government conservation efforts, Hon. Joy Kabatsi, the State Minister for Animal Industry said that there's need for full participation of all stakeholders and development partners in transforming Uganda's economy from peasantry to commercial.

With funding by the Korea Rural Community Cooperation, the project was as a result of a Memorandum of Understanding between Ministry of Agriculture, Food and Rural Affairs (MAFRA), Korea and Ministry of Finance, Planning and Economic Development (MFPED), Uganda, which was signed on 17th December 2018.

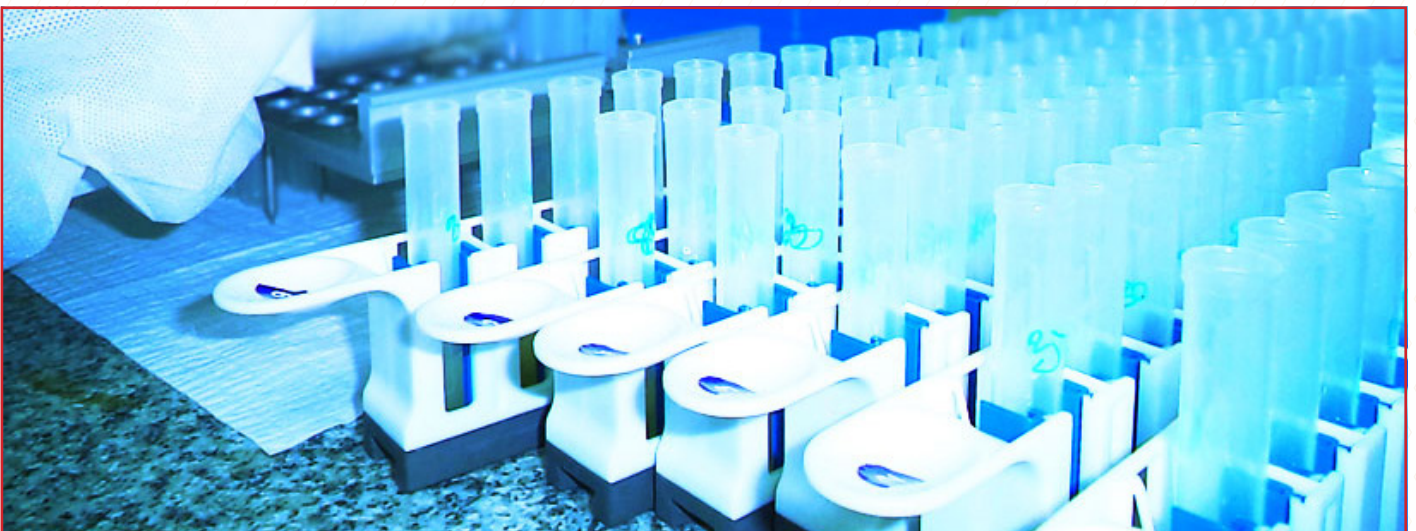


# COVAB ANTI-TICK VACCINE

## 1.3.4 The Anti-Tick Vaccine Developed to Address the Problem of Ticks and Tick-Borne Diseases in Livestock .

Since her establishment in 1922, the College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB) has always prioritized being a number one contributor in addressing global health insecurities in both animals and humans.

Africa is currently experiencing the fastest rate of population growth globally while its agriculture and livestock production are amongst the least productive, and yet, the drastically increasing populations are highly dependent on livestock such as cattle, sheep, goats, and pigs among others for proteins. Ticks and tick-borne diseases are some of the



challenges which are currently reported to affect livestock production. It is therefore important to note that improving food security while safeguarding the health of animals presents an economic obstinate challenge. CoVAB has embarked on addressing this challenge through the development of the Anti-Tick Vaccine to avert tick-borne diseases in livestock.

The Anti-Tick Vaccine Project is championed by Prof. Margaret Saimo Kahwa, who is a researcher in the area of ticks and tick-borne diseases. It was a great pleasure to have



Professor Margaret Kahwa showcasing the new anti-tick vaccine to the President of the Republic of Uganda H.E Yoweri Kaguta Museveni, and the Vice Chancellor Prof. Barnabas Nawangwe Nawangwe

the President of the Republic of Uganda, Gen. Yoweri Kaguta Museveni acknowledge this project during the recent Makerere University Agricultural Day and Exhibition which was held on 25th September 2019 in the University Freedom Square, when various research and innovations were showcased.

**C**OVAB scientists with support from government identified vaccine candidate proteins from the local ticks which they exploited to produce an anti-tick vaccine. The Anti-Tick Vaccine candidate proteins are simply injected in the animals. This invention therefore intends to solve the problem of ticks and avert tick borne diseases in livestock such as East Coast Fever among others.

The project further aims at developing an effective, affordable and safe anti-tick vaccine that will reduce acaricide use, and protect cattle from risk of acaricide resistant ticks, which will in turn encourage investment in the agricultural sector, increase food security, household

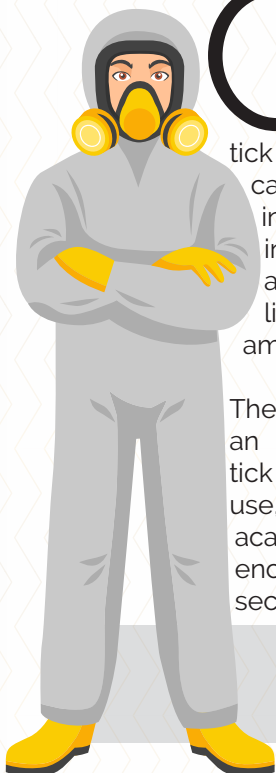


Dr. Margaret K Saimo,  
Tic Vac-Uganda



Overall efficacy for the vaccine candidate proteins was 86% for *R. appendiculatus* (brown ear tick) adult ticks and immature stages (nymphs, larvae); the tick that transmits East Coast Fever (ECF) disease and 53% for *R. decoloratus* tick species (transmits *Babesiosis*). Engorged ticks from immunized cattle performed poorly as they did not attain full weight on detachment, which resulted in eggs with low weight thereby affecting their hatchability. Eggs from ticks detached from immunized cattle failed to hatch while those from animals that were not immunized hatched very well

An Excerpt from the Project Brief, 2019



# RESEARCH CENTRES



### 1.4.1 Introduction

The Centre will help minimize risks associated with pathogen management, animal, in addition to human management. It will also provide services in capacity development of medical students and staff interested in biosecurity and health through training in responsible laboratory practices respectively. Additionally, the Centre will provide services ranging from surveillance, research, product developments, and diagnostic services with referrals.

Furthermore the Centre will ensure provision of strategic support to trade, health, security and broader control services. Correspondingly, the Centre will provide services in strategic domains of; Zoonotic issues and bio threats such as emerging and re-emerging threats, Biotechnology

and Bio-synthetics; development of vaccines, Food, Drugs and chemicals, Referral diagnostics; diagnostic tests on regular diseases and Bio-economy such as product formulation, packaging and testing.

As a new generation of Veterinary Colleges, COVAB secured support from the Ugandan government through the Capacity Building in Integrated Management of Trans-boundary Animal Diseases and Zoonoses (CIMTRADZ) project, and this was directed towards the construction of the Centre for Biosecurity and Global Health in Africa.

CIMTRADZ project was started in 2011 with a goal to empower food security, animal and public health systems for sustainable community development in Eastern and Central Africa. The project's main partnering universities are Makerere University and Mississippi State University in USA.

The Center is multidisciplinary and consists of a board with a long term agenda. It also collaborates with other laboratories such as; UVRI, Walterreed, CDC, NADECC, UNHLS and OIE reference laboratories. It also reflects the College's strength in Africa and Globally.



## 1.4.2 Consultative Meeting on the Development of the Center for Biosecurity and Global Health in Africa

On 3rd October 2019, CoVAB administration together with representatives from the College's partner organizations convened to brainstorm ideas on how to further develop the Center for Biosecurity and Global Health in Africa (CEBIGHA).

The meeting which was held in the College E- Board room was chaired by the Principal, Prof. John David Kabasa. Partakers in this convention had an opportunity to hear from a Distinguished Professor from Michigan State University (MSU), Prof. John B. Kaneene, who is also a founding member and Director of the Center for Comparative Epidemiology at MSU.

Prof. Kaneene highlighted on the strategic importance of establishing a Biosecurity and Global Health Center at Makerere University, indicating that the Center is strategically located right at the heart of the Congo Basin, which is one of the major reservoir for emerging and re-emerging infectious diseases of animal and human importance.

In addition, Prof. Kaneene affirmed that Makerere University suits the establishment of the Center since it's a full university which can facilitate effective communication and discussions among



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researchers and students about the development of the facility.

While highlighting on the efficient and safe running of the Center, he emphasized that the center has to be interdisciplinary with a very specific and dynamic mission and its budget must have a strong base.

He pointed out the requirement of Standard Operating Procedures (SOPs) which should be stationed in every section to guide everyone working and visitors to the center. He further affirmed the requirement of qualified senior motivated staff

for the center, putting his emphasis on IT experts who are vital in data management.

On concluding his remarks, emphasis was drawn towards the need for monitoring the approach used in the laboratory to address a certain issue, evaluating the outcome and learning from experiences, which Prof. Kaneene abridged as 'MEL'.

This meeting brought together scientists, researchers, lectures and administrators from Uganda Veterinary Association, National Drug Authority, Center for Tick and Tick-

borne Diseases- Malawi, Michigan State University, Infectious Diseases Institute (IDI), and CoVAB among others.

It should be remembered that the establishment of CEBIGHA at CoVAB stemmed from the Presidential initiative to provide strategic service and research to government, the country and region at large to protect cross- border trade, animal agriculture, tourism and public health systems from biothreats originating from the animal world.



# 2.0: TEACHING AND LEARNING

## 2.1 Student Enrollments 2019/2020

### REPORT FOR SEMESTER 1, COVAB, AUGUST INTAKE (2019/2020)

CODE	PROGRAM TITLE	STUDY YEAR	ENROLLED	REGISTERED
<b>SBBLS -SCHOOL OF BIOSECURITY, BIOTECHNICAL &amp; LABORATORY SCIENCES</b>				
BBLT	Bachelor Of Biomedical Laboratory Technology	1	179	157
BBLT	Bachelor Of Biomedical Laboratory Technology	2	164	156
BBLT	Bachelor Of Biomedical Laboratory Technology	3	203	183
MIDM	Master Of Science In International Infectious Diseases Management	1	6	4
MIDM	Master Of Science In International Infectious Diseases Management	2	10	3
MSBL	Master Of Science In Biomedical Laboratory Sciences And Management	1	11	4
MSBL	Master Of Science In Biomedical Laboratory Sciences And Management	2	4	2
MSBS	Master Of Science In Molecular Biology	1	13	1
MSBS	Master Of Science In Molecular Biology	2	5	3
MVFE	Master Of Science In Veterinary Preventive Medicine (Field Epidemiology)	1	4	2
MVFE	Master Of Science In Veterinary Preventive Medicine (Field Epidemiology)	2	1	1
MVMF	Master Of Veterinary Medicine (Food Animal Health And Production)	1	4	3
MVMF	Master Of Veterinary Medicine (Food Animal Health And Production)	2	1	1
MVPM	Master Of Veterinary Preventive Medicine	1	4	1
MVPM	Master Of Veterinary Preventive Medicine	3	1	0
PSBL	Doctor Of Philosophy ( School Of Biosecurity & Laboratory Sciences )	3	1	0
<b>SVMAR -SCHOOL OF VETERINARY MEDICINE, ANIMAL RESOURCE AND BIOSECURITY</b>				
BAPT	Bachelor Of Animal Production Technology And Mgt	1	23	21
BAPT	Bachelor Of Animal Production Technology And Mgt	2	35	35
BAPT	Bachelor Of Animal Production Technology And Mgt	3	40	32
BILB	Bachelor Of Industrial Livestock And Business	1	31	31
BILB	Bachelor Of Industrial Livestock And Business	2	12	12
BILB	Bachelor Of Industrial Livestock And Business	3	8	5
BVET	Bachelor Of Veterinary Medicine	1	67	61
BVET	Bachelor Of Veterinary Medicine	2	78	74
BVET	Bachelor Of Veterinary Medicine	3	59	59
BVET	Bachelor Of Veterinary Medicine	4	68	67
BVET	Bachelor Of Veterinary Medicine	5	92	88
BWHM	Bachelor Of Science In Wildlife Health And Mgt.	1	4	4
BWHM	Bachelor Of Science In Wildlife Health And Mgt.	2	10	10
BWHM	Bachelor Of Science In Wildlife Health And Mgt.	3	12	12
GLPM	Postgraduate Diploma In Livestock Development Planning And Management	1	11	9
GLPM	Postgraduate Diploma In Livestock Development Planning And Management	2	1	0
MSLD	Master Of Science In Livestock Development And Management	2	1	0
MSLS	Master Of Science In Livestock Development & Management	1	12	7
MSLS	Master Of Science In Livestock Development & Management	2	3	1
MSWR	Master Of Science In Wildlife Health & Mgt (Wildlife Resource Management)	1	2	1
MSWR	Master Of Science In Wildlife Health & Mgt (Wildlife Resource Management)	2	1	1
PHVET	Doctor Of Philosophy	3	1	1
PSVM	Doctor Of Philosophy ( School Of Veterinary Medicine & Animal Resources )	1	1	0

Program (Undergraduate)	No. of Graduands (2019)
Diploma in Livestock Health Science	17
Ordinary Diploma in Dairy Industry and Business	09
Ordinary Diploma in Laboratory Science Education and Industry	05
Diploma in Leather Industry and Business	—
Diploma in Pig Industry and Business	—
Diploma in Poultry Industry and Business	10
Ordinary Diploma in Feed Industry and Business	04
Diploma in Livestock Products Development and Entrepreneurship	14
Bachelor of Animal Production Technology and Management	33
Bachelor of Biomedical Laboratory Technology	106
Bachelor of Science in Wildlife Health and Management	07
Bachelor of Veterinary Medicine	53
Bachelor of Science in Meat Industry and business	01
Bachelor of Dairy Industry and business	24
Bachelor of feed Industry and Business	07
Bachelor of Laboratory Science Education and Industry	29
Bachelor of Science in Poultry Industry and Business	11
Bachelor of Leather Industry and Business	03
<b>TOTAL</b>	<b>333</b>





Program (Postgraduate)	No. of Graduands 2019
Degree of Doctor of Philosophy	02
Master of Wildlife Health Management	03
Master of Science In Molecular Biology and Biotechnology	04
Master of Science in Biomedical Laboratory Science and Management	02
Master of Veterinary Medicine (Food Animal Health and Production)	02
Master of Animal Products Processing, Entrepreneurship and Safety	—
Master of Science in Livestock Planning, Development and Management	09
Master of Science in Infectious Disease Management	01
Master of Veterinary Preventive Medicine	06
Post Graduate Diploma in Livestock Development Planning and Management	02
Degree of Master of Natural products Technology and Value Chain Management	—
Degree of Master of Science in Veterinary Pathology	-
<b>TOTAL</b>	<b>31</b>

## SPEDA-AFRISA PROGRAMS ENROLLMENT

### DIPLOMAS

Program	2018/2019	2019/2020
Diploma in Laboratory Science Education and Industry	17	10
Diploma in Poultry Industry and Business	18	12
Diploma in Feed Industry and Business	03	05
Diploma in Leather Industry and Business	02	05
Diploma in Fish Industry and Business	04	-
Diploma in Pig Industry and Business	07	04
Diploma in Dairy Industry and Business	19	17
Diploma in Meat Industry and Business	01	01
Diploma in Bee Industry and Business	01	-
Diploma in Livestock Product Development and Entrepreneurship	16	10
TOTAL	88	64

### ORDINARY CERTIFICATE

Program	2018/2019	2019/2020
Dairy Industry and Business	16	13
Poultry Industry and Business	10	13
Bee Industry and Business	-	01
Pig Industry and Business	03	01
Fish Industry and Business	02	01
Feed Industry and Business	01	04
Wildlife Industry and Business	02	02
Meat Industry and Business	02	-
Laboratory Science Education Industry and Business	05	09
Leather Industry and Business	01	01
TOTAL	42	45

## ARTISAN CERTIFICATE

Program	2018/2019	2019/2020
Dairy Industry and Business	06	02
Poultry Industry and Business	04	01
Bee Industry and Business	-	-
Pig Industry and Business	02	02
Fish Industry and Business	01	-
Feed Industry and Business	03	02
Wildlife Industry and Business	01	-
Meat Industry and Business	-	01
Laboratory Science Education Industry and Business	-	-
Leather Industry and Business	01	-
TOTAL	18	08



*Exhibited shoes made out of leather by the AFRISA Leather Value Chain students.*



RESEARCH

&

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3.1 TECHNOLOGIES AND INNOVATIONS  
DEVELOPED

### 3.1.1 The SafeFish Project embarks on the Development of Natural Enemies of Bacteria (Bacteriophage) as Disease Bio-control Agents to Improve Aquaculture Productivity

The SafeFish Project held a stakeholders' buy-in workshop on 15th August, 2019 at Grand Global Hotel, Kampala to launch its activities on the development of Bacteriophage cocktails as disease bio-control agents to improve aquaculture productivity, food and nutrition safety in Ghana and Uganda.



*A group photo of the The Safefish Project members after a stakeholders' meeting*

the mapping of bacterial pathogens of farmed tilapia in Uganda and Ghana, and the development of phage products will improve fish health management, ensure safe fish production and improved fish farm productivity.

The project meeting brought together various stakeholders such as; fish farmers, policy makers, legislators, science Professors, Academia, media personnel, investors, and scientific researchers who shared views on the use of natural enemies of bacteria to improve the food, nutrition and economic security, most especially through aquaculture.

The Principal Investigator of the SafeFish Project, Dr. Jesca Nakavuma spearheaded the discussions and shared with delegates the overview of the project. She informed them of the project partners in Ghana, UK, and Uganda, with the final beneficiaries being inland fisheries sector in Uganda and Ghana, fish consumers, fish farmers, and line ministries in fisheries and aquaculture.

Dr. Nakavuma additionally informed delegates that there are

challenges in fish farming such as; inability to access quality feeds and seeds, and diseases which arise leading to the over use of drugs and chemicals, hence resulting into issues of Antimicrobial Resistance (AMR), and yet, these can be addressed by natural enemies of bacteria.

"We engage in some practices to address challenges of diseases, and similarly, there are practices in aquaculture that may influence disease outbreaks, however, the solution by the SafeFish Project is use of bacteriophages which are natural enemies of bacteria. These are abundant in nature and they affect only specific bacteria which they are targeted to attack. Fortunately, these also attack drug resistant bacteria and they don't attack animal and plant cells, and so, animals and humans are safe," stated Dr. Nakavuma.

Dr. Nakavuma also affirmed that

The project team was congratulated upon achieving such a health promoting worthwhile grant by the Principal-CoVAB, Prof. John David Kabasa, who officiated the scientific event. Prof. Kabasa later highlighted to delegates about the increase on demand of proteins which will rapidly increase by 8 times in 30 years to come, since fish is a source of proteins.

"The pathogenic molecules disrupt the quantity of fish and quality of fish products, and therefore, there's need to consider the environment for production to increase the quantities, and we need a frame work to govern these molecules," added Prof. Kabasa.

The Commissioner - animal health in Uganda, Dr. Rose Ademun, who is also the Chief Veterinary Officer urged delegates to earlier report fish diseases locally before they are known internationally, affirming that it is important to locally have national data on certain issues before it flows on the international scene.

"When researching about diseases, it's important to be sensitive of our economies and there's need to report to the Chief Veterinary Officer who has the authority to inform the world, so that we protect our economy. Research on fish and fish feeds should be coordinated and regulated," affirmed Dr. Ademun.

Dr. John Walakira from NARO-NAFFIRI gave delegates a talk on Fish Health Challenges and Management-Prevalent fish bacterial pathogens and diseases; famers' practices. He informed delegates that 20 years ago, there was little documented information on fish diseases, but there was an increase in fish health management from 2008 to date.



*Dr. Jesca Nakavuma giving an overview of the Safe Fish project while in the stakeholders' workshop at Grand Global Hotel.*

He additionally informed delegates of the non-infectious factors that bring about fish illnesses, to mention but a few which include; nutrition, pollution, issues of water quality and also infectious diseases which affect fish farmed products. Dr. Walakira however informed delegates that there is the establishment of biosecurity systems through the fish value chain approach to minimize the risks of fish pathogens.

Dr. Samuel P. Wamala later discussed the use of bio-control agents in animal health, in which he highlighted to delegates that there are phages

infecting and killing bacteria of which some are commercial phage products which are actually very effective, and that bacteriophages are alternatives to the use of antibiotics in growth promotion, pathogenic reduction and disease prevention.

On highlighting the existing policy issues in fisheries sector Dr. Maureen Mayanja encouraged delegates to take keen interest in fisheries policies to achieve a balance between the social, environmental, ecological, and economical factors, and to have the gaps in aquaculture intensified and

addressed.

The SafeFish project is a European Commission-African Union Commission funded project which aims to develop bacteriophage cocktails as fish disease bio-control agents for improved aquaculture productivity among tilapia farmers, and for economic and social development by addressing food and nutrition safety in Ghana and Uganda.

## 3.2: Visitors Hosted

### 3.2.1. CoVAB'S Innovativeness Thrills Makerere University Council Officials

*It was a delightful engagement for COVAB Staff with Makerere University Council officials, who paid the College a visit on Tuesday 10th September, 2019, in which a number of scientific facilities' activities, innovations, and inventions were showcased, coupled with discussions on how to address challenges that the College is still grappling with.*

**Mak**erere University Council Chairperson, Mrs. Lorna Magara, together with her Vice, Mr. Daniel Fred Kidega were warmly received by the College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB) administration headed by the Principal, Prof. John David Kabasa, who presented the various College scientific research facilities, inventions and innovation service centres through a substantive guided tour.

The Dean School of Biosecurity, Biotechnical and Laboratory Sciences Prof. Frank Mwine briefing the council officials about the different works conducted in the Molecular Biology Laboratory. Key facilities that were showcased during this engagement were; the newly constructed Centre of Biosecurity and Global health. While reporting on the services to be delivered by this centre, Prof. Kabasa termed it as a strategic research and development facility which will coordinate research and development related to biosecurity

“This facility will focus on strategic research development and governance of Zoonotic diseases biothreats, food and drug safety, bioeconomy, biotechnology and development, as well as biochemical threats and pollution,” reported Prof. Kabasa

and global health in a complete one health manner.

“This facility will focus on strategic research development and governance of Zoonotic diseases biothreats, food and drug safety, bioeconomy, biotechnology and development, as well as biochemical threats and pollution,” reported Prof. Kabasa.

Council officials also had a visit to the Ruth Keesling Wildlife Health Extension, Research and Education Centre (RK WHERE) and the Africa Institute for Strategic

Services and Development (AFRISA), which Prof. Kabasa introduced as a regional centre for comprehensive industrial value Chain education and enterprises development.

“As an affiliated institution of CoVAB, AFRISA's model of education is implemented with emphasis on skills, production, enterprise, development and accreditation (SPEDA) which addresses the third function of the university as stipulated in the 2001 Universities and other Tertiary Institutions Act, to disseminate knowledge,” affirmed Prof. Kabasa.

The Central Diagnostic Laboratory (CDL) was also introduced to Council officials by one of its heads, Dr. Eddie Wampande. He highlighted that CDL is a Joint Unit that was commissioned in 2011, based on a Memorandum of Understanding between CoVAB and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), with initial support and funding from Japan International Cooperation Agency (JICA). He also informed Council officials about the purposes of the

laboratory's establishment while he took them through the various activities undertaken in its different chambers.

"CDL conducts animal diseases surveys, it has the capacity to train field extension workers, it also conducts research and disease epidemiology surveys, conducts acaricide efficacy tests and it's also committed to promoting and providing reliable and accurate diagnostic and research services to the public at affordable prices," said Dr. Wampande.

*While in a meeting, Prof. Kabasa also presented to officials the various research, knowledge and technology transfer service centres of CoVAB beyond the Makerere University boundaries such as;*

1. *The Nakyesasa Incubation Centre which focuses on skills development, innovation, enterprise, technology and production,*
2. *The Sheikh Technical Veterinary School (ISTVS), which is a well-established tertiary education institution affiliated to Mak-CoVAB located in Sheikh, Somalia with a focus towards improved resilience in the pastoral areas of the ASALs region,*
3. *CoVAB also champions One Health in Uganda together with its partner institutions under the Regional Universities Mediated Partnerships for Enhancing Livelihoods and Health in Africa (RUMPELHA) to promote multidisciplinary research using a One Health approach.*



Council officials were as well introduced to the Viral Biotechnology and Diagnostics Laboratory headed by Prof. Denis K. Byarugaba, who informed them that this facility handles very sensitive research and it has the PSL Unit that is basically designed to handle very high infectious diseases to mention but a few which include; influenza and Ebola.

On visiting the Research in Tropical Diseases and Vector Control (RTC) laboratory under the leadership of Dr. Patrick Vudriko, he informed the officials that this laboratory was established to address community problems using science through specialized services such as; serology and vaccination efficacy monitoring, tick acaricide susceptibility testing, clinical trials, chemical analysis and RTC Genomics.

At the Small Animal Clinic surgery theatres, Prof. Kabasa affirmed to officials that this facility is a strategic opportunity for the veterinarians and students since these are continuously equipped and trained in surgery. However, after visiting all the College facilities, Prof. Kabasa appealed to Council officials and University management to lobby for more government support to upgrade these facilities in order for them to deliver services effectively and

efficiently.

Prof. Ruth Muwazi, the in charge for Business Research, Innovation and Skills Centre, backed up Prof. Kabasa by reporting to the university council chairperson how the Department has skilled farmers and youths who have not gotten a chance to acquire high Education in fields of Dairy production and leather making through manufacturing products like yoghurt, ice cream, shoes, belts and lots more. The Centre also combines Technology and Research to deliver incubation services for both private and government censored institutions.

"We want a local farmer to adopt the technology we are using and that is why we choose using local materials everyone can afford", added Prof Muwazi. The Centre also runs a self-sustaining incubation hub for livestock.

The College staff later opened up to Council Officials about the challenges that they are still grappling with which included; challenges with transporting students to the field since this isn't funded, increase in the number of students and yet the funds allocated for trainings and practicals are still inadequate for the science based institutions, inadequate space for the increased number of

students troubling service delivery at the College, and extremely long procedural major guidelines for procurement in the university which results into leakages in the university procurement system.

Mrs. Magara applauded CoVAB for its innovativeness and commended the college administration and staff for their heartfelt service delivery to Makerere University. She later tipped them on the intension of this visit, informing them of their need to understand what is happening at all Colleges in Makerere University which deserves to be known by the public.

"Our intention for visiting all the

Colleges in the university is to see and understand where you work from and know how the colleges are running and what is required," said Mrs. Magara. One of the key deliverables of the university council is to create a platform for all colleges to bring into the public arena what is happening in Makerere University.

Mrs. Magara also urged CoVAB administration and researchers to present their innovations and research activities to the government, public and private sector since this can attract investment in the College. She also advised them to present a strategic plan of the College and its projects to the university management and

the government to attract timely support.

Hon. Kidega the council vice Chairperson as well encouraged CoVAB staff to present their accomplishments to the university management and government to motivate them for support, rather than only presenting their challenges.

On concluding the official meeting, Prof. Muwazi thanked the university council officials for the visit and appealed to the university and government to further aid the College innovations and inventions as well as projects that engage the common people of this country.



# Safer Planet, Prosperous Communities

[www.afrisa.org](http://www.afrisa.org)

[www.covab.mak.ac.ug](http://www.covab.mak.ac.ug)

[principal@covab.mak.ac.ug](mailto:principal@covab.mak.ac.ug)

COVAB ONLINE





The Deputy Vice Chancellor in charge of Finance and Administration Professor William Bazeyo and a delegation from Korean Technological Farmers pose for a photo with other University officials

### 3.2.2. Korean Technological Farmers and Educationists pay a Courtesy Call to the Deputy Vice Chancellor

On the 9th of August 2019, Professor Robert Tweyongyere the Dean for School of Veterinary Medicine and Animal Resources Makerere University led a Delegation of 6 Korean Technological Farmers and Educationists to pay a Courtesy Call to the Deputy Vice Chancellor in Charge of Finance and Administration Professor William Bazeyo at his office at the University Main Building.

The meeting was aimed to benchmark on a Public-Private Smart Farming initiative "The Korea Uganda Dairy Project" that seeks to share knowledge and skills to young professionals in the veterinary, animal and Dairy fields at Makerere University on how to raise genetically improved and disease resistant breeds of cattle to improve dairy production in the country

According to professor Sung Jong Oh a Principal Research Scientist in chemical Engineering at the Korea University of Science and Technology and the Korea Uganda Dairy Project Manager, the project envisions Creation of a Professional, Smart (ability to use technology in Farming) and commercial Farmer by building capacity with systems in farm Technology, Artificial Insemination and Genetics.

Professor Tweyongyere said that this project will as well bring aboard Information Technology and software experts from the University's College of Computing and Information Sciences (COCIS) to make sure that these "Smart Farming" skills and technologies are even made better by these brilliant young professionals with time. He added that this

partnership is a great milestone to the University and the country generally, called upon government's support to such innovative pieces of work.

In a meeting earlier on at the College of Veterinary Medicine Animal Resources and Biosecurity (COVAB), the Principal Professor John David Kabasa said that Uganda's farming industry has for long been challenged by its ancientness and this project is a way to make it modern and contemporary. "Smart farming is good Music to young people, Capturing Data and evidence to closely track farming is really attractive and trendy something our youths like", he added.

This partnership has seen a number of biotechnological Korean companies aboard including the Korea Vet Clinic, L & H Genetics, Pearl Farm and the multinational Electronics and mobile devices giant LG to feature in the innovative technology and sleek designs to suit the project.

The DVC assured the delegation the university's support to the project. He said that preparations of looking for a contractor to establish a Mega Demonstration farm at Nakyesasa are underway. He applauded and thanked the Korean science community for always looking out to Uganda and particularly Makerere University. Professor sung said that they always enjoy working with Makerere due to its love and efforts in impactful Research. He pledged to always support Makerere students with bias of veterinary and technology through further education at the Korean University of Science and Technology.

### 3.2.3. Prof. Kaneene Visits the Centre for Biosecurity and Global Health: Gives Guidance on Key Centre Requirements

On 26th September 2019, the College Principal, Prof. John David Kabasa together with committee members of the Centre for Biosecurity and Global Health hosted Prof. John B. Kaneene, a distinguished Professor and researcher from Michigan State University, College of Veterinary Medicine for a visit to the newly constructed Biosecurity facility at CoVAB.

While in a tour of the facility, Prof. Kaneene gave guidance to the team on a number of key requirements

to effectively run the Centre activities. Major emphasis was drawn on the essentiality for Standard Operating Procedures (SOPs) that cover the biosafety concerns and laboratory procedures. SOPs address safe manipulation of specific organisms, specific exposure control methods, and specific decontamination and waste-handling requirements.

Prof. Kaneene also emphasized the necessity of well-trained assistants, adequately skilled technical persons, IT experts, and scientists

who absolutely understand biothreats, adding that backup is a vital requirement in Biosecurity Centre- Level 3.

The tour was concluded with emphasis on the Centre personnel always monitoring the approach used in the laboratory to address a certain issue, evaluate the outcome and learn from their experiences, which Prof. Kaneene abridged as 'MEL'. Members on the Committee for the Centre who backed the tour with information about the facility were Dr. Paul Ssajjakambwe and Dr. Gabriel Tumwine.

### 3.2.4. Vice President of Zoetis International Operations Visits CoVAB'S RTC Laboratory

With great pleasure, CoVAB hosted Mr. Drees Beekman, the Vice President of Zoetis International Operations for Belgium, Netherlands, Luxembourg, Africa and Middle East (BENAFME) on 7th November 2019 to assess the RTC laboratory's activity progress.

Along with Mr. Beekman was; the Head of Zoetis- African Livestock Productivity and Health Advancement (ALPHA) Initiative, Dr. Gabriel Vaga, the Managing Director- Eram Uganda Limited, Mr. Edward Muhingirwa, together with scientists from Kenya and Nigeria.

While in a meeting with the College Principal, Prof. John David Kabasa, Mr. Beekman acknowledged the College leadership and RTC Laboratory team for the good progress in ensuring that the laboratory is well equipped. He also encouraged African scientists to change the mindsets of farmers from peasantry to being commercial producers.

The newly constructed Research Center for Tropical

Diseases and Vector Control (RTC) serology laboratory, which is headed by Dr. Patrick Vudriko is one of the ALPHA Initiatives in Africa.

It was established to address community problems using science through specialized services such as serology and vaccination efficacy monitoring, tick acaricide susceptibility testing, clinical trials, chemical analysis and RTC Genomics.

Uganda was the first beneficiary of ALPHA, a co-funded initiative between Zoetis and Bill and Melinda Gates Foundation. Zoetis partnered with RTC Laboratory, School of Veterinary Medicine and Animal Resources, COVAB, Makerere University, to develop a serology Laboratory to enhance veterinary diagnostics services in the country, which was one of the most felt needs that had been documented as an impediment to livestock productivity in Uganda.

Zoetis is a global animal health company offering innovative products and services for healthy and productive animals.



Officials pose for a group photo during the visit to the RTC Laboratory at CoVAB, Makerere University on 7th November 2019.



Dr. Patrick Vudriko (2nd right) introducing the RTC Serology laboratory to the guests on 7th November 2019

**ZOETIS INTERNATIONAL OPERATIONS' VISIT TO RTC LABORATORY**



## 4.0: KNOWLEDGE TRANSFER AND PARTNERSHIPS

Transparency, open sharing, and reproducibility are core values of science, but not always part of daily practice and that's why CoVAB utilizes extra interactive courses, activities and conferences to share ideas and pass on knowledge from multidisciplinary experts to the younger generation.



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### 4.1. President Museveni Applauds CoVAB'S Innovativeness

CoVAB was an active participant in the Makerere University Agricultural Day and Exhibition showcasing research and innovations which was held on 25th September, 2019 in the University Freedom Square under the theme; Enhancing Youth Involvement in Agriculture to Mitigate Increasing Food Insecurity and Unemployment in Uganda.

During the event, various research projects and innovations were showcased to the President of the Republic of Uganda, Gen. Yoweri Kaguta Museveni and MAK stakeholders. It was a great pleasure to have CoVAB Researchers, innovators as well as nurtured entrepreneurs present their products which thrilled President Museveni.

The president commended CoVAB Professors for envisioning value addition and nurturing the youths for the competitive job market. He shared his experience with the exhibitors, where he got an opportunity to meet a researcher and inventor of the Anti- Tick Vaccine, Prof. Margaret Saimo Kahwa. The

president was so excited about this research innovation and applauded Prof. Kahwa for developing a vaccine which will finally address the problem of ticks the country is grappling with.

As an agricultural country, Uganda's increasing population is largely dependent on livestock products for improvement of livelihoods and the economy and yet tick- borne diseases are a major problem in cattle. The Anti- Tick

Vaccine is therefore intended to solve the problem of ticks and avert tick borne diseases in cattle such as East Coast Fever among others

H.E. Gen. Museveni was also excited by the entrepreneurs in the leather industry and by the fact that CoVAB

not only instills knowledge in students about animals, but also nurtures them on how to extract various products from animals.

"What is the point of keeping cows alive without having to explore more from them? I therefore congratulate CoVAB Professors for thinking in



an integrated way and coming to reality of making knowledge and technology a producer of youths needed in the job market, " said President Museveni.

## 4.2. CoVAB in the 2019 Summer School

The College hosted the 2019 Summer School from 4th to 28th June 2019, which commenced in high spirit with theoretical learning, experiential/field learning in the Central, East and West. This knowledge sharing occasion continued with sharing of ideas during the 8th International Cultural Boma and concluded with the Conference under the theme; "Global Health Security: A need for Multi-sectorial Partnerships for Sustainable Livelihoods and Development".

The Summer Course runs every June with students from other countries and in particular, Mississippi State University and regional universities including Makerere University converging at COVAB for an exciting program designed to equip them with knowledge and skills in animal production, disease surveillance and public health. This year, the course exposed the participants to experiential learning with field trips to Central, Eastern and Western Uganda to learn about food security, wildlife and eco-system health management while getting an insight into Ugandan culture and systems.

Well, this year the Summer

School was once again coordinated by Dr. Gabriel Tumwine, and it was a great pleasure to host the Summer School team from Mississippi State University and Summer School Alumni from Smithsonian Institution-USA who were engaged in a meeting with the College Principal, Prof. John David Kabasa and the Infectious Diseases Management (IDM) MSc students on 13th June, 2019 in which they brainstormed ideas on strengthening collaborations through more knowledge sharing international programmes similar to the Summer School.

### 4.2.1. Summer School Field Experiences and Studies

#### The Central Route

The Summer School students were Abby Crouse, Alexandra Chodzin, Taylor Cochran, and Katie Strickland, who shared their experience at National Animal Genetic Resources Centre and

Data Bank (NAGRC), where the NAGRC shared some of their activities such as Artificial Insemination, community outreach, Cross breeding programs, poultry rearing, piggery, and rabbit rearing. They as well visited the Uganda Wildlife Education Center where they were informed about some of their activities such as; providing sanctuary and medical care



for wildlife, Captive breeding programs of threatened species, providing education, community outreach, and animal programs.



#### The Western Route

The students as well visited Lake Mburo, and they were engaged in activities such as; Physical Capture by using walking then running in a C-formation to catch impala, they caught animals for translocation to another park. They also took care of animals under anesthesia and taking samples.



Bird length measurement by the summer school students at the Makerere University Biological Students Center In Kibaale District



*LEFT: The Summer School Team together with field assistants in Western Uganda pose for a group photo.*

*BELOW: A-Student-In-a Practical On Identifying The Reproductive System Of The Tsetse Fly During a Trypanosome Study at-NALIRRI*

*2. Students restraining an animal to take a sample*

### **At Kibale;**

While at Kibale National Park, the Summer School team engaged in activities such as; rodent capturing, taking their measurements and samples, mist netting, and butterfly capturing using 6 traps, 22 species caught.

### **At Murchison Falls National Park**

At Murchison Falls National Park, students had a mobile ecological lecture on the wildlife and visited falls, had a boat tour to embrace Uganda's Physical Features. The National Park has 60+ giraffes, 70+ African elephants, Jackson's Hartebeest, Oribi, Ground Hornbill, Crocodiles, and Hippopotamuses among others.



## **Recommendations made by the Summer School Students after the field visits included;**

- Need for a solidified curriculum with set expectations for the program and students.
- Didactic lessons should be provided during spring semester to allow for practical application during summer school.
- Utilize Makerere University field stations for full immersions in environments.
- Involve Makerere students in field excursions as a way to bridge the American and Ugandan styles of learning to enhance the cultural experience.
- Take advantage of wildlife in national parks for hands on experiences to allow Mississippi students to have practical applications of veterinary medicine on wildlife unique to Uganda.

## 4.3. Workshop on Quantitative Data Analysis Using R- Software



Prof. Wills (right) taking students through quantitative Data Analysis at CoVAB, Makerere University.

Over the years, CoVAB has prioritized the need to develop capacities and skills of multidisciplinary researchers and scholars in order to have research expertise on critical areas of public health, through many of similar workshops on data analysis

As a contribution to Makerere University's focused research agenda, CoVAB held a Quantitative Data Analysis workshop from 10th June to 21st June, 2019, with a major purpose of strengthening participants' capacity in research data development and interpretation.

The College hosted researchers from the different disciplines of Makerere University, who are also PhD and Masters Students for this 10-days workshop. They were equipped with knowledge and skills in visualization

of research data, given that data analysis is a vital requirement while undertaking professional studies.

The workshop was coordinated by Dr. Gabriel Tumwine and blessed with facilitation by Prof. Robert Wills from Mississippi State University, in addition to funding by the Consortium for Advanced Research Training in Africa (CARTA). CARTA is an Africa-based, Africa-led initiative to rebuild and strengthen the capacity of African universities to locally produce well-trained and skilled researchers and scholars.

On concluding the workshop, the Deputy Principal, CoVAB, Prof. Samuel



Majalija commended the participants for being part of this training, he also appreciated Prof. Wills for sparing time to share knowledge with the Makerere University researchers.

Prof. Wills later urged the participants to keep applying this knowledge while undertaking research and keep practicing this knowledge to perfectly develop their research capacities.

The participants also disclosed their sincere gratefulness to the organizers of the workshop and Prof. Wills to whom they handed over a token of appreciation. In return, the participants were awarded certificates of completing the 10-day program.





*A group photo taken after the IPMB Alumni meeting on 15th July, 2019 in the Department of Food Science and Technology Conference room, Makerere University.*

## 4.4. CoVAB Hosts the 2019 Interuniversity Program Molecular Biology (IPMB) Alumni Meeting

The College of Veterinary Medicine, Animal Resources and Biosecurity was thrilled to host this year's Interuniversity Program Molecular Biology (IPMB) Alumni meeting, which ran from 15th July, 2019 to 17th July, 2019 and based on the theme; 'Enhancing safe and beneficial use of biotechnology in Sub-Saharan Africa.'

The three-day enlightening meeting was held at the Department of Food Science and Technology and it brought together IPMB Alumni and researchers from East Africa and Belgium, Professors

from various Universities and IPMB Professors, who shared views on new molecular biology and biotechnology developments, activities, education and research.

Respectively, the interuniversity meeting was coordinated by Dr. Steven Odongo, who was also nominated as the Chairperson for the IPMB Uganda Chapter which was launched on 17th July, 2019.



During the opening ceremony, Dr. Steven Odongo welcomed the delegates from their

different home Universities and informed them of the scholarships requested to enhance molecular biology through training. He further emphasized the need to keep the promise of sticking to the principle of IPMB, with institutions in the South and North collaborating.

His remarks were followed by a word from the CoVAB Dean, School of Biomedical Laboratory Sciences (SBLS), Prof. Frank Mwine, who encouraged all participants in the meeting to expand their tentacles in terms of capacity building, which leaves behind building blocks and mentors people. He also reminded the audience that they are the game changers individually and urged them to utilize such events to

network and build on their social capital. While commending such projects for their relevance in Africa and Worldwide, the Principal, CoVAB, Prof. John David Kabasa urged delegates to have Molecular Biology and Biotechnology not only at conversational level, but rather put into action and impact in terms of vaccines development to address the current global pandemics. He continually recognized Molecular Biology as the next generation source of wealth creation.

Before officially opening the ceremony, the Deputy Director-Directorate of Research and Graduate Training (DRGT) Prof. David Owiny emphasized the importance of the collaborations in Molecular Biology and as well hinted on the Biotechnology and Bio laboratory sciences law as not yet in existence, but being considered in the Parliament of Uganda.

Delegates later had an opportunity of getting to know IPMB from 1983 till today, through a discussion by the former *Scientific Administrative Coordinator of IPMB from Vrije Universiteit Brussels, Belgium, Prof. Edilbert Van Driessche*, who gave a brief background of IPMB to have started in 1983 as Tropical Molecular Biology, and in 1996,

it became a real interuniversity program, currently attracting students from all over the world.

Prof. Edilbert additionally explained to delegates the advantages of the interuniversity program of which to mention but a few included; the ability to have results that have real impact, the teaching staff becoming experts in all disciplines, and students being well trained and equipped. He also highlighted on the aim of the project which was to allow people to come together and compose solutions to address certain issues, in addition to sharing knowledge and ideas. Prof. Edilbert continually advocated for cooperation between the North- South and South- South, a key element of IPMB. Delegates were also given an insight into IPMB administration by the IPMB Director, Vrije Universiteit Brussel, Belgium, *Prof. Geert Angenon*, who also expressed the appreciation by students of the new program as it gives students an understanding of how organisms work at molecular level and thus improve health of humans, animals and the environment. During a closing ceremony of the meeting on 17th July, 2019, the IPMB Ugandan Chapter was launched, with Dr. Steven Odongo appointed as Chairperson of the IPMB Uganda Chapter. Prof. Edilbert later informed delegates of the program's future prospects to have a one East African Joint Chapter involving all member countries in East Africa.

For over 23 years, IPMB was jointly organized by the Vrije Universiteit Brussel, the Katholieke Universiteit Leuven and Universiteit Antwerpen and supported by VLIR-UOS as one of its International Course Programs (ICP).

## 4.5. Improving Animal Welfare through Education

The WTS/WTG Vets United animal welfare project based at COVAB, is a 2-year (to August 2021) project for promotion of animal welfare among students of the College of Veterinary Medicine, Animal Resources and Biosecurity. The coordination team for this project include; Prof. John David Kabasa (principal investigator), Dr. Tumwine Gabriel (project coordinator) and Dr. Ssuna Paul and Dr. Tayebwa Dickson (activity managers). The purpose of the project is to train and improve students' skills and knowledge on animal welfare.

This year, the project held activities from 21st/ October 2019 to 4th November 2019 and also invited Dr. Tina Lang to share her vast experience of 13 years of working in small animal's clinics and practices in Germany and Spain.

### Activities performed this year

a) Holding sensitization seminars at COVAB and meeting the animal welfare students club.



b) Performing practical sessions for students in both large and small animals



c) Taking students to field trips including visiting the only dog shelter in Uganda; the Uganda Society for promotion and care of animals (USPCA)



d) Community outreach in Nansana municipality to vaccinate and treat dogs and cats and to sensitize the communities.



In summary: The students enjoyed and learnt a lot from Dr. Tina Lang. Taking part in lectures and having hand on training in performing spays and neuter of dogs, and they are hopefully looking forward to the activities for next year.

## 4.6. CoVAB Represented in the Global Health Security Conference 2019 at University of Sydney

The Global Health Security Conference convened from June 18th to 20th, 2019 at the University of Sydney- Australia. The Makerere University College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB) was thrilled to have one of her graduate students, Mr. Siya Aggrey (MSc in International



Infectious Diseases Management) take part in the conference. Mr. Siya shared about Farming Systems in Uganda and Zoonotic Diseases Outbreaks.

The conference itself was in line with CoVAB's mandate of 'Sustainable Biosecurity through securing the freedom, integrity and sustainability of humanity, economic and security systems from the dangers posed by life threatening biological agents at national, regional and global level'.

CoVAB continues to realign her programs to address national, regional

and global concerns. And, we will always be happy to see students participate in such fora.

## 4.7 CoVAB Faculty Intellectual Property and TISC Sensitization Programme



CoVAB is rich with professional researchers in science with lots of publications, and it runs a number of research projects and innovations which makes it a strong institution in Africa. However, all this creation needs to be protected from the unfair use by others, and that's why the college hosted a team from Uganda Registration Services Bureau (URSB) on 24th and 25th June, 2019 to sensitize faculty and students on intellectual property (IP) rights for researchers and innovators.

The URSB team which was led by the Deputy Director for Innovations, Development and Partnerships Makerere University, Assoc. Prof. Robert Wamala briefed participants on patents and IP rights, and encouraged them to register trademarks for their research innovations. Additionally, participants were urged to have copyrights to protect their science publications and have minimal burdens of confidentiality.

"Have your creation available for the public while it's also protected, don't restrict yourself because your innovations might have an inventive aspect and these should be patented for protection," affirmed URSB Patents Examiner, Mr. Ageet Onyait.

The Technology and Innovation Support Centres (TISC) were also introduced to the participants, they are vital in increasing on the quality of research done by innovators as well as researchers, in addition to giving free access to patent databases and scientific journals.

Scientists form ideas that are monetary and of human health benefits when applied and these require protection. Nevertheless, there is still need for institutional integration to leverage expertise so that institutional research and innovations are protected and recognized.



*Prof. India (R) & Ass. Prof Marcy Souza (L) imparting knowledge and teaching skills in the participants during the interactive sessions*

## 4.8. Master Teacher Workshop for Veterinary Medical Educators

**W**ith the persistence to drive transformative knowledge, skills, innovations and services,

CoVAB mirrors this in nurturing not only students, but also the academic staff. This was reflected through the Master Teacher Workshop of Veterinary Medical Educators, which ran from 18th June to 21st June, 2019 and held in collaboration with The University of Tennessee College of Veterinary Medicine (UTCVM).

The 4-day workshop provided faculty with extra skills in professional teaching and qualifications in the development and refinement of teaching and testing materials. It also focused on improving teaching skills of the college academic staff through the train-the-trainer format.

It was a great pleasure for the College to host facilitators from UTCVM, Prof. India Lane, Ms. Misty Bailey, and Ass. Prof. Marcy Souza, who imparted knowledge and teaching skills in the participants during the interactive sessions, and to this team, we also much recognize

and extend our appreciations for their support towards all the workshop activities through the Master Teacher Program.

Similarly, CoVAB as well hosted



participants from Egerton University-Kenya, Addis Ababa University- Ethiopia and Sokoine University of Agriculture-Tanzania for this training which was coordinated by the College Deputy Principal, Prof. Samuel Majalija.

On opening the workshop, the Principal- COVAB, Prof. John David

Kabasa appreciated the team from UTCVM and the COVAB's Deputy Principal for securing support towards this initiative.

"It is assumed that all lecturers know how to teach, however there are extra skills that one may be lacking to be a teaching professional. This engagement will therefore help us nurture people into becoming teaching professionals," said Prof. Kabasa.

Participants shared ideas on the best teaching practices and at the end of this engagement, they were given awards of completing the 4- day course; these in turn extended their appreciations to the facilitators and pledged to apply the acquired Mastery of Teaching skills in their regular service delivery.



*Participant from Egerton University, Kenya (right) receiving her certificate of completion.*



This meeting also opened doors for the formation of a new international consortium for Veterinary Education, so that the acquired skills in Mastery of Teaching can be extended to other universities globally, hence a vital contribution to the global education sector.

## 4.9. Gender analysis and Methodologies Training

On Monday 19th August, 2019, the Gender Analysis and Methodologies Training kicked off at the college of Veterinary Medicine Animal Resources and Biosecurity Ruth Kisling block with over thirty five trainees who got skills in Basic Livestock Research for five days.

The Training also saw introduction of the SHEVAX project which intends to hear of women Voices, Action, Research to support women's Agency and Empowerment in livestock vaccine distribution and use in three East African countries Uganda, Kenya and Rwanda to the trainees. Professor Anthony Mugisha the Project Manager in Uganda also said that the project seeks to produce improved women in household wellbeing through empowerment and equitable engagements in order to benefit from the livestock value chain.

Trainees were also equipped with other consequential aspects in data collection including scoring and ranking, community dialogue, Questionnaire preparation and focused group discussions for the entire time of the training.



The trainees together with their trainers also reflected on household patterns of power and decision making tools discussing who has access, control and power over resources in a family. Do women have access to communal resources and traditional social support system for example patronage and kinship? This was the subject matter in the second day. Dr. kyewalabye a

woman livestock activist from the school of Veterinary Medicine and Animal Resources cautioned women trainees to work hard such that they are in position to make some decisions in the household. She went ahead to say that when a man realizes that you are capable of surviving on your own, the more he will Value you.

During the third day, trainees performed role plays exhibiting ethics and disciplines of community based research and it was on this day when trainers grouped attendees, taking them through the SHEVAX Google system where coding and data upload happens in preparation of the field visits on the fourth day.

At exactly 8am on Thursday, the team boarded off college for a field visit in Mukono where they met and engaged a number of farmers and Agro Vets who gathered at the district headquarters. On the fifth day, the team analyzed the different data collected during classroom exercise and field work, formulated methodology tables and flip charts and later on in the day, they reviewed women participation and Empowerment in Livestock as closing remarks and hence closure of the five days event.



*Gender Analysis and Methodologies trainees engaging a group of Farmers from Mukono district in a focused Group at the district headquarters during their field visit.*

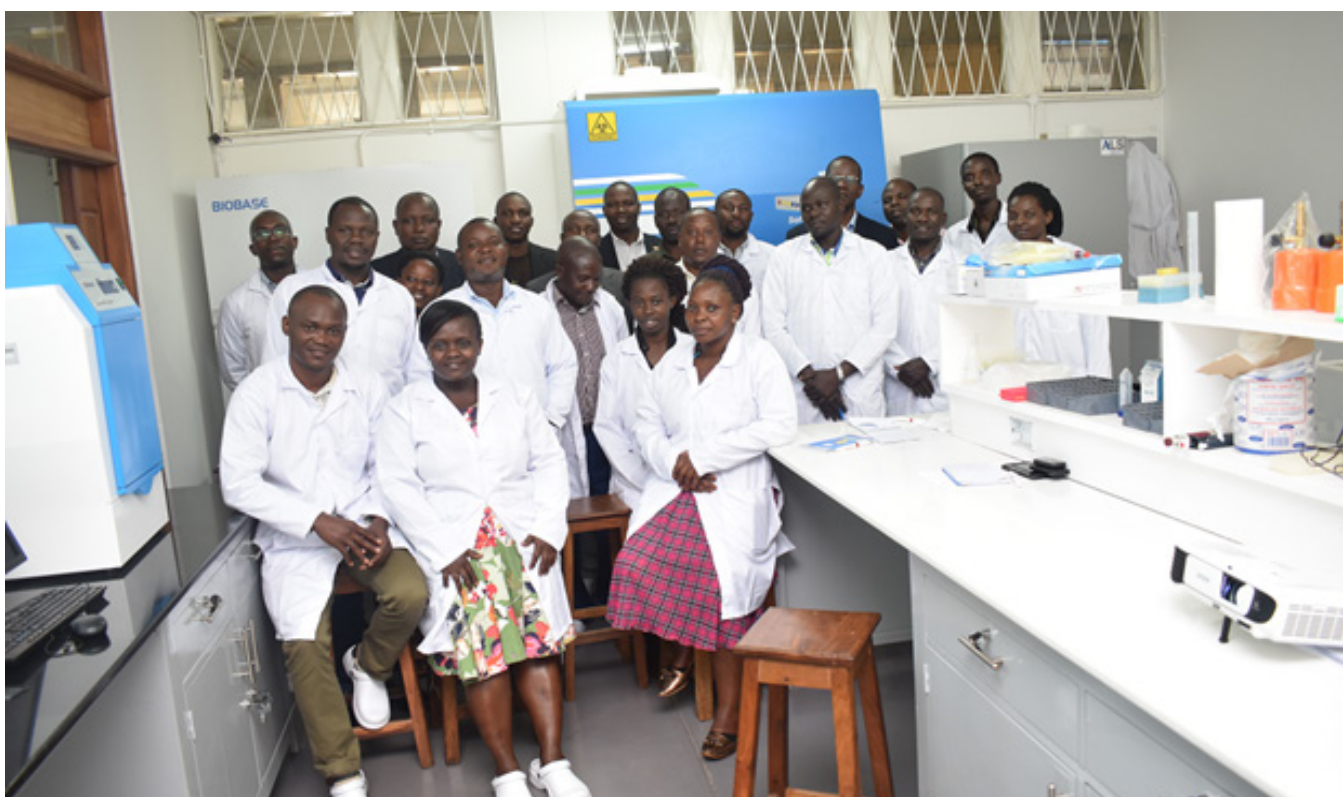
## 4.10. VETERINARY LABORATORY STAFF TRAINING ON DIAGNOSIS OF TICK-BORNE DISEASES AND TICK ACARICIDE RESISTANCE

The Research in Tropical Diseases and Vector Control (RTC) laboratory conducted a four- days' workshop on diagnosis of Tick-Borne Diseases and Tick Acaricide Resistance from 9th December 2019 to 12th December 2019. With support from Food and Agriculture Organization of the United Nations, the workshop aimed at building national capacity for acaricide resistance diagnosis and control. Participants in this training were Veterinary Laboratory staff from different districts in Uganda.

The workshop was coordinated by Dr. Patrick Vudriko, who led the RTC Laboratory team of facilitators who included

Dr. Joseph Byaruhanga, Dr. Dickson Tayebwa, and Mr. Fred Kanyike.

Participants were equipped with knowledge and skills in/ on diagnosis of Tick- Borne diseases, major tick species, identification and tick acaricide resistance testing and diagnosis, Biosafety and biosecurity concerns, tick resistance management strategies, in addition to engaging in practical sessions regarding taxonomical tick identification.



*Participants in the Workshop on Diagnosis of Tick-Borne Diseases and Tick Acaricide Resistance pose for a group photo during the training's opening ceremony in the RTC Laboratory- CoVAB on 9th December 2019.*





# 5. SEMINARS

## 5.1. Improving Animal Welfare

**W**TG Vets United Animal Welfare project annually conducts workshops to equip participants with knowledge and skills in proper handling of animals. Similarly, on 24th October 2019 the project team held a seminar to introduce the Animal Welfare project to the veterinary students at CoVAB.

Through a presentation by the Project Coordinator, Dr. Dickson Tayebwa, he informed students that WTG Vets United aims to raise Animal Welfare standards worldwide. The issues addressed by the project include; proper handling of animals during transportation to the abattoir, for vaccination, infringement of animal rights to mention but a few. Since its commencement, the project has been able to build students' capacities in animal handling and welfare through lectures and practical field trainings, and build capacity of students in leptospirosis laboratory testing techniques.

In Africa, the project is running in Uganda, Malawi, Gambia, Kenya, and Nigeria with support from WTG Vets United which aims at raising animal welfare standards by offering better education to vets in training.

## 5.2. CoVAB Researchers embark on Curbing Bacterial Food Contamination on Dairy Farms IN Mukono District

In a study to evaluate the "Prevalence and susceptibility profiles of *Campylobacter jejuni*, *Escherichia coli* (E. Coli) and *Salmonella* in dairy farms Mukono District, Uganda" conducted by Dr. Sylvia Baluka and her team, it was discovered that E. coli bacteria is still resistant to most commonly used antibiotics on dairy farms, which puts humans at risk of bacterial infection of animal origin.

While presenting the study to various scientific researchers at CoVAB on 12th September, 2019, Dr. Baluka reported that there are a number of food borne diseases that humans are exposed to through consumption of contaminated food, which this research embarks on addressing.

During this study, 184 samples were collected from 33 selected study farms, which included milk, fecal and water samples and analyzed in the laboratory. It was reported that E. coli isolates from fecal and water samples showed high resistance towards oxacillin, a commonly used antibiotic. *Campylobacter* and *Salmonella* were not detected in the study area.

Dr. Baluka additionally cautioned that oxacillin shouldn't

be routinely used for treating bacterial infections, and that there should be restricted access and use of antibiotics such as; gentamycin and ciproflax among others. She also cautioned that prescriptions should be taken as directed by the physician.

"For these antibiotics to work, we need to achieve a certain quantity in the blood and therefore patients should take antibiotics as directed by the physician," said Dr. Baluka. More team members in this project include Prof. Francis Ejobi, Mr. Lameca Buyinza, Prof. Julius Okuni to mention but a few.

This research was funded by CARNEGIE

Postdoctoral research Project: Nurturing Emerging Research Leaders through Post-Doctoral Training at Makerere University (NERLP) 2017-2019 to enhance the Capacity of postdoctoral fellows to become Research leaders in Uganda.

The prevalence of food borne diseases has an implication when spread from animals to humans, therefore, we are working on a monitoring plan to see that animal dairy products are residue free and safe for human consumption," said Dr. Baluka.



## 5.3. Professional Development of CoVAB'S Veterinary Educators



Dr. Samuel Oketch a veterinary medicine and animal welfare lecturer and a FEP beneficiary as well talking to students about his experience at Michigan State University.

CoVAB takes initiative to support the development of its Academic staff's teaching capacity through international trainings. Among the many participants in the 2018 Faculty Exchange Program (FEP) was our very own Dr. Samuel Oketch.

As a participant attached to Michigan State University (MSU), USA, Dr. Oketch shared his experience in FEP with fellow CoVAB scientific researchers, academic staff and students through a report on "Reflections on the USDA Faculty Exchange Program 2018," which he presented on 19th September, 2019 in the College Media Hall.

He informed the audience of FEP's aim which is; to promote the development of sound science, policy, teaching and researching techniques in Veterinary Medicine. FEP enhances the teaching ability of agricultural and veterinary educators from institutions of higher learning in developing countries.

As an effort to learn from other international universities' teaching styles in addition to having a favorable learning experience for students, reflections were made on MSU's Veterinary teaching and learning environment to mention but

a few which included; well-equipped laboratories and theatres for animal surgeries with technical experts.

The institution also strongly promotes research culture through the commemoration of the Phi Zeta Research Day, when various researchers get to publicly share their study findings. The institution as well participates in community service and outreaches, in addition to the high spirit of alumni contribution towards University activities such as; renovations, support towards sports games which is also a perfect platform for professional networking.

With these reflections launched to CoVAB administrators and academic staff, this laid a platform for discussions on how to enhance students' learning experience. The Chair of the seminar session, Prof. Samuel Majalija, who is also the College Deputy Principal encouraged students to apply for international opportunities in veterinary training to build on their knowledge on how professional veterinary activities are done.

This engagement also stemmed into creation of a platform for final year students to publicly present their

research work as a way of sustainably promoting the research culture in Makerere University. Due to the exchange program being costly, this also brought on board discussions on having Makerere University apply for more grants to support students' participation in this program.

The Exchange Program for teaching staff is funded by the United States Department of Agriculture (USDA) which offers fellowships in USA to agriculture and veterinary medicine educators for selected countries in sub-Saharan Africa.

## 5.4. BANG embarks on Promoting Moral Conduct in High Academic Institutions

**O**n the 15th of August 2019, Becoming a New Generation (BANG) Team held a Workshop at the College of Veterinary Medicine, Animal Resource and Biosecurity. The Eng. Steven Langa led team shared with students about "Sexual Health" and how best Sexuality can be a foundation for a better life and rather not a breaker for life.

"The 21st Century is for Africa and therefore Africans need to rise up and compete on the world stage. If the current generation doesn't wake up, Africans will be enslaved on their own continent" said Mr. Langa who continuously reflected on the state of fatherhood in Uganda where 10% of fathers are unaware of the existence of their own children, with 45% aware but no emotional connection with their children, terming this as positioning the country in a critical and unfair system of upbringing children.

This country is struck by inadequate preparation of youths, too much poverty leading to reckless and antisocial behavior such as, domestic violence, reckless sexual behavior and total loss of morals, values and character among people. To address such a situation, Mr. Langa reported that Family Life Network came up with the "BANG" campaign in higher institutions of learning to ensure restoration of ideal Sexuality, family values and morals.

The students were very much delighted for the BANG Team's Visit to the college and appreciated the words of wisdom shared throughout the entire workshop. One of the students said that BANG has given her a critical thought and triggered her to think about a life of 30 years from now.



## 5.5. CoVAB International Genetically Engineered Machine Project embarks on Addressing Environmental Pollution Concerns

**O**n 31st October 2019, the International Genetically Engineered Machine (iGEM) Project held a seminar on the project's global activities at the College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB). They shared knowledge with the students on how they use synthetic biology to address environmental challenges by embracing the better outcomes of plastic waste which can be turned into fuel. The students had presentations from Ms. Thea Chrysostomou, the iGEM European Ambassador from Paris and Mr. Alex Kyabarongo, the club's team leader at Makerere University on research and activities undertaken by the project worldwide.

Makerere- CoVAB iGEM under the Principal Investigation by Prof. Julius Boniface Okuni launched the Synbio Africa initiative in 2018. This is the very first synthetic biology community in Africa. It brings together scientists, researchers, policy makers, students and the wider community to discuss synthetic biology and its potential benefits to humans, animals, plants, microorganisms, and to the development of Uganda's economy.



# COVAB STUDENT AFFAIRS

6.0

## 6.1. 2019/2020 CoVABSA Executive Committee Assumes Office



**You are  
the next  
generation  
pool of  
leaders and  
therefore  
must brand  
yourselves..**



Current CoVABSA President, Hon. James Eyangu took an oath of office during the CoVABSA students' leaders' handover ceremony held on 5th September, 2019 at CoVAB, Makerere University.

On 5th September, 2019, the College of Veterinary Medicine, Animal Resources and Biosecurity Students' Association (CoVABSA) held a handover and swearing in ceremony, in which a new executive committee of student leaders assumed office.

The swearing in session of the incoming cabinet for the association and leaders of the various college ministries was presided over by the

outgoing CoVABSA Speaker, Rt. Hon. Florence Nassuna, who was represented by the outgoing CoVABSA President, Mr. Joel Musafiri.

The college Principal, Prof. John David Kabasa, who was also the Guest of Honor commended the outgoing student leaders for serving CoVAB and Makerere University at large responsibly. He also congratulated the new student leaders upon assuming governance positions and reminded them of their responsibility of branding

the College.

"You are the next generation pool of leaders and therefore must brand yourselves," said Prof. Kabasa. He additionally encouraged them to present students' needs to the College and University administration responsibly, while he promised to support CoVABSA in all its endeavors. It should be recalled that the new CoVABSA Executive Committee was elected by the students on 29th April, 2019 for a one year term of service.

## 6.2. University Students' Training of Trainers Workshop on Transformative Masculinities and Femininities

The CoVAB Anglican Community held a students' training of trainers workshop on transformative masculinities and femininities at the Ruth Keesling Centre, CoVAB Makerere University from 27th to 29th July 2019, which was based on a biblical scripture; "Behold I create a new earth," channeled towards building a world without AIDS.

The three - day workshop brought together youths who were inspired by various motivational speakers from spheres of



society, religion, health and economy among others. Participants were

engaged in education that nurtures and promotes the ethical, intellectual, social and emotional development, so that they can become moral, caring, critical, responsible and disease-free individuals.

This was through imparting in them knowledge, values and skills necessary for success in life, which they are to share with the rest of the people around the world, hence as well becoming trainers in transformative masculinities and femininities.

## 6.3. Veterinary Students' Career Guidance

CoVAB, with a hand from the college administration prioritizes guiding students on their profession and future career decisions.

This was showcased on 17th October 2019, when the Veterinary students had a talk from various inspirational speakers on the dos and don'ts for a successful life, based on the theme: Inspiring the young generation to increase visibility and potential of the veterinary profession to address global challenges for sustainable development.

A renowned educationist and performing artiste, Mr. Fagil Musa Mandy was a guest speaker to the students. While extracting his enormous inspiring career path, he invigorated addressees about Africa's composition of everything required for successful livelihoods, drawing much attention onto the need to change from killer mindsets to positive ones.

"We have everything needed for being a super continent, but the problem is our faults of history," said Mr. Mandy.

He shared with students information extracted from one of his readings on the six killer mindsets that need to be addressed for greater achievements, which listed African populations as being; victims of colonialism, inferiority complex, self-hatred, copying what isn't suitable, behaving like a herd of animals, and elite dilemma resulting into mixed thoughts due to diversity of knowledge.

*The Guest of Honour, Commissioner Animal Health from Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Dr. Anna Rose Ademun, who is also the Chief Veterinary Officer encouraged students to appreciate any opportunity that surfaces them for career growth.*

"Wherever you are, grow yourself, go for further studies and don't refuse any work opportunity," stated Dr. Ademun.

Students were also awakened on the need to join the Uganda Veterinary Association (UVA) to secure the association's future support in the job market in addition to becoming more knowledgeable about the veterinary practice and having a diversity of skills required for a get-through in the competitive world.

The event was organized by the Makerere University Veterinary Students Association (MVSA) under the coordination of the Dean, School of Veterinary Medicine and



*The chief Veterinary Officer Ministry of Agriculture, Animal industry and Fisheries Dr. Anna Rose Ademun delivering her speech during the Vet Students Career Event.*

Animal Resources (SVAR), Prof. Robert Tweyongyere, together with the association's president, H.E. Jagenda Jimmy, with funding from the association's partner, NORBROOK.

NORBROOK is a veterinary pharmaceutical company which focuses on product innovation and invests



Students were also awakened on the need to join the Uganda Veterinary Association (UVA) to secure the association's future support in the job market in addition to becoming more knowledgeable about the veterinary practice and having a diversity of skills required for a get-through in the competitive world.

significantly in Research and Development.



## **7.0 THE COMMUNITY AND OUTREACHES**

# CAPAZOMANINTECO



## CAPAZOMANINTECO Project Community Outreach against Zoonotic Diseases

The Zoonotic Diseases management project conducted a community outreach in Nakasongola District on 12th and 13th November 2019, as one of its efforts to address the issue of zoonotic diseases that the region is still grappling with.

While in Nakasongola district, the team which was led by the project Principal Investigator, Prof. Clovice Kankya and one of the project's beneficiaries, Dr. James Bugeza conducted vaccination of dogs, pigs, and cattle. The team as well held a community sensitization on zoonotic diseases and a One Health talk in Migeera Town Council.

Along with them were NORHED officials who were led by Ms. Jeanette Da Silva. The NORHED Officials were hosted by the CAPAZOMANINTECO team to discuss the project's activity progress.

The One Health talk brought together veterinary doctors, human health personnel, farmers, primary school pupils, researchers, teachers, and members from various communities in Nakasongola district.

The community had lessons learnt from a One Health presentation by Dr. James Bugeza, who is an MSc beneficiary of the project. The topic on Current Zoonotic Diseases Management and Biosecurity in Africa was shared by Prof. Clovice Kankya.

Migeera community members were as well educated about the roles of men and women in promoting One Health which was relayed by Prof. Consolata Kabonesa, who is the project's Gender Focal Person.

The Capacity building in Zoonotic diseases Management Using Integrated Ecosystems and gender focused approach (CAPAZOMANINTECO) project has over the years conducted similar activities in Nakasongola District as an endeavor to address the issue of zoonotic diseases.

It should be remembered that on 30th October 2014, CAPAZOMANINTECO project conducted a One Health workshop in Nakasongola which aimed at increasing pastoral community awareness about Zoonotic diseases such as; Brucellosis, Rabies, Cysticercosis, Echinococcosis, and Tuberculosis, as well as identifying risk factors that increase community exposure to those diseases. In 2017, the team visited Nakasongola pastoral communities for a follow up on the human-livestock health in regards to the control of Zoonoses.

CAPAZOMANINTECO is one of the 9 projects funded by NORHED at Makerere University which is the grant recipient.

NORHED aims at strengthening capacity of higher education institutions in Low and Middle Income Countries



*The CAPAZOMANINTECO Team deworming and vaccinating animals in Nakasongola District.*

(LMIC), and to increase quality and quantity of research conducted by the countries' own researchers for enhancement in sustainable economic, social and environmental development.

## 7.2. Divine Activities at CoVAB



**CoVAB's** diversity in religious composition is one of the factors that makes her a strong college, with various religious communities such as the Moslems, Catholics, Anglicans, and Seventh Day Adventists among others. A number of divine activities are held, where covabians are involved basing on individual divine belonging and preference, which promotes staff and students' diverse interactions and moral nurturing.

## 7.2.1. CoVAB Anglican and Catholic Community Reaches Out to Vulnerable Grandmother of Six Orphans



Second from left is Nalongo Nakate with her grandchildren when the CoVAB Christians reach out to give them support

BELOW: Nalongo Nakate's house which is in bad shape in Kidukulu Village, Luweero District.



On 5th April, 2019 the CoVAB Catholic and Anglican Community reached out to Nalongo Teopista Nakate, a 52 year old vulnerable woman and six orphans in Kidukulu Village, Luweero District to convey their support to this family.

Nalongo Nakate reported to the CoVAB Christians that since the death of her children, she carried on the responsibility of taking care her grandchildren (the oldest child being 11 years and the youngest being 4 years old), despite of her incapacity in handling this role.

She however works as a cook at the school where her grandchildren study and the money being raised from this job, she in turn pays the orphans' school fees.

The CoVAB Christians therefore showed their concern about this family's

way of living, and prioritized supporting it with a number of house hold needs, books, and pens to mention but a few for the children.





# COVAB CATHOLIC COMMUNITY



## 7.2.2. CoVAB Catholic Community End of Semester Mass, Family Day and X-mas Party

On 5th December 2019, CoVAB Catholic community held an end of year mass and Christmas Party. During the event, some students shared their most catchy moments in semester one. It was such a memorable evening for all.

## PICTORIAL



Left- Fr. Dennis from St. Augustine Church Makerere University Praying for students during the Semester 1- 2019/2020 End of Year Mass, and Right- some of the money fundraised for the CoVAB Catholic Community activities during the event.



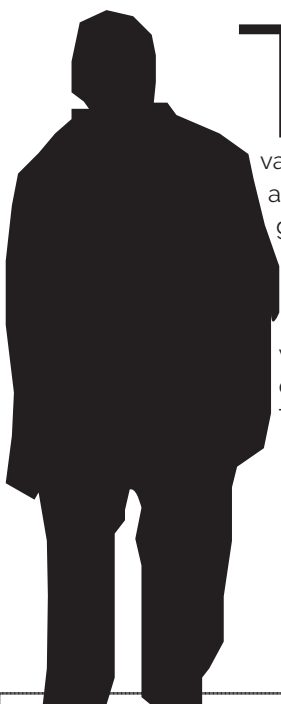
Left- students sharing their semester 1- 2019/2020 academic year experience, Right- Masters of Ceremony entertaining the congregation during the end of Year Christmas Celebrations.



Left- students sharing their semester 1- 2019/2020 academic year experience, Right- Masters of Ceremony entertaining the congregation during the end of Year Christmas Celebrations.



## 7.3. CoVAB Joins Thousands in the National Anti- Corruption Walk



Through an Anti- Corruption walk, the government of Uganda expressed its continuous commitment to fight fraud in various national institutions, which is a huge concern the country is still grappling with. Under the leadership of Makerere University's Vice Chancellor, Prof. Barnabas Nawangwe, on 4th December 2019, CoVAB together with the rest of Makerere University colleges participated in this endeavor. The 3.6 Kilometer walk was spear

headed by the President of Uganda, Gen. Yoweri Kaguta Museveni. He was joined by the Vice President, Hon. Edward Sekandi, the Chief Justice Bert Katureebe, the Deputy Speaker of Parliament Jacob Oulanyah, Cabinet Ministers, Heads of Government Agencies, Members of Parliament, Religious leaders and thousands of Ugandans.

The walk commenced from the Constitutional Square to Kololo where President Museveni addressed the walkers. He echoed his awareness of the corrupt government officials, and warned that he is still gathering enough evidence on this matter. The President also advised government agencies to always consider integrity while recruiting workers rather than paper qualifications, which can help solve the problem of fraud.



TOP: Prof. Barnabas Nawangwe (3rd from left) leads participants from Makerere University in the Anti-Corruption Walk.

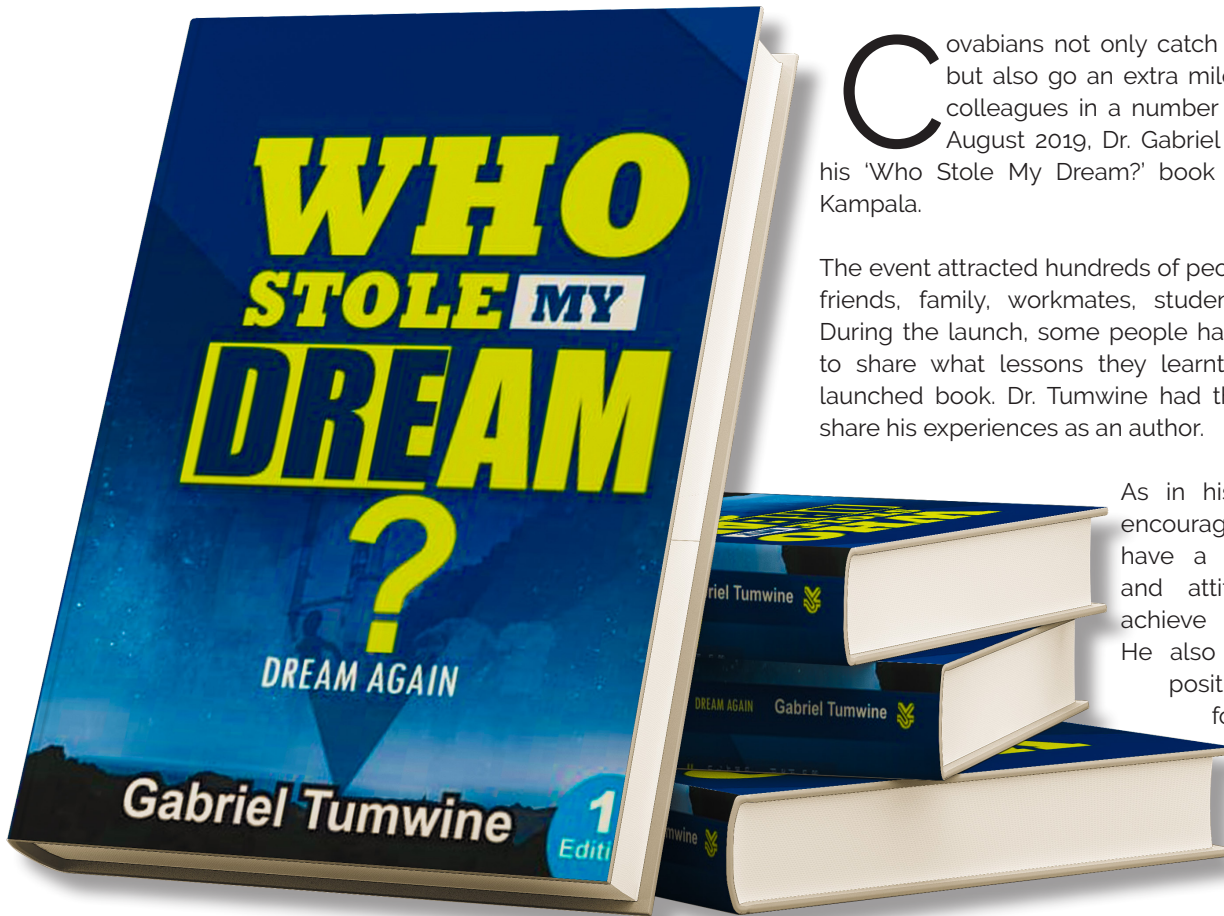
RIGHT: Makerere University Participants in the Anti-Corruption walk pose for a group photo at the University Main Building on 4th December 2019.



# 8.0. COVAB STAFF ACHIEVEMENTS



## 8.1. CoVAB'S Gabriel Tumwine Launches His Book, 'Who Stole my Dream?' and a philanthropist foundation

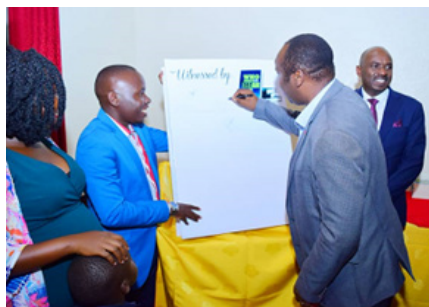


CoVabians not only catch up in academics, but also go an extra mile to support their colleagues in a number of ways. On 30th August 2019, Dr. Gabriel Tumwine launched his 'Who Stole My Dream?' book at Kolping Hotel Kampala.

The event attracted hundreds of people who included friends, family, workmates, students, and authors. During the launch, some people had the opportunity to share what lessons they learnt from the newly launched book. Dr. Tumwine had the opportunity to share his experiences as an author.

As in his new book, he encouraged everyone to have a positive mindset and attitude so as to achieve their dreams. He also emphasized the positive effects of a focused attitude as he reminded partakers to have more than one income generating extents.

### PICTORIAL



**Gabriel & Winnie Tumwine  
FOUNDATION**

# 9.0: PUBLICATIONS 2018-2019

## 9.1. CoVAB 2018 Publications

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