Moving forward towards excellence is never an easy feat, but that is exactly what the Biologicals Manufacturing Division (BMD) is doing. For 30 years, BMD has been working with the Department of Health (DOH) towards responding to the country's need for vaccines.

On the 30th of January 2017, BMD commemorated its 30th anniversary. The celebration was a humble one but boasting with pride on the numerous accomplishments BMD has had over the years.

The highlight of the celebration was the commendations to outstanding employees over the years and the unveiling of the audio-visual presentation entitled ‘BMD Before, Now and Beyond’ which showcased the growth of BMD from its early days to its transfer in the Research Institute for Tropical Medicine (RITM).

**BEFORE: The Biologicals Production Service**

In 1805, King Charles IV of Spain sent a scientific expedition – La Real Expedición Filantrópica de la Vacuna (The Royal Philantropic Vaccine Expedition), to Manila. The world’s first immunization campaign was headed by Dr. Francisco Javier de Balmis, court physician of the Spanish crown, the mission carried the Vaccinia virus to the archipelago and maintained it by serial passages in children, who were purposely brought along in passage.

A year after the expedition, a Central Board of Vaccination was created to propagate and produce smallpox vaccine. This was followed by the establishment of the First Municipal Laboratory in Manila. In 1893, the Central Board of Vaccination was reorganized, paving the way for the formation of the Bureau of Governmental Laboratories in 1901. The latter was renamed Bureau of Science in 1905 where the production of smallpox vaccine begun.

In 1920, the Serum and Vaccine Unit of the Bureau of Science was transferred to Alabang, Muntinlupa. It was renamed as Alabang Serum and Vaccine Laboratories (ASVL) and was transferred to the University of the Philippines in 1936. Through Executive Order 94, the Division of Laboratories that includes the ASVL was created and incorporated with DOH.

Three years after, the Division of Laboratories was transformed to Public Health Research Laboratories (PHRL). In 1958, PHRL was replaced with the Bureau of Research and Laboratories (BRL), making ASVL a division of BRL. On the 30th of January 1987, ASVL was separated from BRL and became a support service of DOH known as the Biologicals Production Service (BPS).

The year 1999 marked the transfer of BPS to RITM as well as the start of the Vaccine Self-Sufficiency Project (VSSP). BPS then became

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Dr. Lupisan steers RITM forward to 2017

Research Institute for Tropical Medicine (RITM) Director Dr. Socorro P. Lupisan delivered the first “State of RITM Address (SORA)” last January 30 at the Training Center Auditorium.

During the SORA, feedback about the Institute’s accomplishments, and future initiatives were presented to RITM staff.

Moreover, Dr. Lupisan underscored that the Institute’s thrust and priority revolves around improving service delivery to better cater the needs of the Filipinos.

One important metric towards achieving this goal is the ISO 9001:2015 accreditation. RITM has already conducted an internal audit in preparation for the actual ISO audit this coming March.

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RITM strengthens study groups

The Research Institute for Tropical Medicine (RITM), through its newly established Research and Innovation Office (RIO), held the first Institutional Research Agenda Setting to identify research priorities and to develop a comprehensive research agenda last January 26-27 at the Orchid Garden Suites, Manila.

Almost 60 attendees comprised of RITM investigators, and representatives from different study groups participated in the two-day workshop. The output of the workshop will encompass the future research work of the Institute for the next five years.

According to RIO Senior Science Research Specialist Kristel Perdigon, RITM marks this as its initial research agenda output.

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**Biologicals Manufacturing Division... (from page 1)**

the Biologicals Manufacturing Division (BMD) that people know today in 2001, a new Centre for Good Manufacturing Practice (cGMP)-certified vaccine production plant was established in RITM.

NOW: The Biologicals Manufacturing Division

With the aim of improving vaccine production and boosting productivity, BMD established the Vaccine and Antitoxin Study Group (VANITS) in 2016, a team under the new Vaccine Research and Development Committee (VRDC). At present, RITM-BMD is led by Dr. Noel G. Macalalad.

The division is currently producing two vaccines: the freeze-dried Bacillus Calmette–Guérin (BCG) vaccine in its experimental stage and the Purified Capsular Polysaccharide Vaccine (PCV).

BMD Production Department Chair Ms. Cristina Rupa emphasized, "RITM is the sole manufacturer of PCV in the Philippines. We have future plans to integrate our PCV product here at BMD. We plan to shorten the length of time of production process by adopting a new technique that will also increase the number of ampoules produced per kilo.

Hopefully, by second semester of this year, we can start the pre-qualification for the innovation of our anti-venom.”

Recently, BMD is starting to revive the VSSP initiative between RITM and DOH. VSSP aims to produce vaccines for DOH’s Expanded Program on Immunization (EPI), including the revival of BCG vaccine production.

Subsequently, BMD also pursues funding from the Philippine Amusement and Gaming Corporation (PAGCOR) and Health Facilities Enhancement Program (HFEIP) to cover the facilities, production costs and equipment.

BMD is also continuing its drive to enhance the knowledge, skills and capabilities of its Quality Control Department staff.

To fulfill the growth and expansion of the biological products being manufactured, the revival and development of Bacterial Typing Antitoxin, BCG Vaccine, and Equine Rabies Immunoglobulin (ERIG) are currently in progress.

Ms. Rupa also talked about the legacy that comes with being part of BMD. She said: "Our senior staff here at BMD underwent trainings abroad in their respective fields and specializations. They have years of experience and capability to produce under their belt. Meanwhile, BMD management is currently conducting continuous cGMP and Cold-chain Breakdown Trainings to equip the staff with the most relevant and most manufacturing work routines.”

BEYOND: BMD in the years to come

Hundreds of years have passed since the Balmis expedition arrived in the Philippines. On April 15, 2004, a marker was mounted at RITM in honor of the expedition. At present, the Balmins Building also houses the BMD office.

In the coming years to come, BMD plans to create new departments as well as hire additional manpower to aid in the production of vaccines and biologicals. New vaccines are aimed to be produced every year and researches are continuously being conducted to keep up with the latest innovations in vaccine production and to tame the current supply-chain complexity.

BMD has a lot more to offer, whether as a division of RITM or as the leading vaccine producer in the country. Big changes are in store for the year 2017 and beyond.

**Director’s Desk**

**BMD in retrospect**

The last quarter of 2016 stirred public concern as the first local transmission of the Zika Virus was reported. We were swift in taking action as the Department of Health through the Research and Health Services Office (RHSO). We hope to create more impact in the public health sector through trainings and communicating health policies based on our research outputs and data, said Dr. Lupisan.

True to its oath of serving the Filipino people, RITM’s Technology, Transfer, and Review Committee (TTRC) is set to become a Training Office this April to further build staff capacity and better their skills in delivering the Institution’s vision.

RITM aims to continuously improve its services in surveillance, referral laboratory functions, biologicals production, and most importantly, patient care.

"With all these plans set in motion, I join everyone else to help us achieve the institution’s vision. Let us all be united in our endeavors as we embark on yet another dynamic year. In our continuous pursuit of excellence, we will journey on and collectively fulfill what we have set out to do because we are OneRITM,” said Dr. Lupisan as she ended her encouraging address.

**National Polio Laboratory toughens efforts for the PH Polio Endgame Plan**

The National Polio Laboratory (NPL), housed at the RITM Department of Virology, wins the support of local academic institutions, environmental agencies, as well as research and military laboratories in strengthening efforts toward polio eradication in the Philippines.

Key representatives from various institutions pledged their commitment to the Philippine Polio Endgame Plan during the Second Polio Endgame Update held at the College of Veterinary Medicine (CVM) Workshop on March 14-16, 2017 at the B Hotel, Alabang. The program was part of the comprehensive strategic approach to address the laboratory aspect of the Polio Endgame, which includes the (1) establishment of environmental surveillance laboratory, (2) reactivation of the National Task Force for the Laboratory Containment of Poliovirus, (3) distribution of laboratory advocacy materials to key stakeholders, and (4) initiation of polio legacy planning.

The Task Force also eyes for the passage of an Executive Order addressing all objectives of the Polio Eradication and Endgame Strategic Plan including detection and interruption of poliovirus (PV) transmission; strengthening of immunization systems and cessation of the use of oral polio vaccine (OPV); laboratory containment and certification; and global polio legacy planning.

In 2016, NPL has established the Environmental Surveillance for Poliovirus and other Viral Pathogens following provision of equipment and laboratory supplies from the World Health Organization (WHO). NPL also conducts regular laboratory confirmation of cases in support of DOH’s AFP Surveillance Program. Currently, the Philippines is updating its national inventory of clinical and diagnostic facilities.

The Global Polio Eradication Initiative (GPEI) – the largest international public health effort to be undertaken – has decreased the annual incidence of polio by 99% since its launching in 1988. The last wild poliovirus and circulating vaccine-derived poliovirus cases in the Philippines were detected in 1993 and 2001 respectively.
LEPROSY: A BIBLICAL DISEASE
(Or So We Thought)

Is leprosy even relevant?

"Hindi ko rin niniwala na tayo'y nagamit na ang (leprosy)." (I also didn't know what [leprosy] is before, it is only when I've got it that I learned that a disease like this exists.)

Jane was unfamiliar with the disease she contracted. It was only when she was clinically diagnosed as a leprosy patient, that her father mentioned her late mother contracting the disease during her teenage years.

Many people, nowadays, are unaware that leprosy exists, rather, still exists. Some have heard of it, maybe from their parents, grandparents, history books, and even the Bible. But rarely does it pop to people's minds when talking about skin ailments.

While leprosy was once considered “incurable” in 1978 - the WHO recommended the multi-drug therapy (MDT) as the world’s combat to leprosy. MDT is comprised of two or three drugs, depending on the kind of leprosy the patient has.

"Leprosy is caused by the bacteria Mycobacterium leprae, which affects the skin and the nerves. Its effects depend on the person’s immunity status. It can range from whitish discoloration of the skin with insensation; to multiple bumps all over the body, face, and ears; to disability and disfigurement."

Correct and early diagnosis

It is important to consult a specialist when you deal with skin lesions that do not respond to various treatments. Correct and early diagnosis of leprosy prevent drastic disabilities and disfigurements like losing nose bridge, blunting eyesight, non-healing wounds, and shortening fingers and toes.

"Leprosy is called by others as the ‘Great Mimicker’ because it mimics a lot of diseases."

Out of the leprosarium, into the frying pan

"Kasi dito nung wala ako sa (leprosy), nakakalabus ako kung saka ko gusto. Ngayon hanggang bahay nangelang eh. Seryosong nahihiya na rin lumabas ako pag nakita ko ng taong tiniguan ko pa na gustong ito (Before, when I still didn’t have [leprosy]) I was able to go wherever I want. Now (only stay at home). Of course, I feel ashamed, because when people see you, they look at you intently.)"

Since her diagnosis and treatment in 2013, Jane rarely goes outside her house. Her rare trips outside are to RITM for her check-ups.

In the biblical days, leprosy was diagnosed by priests. With people with leprosy to live in inplaces of ‘lepers’ or leprosaria, which was a great milestone in eliminating it, but we cannot stop there. We cannot just forget the leprosy patients now. They still matter, and we’re fighting to make ourselves heard. We just have to listen to their battle cries.

"Kung pagsubok man binigay mo sa akin, kaya lang tiyagaan lang ako. (I have great hope that I’d be healed, but I really need to persevere.)"

Jane is no stranger to RITM as she’s been going to the local clinic for her check-ups. Since her diagnosis and treatment in 2013, Jane is no stranger to RITM as she’s been going to the local clinic for her check-ups. Since her diagnosis and treatment in 2013, Jane rarely goes outside her house. Her rare trips outside are to RITM for her check-ups.

"Leprosy is called by others as the ‘Great Mimicker’ because it mimics a lot of diseases."

Jane also joins lay fora wherein leprosy patients are encouraged to meet with non-leprosy patients. In these meetings, RITM gives lectures, patients share their stories, and get support for their journey to complete healing. Family members and other hospital patients are among the non-leprosy patients during lay fora.

Dr. Gabriel stresses that these activities are done "to remove the stigma" associated with leprosy-infected persons.

"Malaki ang pagasa ko na gagaling ako, kaya lang tiyagaan lang talaga."

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Hope found in treatment

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ZIKA VIRUS

WHAT IS ZIKA?

Zika virus is a virus transmitted by the Aedes mosquito, which also transmits dengue and chikungunya.

The National Tuberculosis Reference Laboratory of the Research Institute for Tropical Medicine (RITM-NTRL) in partnership with the National Institute of Molecular Biology and Biotechnology of the University of the Philippines Los Banos (UPLB-BIOTECH), the Alcoya Nano-Biosensors Lab of the Michigan State University (MSU), and the Provincial Government of Bohol conducted the Applications of Nanotechnology in Tuberculosis Detection Workshop last February 20 to 24 at Tagbilaran City, Bohol.

According to RITM-NTRL Policy and Research Unit Head Mr. Dodge Lim, the workshop aligns with the effort of the Provincial Government of Bohol to establish the very first development center for nanotechnology in the Philippines encompassing health, tourism, and education particularly in the effort of the Provincial Government of Bohol conducted the Applications of Nanotechnology in Tuberculosis Detection Workshop last February 20 to 24 at Tagbilaran City, Bohol.

RITM ARI embarks on IMCI Evaluation after SATREPS project completion

Following the completion of the SATREPS project, RITM-TOHOKU Collaborating Research Center for Tuberculosis Prevention and Control of Childhood Pneumonia Project focusing on the transmission of respiratory syncytial virus (RSV) in Bilar province.

The SATREPS project funded by JICA was completed but the Childhood Pneumonia Project is still ongoing. Now we are moving towards looking into the etiology under the RITM-TOHOKU Collaboration. It is the most common pathogen observed in children with pneumonia. It was not a major cause of mortality but it was causing observed in children with pneumonia. It was not completed but the Childhood Pneumonia Project was originally part of the intervention study under the SATREPS project “Comprehensive Etiological and Epidemiological Study on Acute Respiratory Infections in Children: Providing Evidence for the Intervention” that started on April 2011 and ended on March 31, 2017. It was a joint research project funded by the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA) through its Science and Technology Research Partnership for Sustainable Development (SATREPS) program.

The SATREPS project looked at the etiology, burden of the disease, and the risk factors of childhood pneumonia. Laboratory testing sites were set up in selected project hospitals: (1) RITM Hospital and Laboratory, (2) Eastern Visayas Regional Medical Center (EVRMC) in Tacloban City, Leyte, (3) Ospital Ng Palawan (ONP) in Puerto Princesa, and (4) Biliran Provincial Hospital (BPH) in Biliran Province. A cohort study was also conducted in two municipalities and twenty barangays (villages) of Biliran wherein 2,000 children where enrolled and followed up in the pilot implementation of the eIMCI Plus program.

RITM strengthens study groups

This is a milestone event for the Institution, because it has generated research objectives that will serve as the research targets of RITM in the coming years. The workshop has set future research directions and priorities in the field of tropical and infectious diseases in the Philippines,” she emphasized.

Once collated and finalized, the coherent research agenda will be presented to the Department of Health to lobby for support and funding.

RITM Director Dr. Socorro Lupisan mentioned that through collaboration with external and foreign partners, formal ties with other hospitals and institutions, publications and dissemination of related researches, and funding support, RITM will further encourage and strengthen its study groups in producing globally competitive research.

Hinged on the Institution’s vision of being responsive to public health needs through excellence in research, RITM expects 80% of its research outputs, investigator-initiated researches, and formal ties with other hospitals and institutions, publications and dissemination of related researches, and funding support, RITM will further encourage and strengthen its study groups in producing globally competitive research.

RITM piloted nanotechnology application in detecting TB

The National Tuberculosis Reference Laboratory (NTRL) pilots nanotechnology application in detecting TB in Bohol Island State University (BISU), Bilar Campus.

The National Tuberculosis Reference Laboratory (NTRL) piloted nanotechnology application in detecting TB in Bilar, Bohol.

The RITM-NTRL Project is being evaluated by the Integrated Management of Childhood Illnesses (IMCI) program as continuation of the Childhood Pneumonia Project focusing on the transmission of respiratory syncytial virus (RSV) in Bilar province.

The RITM-NTRL ARI project is part of the intervention study under the SATREPS project “Comprehensive Etiological and Epidemiological Study on Acute Respiratory Infections in Children: Providing Evidence for the Intervention” that started on April 2011 and ended on March 31, 2017. It was a joint research project funded by the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA) through its Science and Technology Research Partnership for Sustainable Development (SATREPS) program.

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RITM Program on Awards and Incentives for Service Excellence (PRAISE) Committee Awardees

Dr. Kristy Evangelista
Awarded the 2017 Strauss and Katz World Congress Fund Scholarship by the American Academy of Dermatology

Dr. Ma. Rosario Capeding
Conferred with the rank Scientist II in the Scientific Career System by the National Academy of Science and Technology

Dr. Blanca Jarilla
Completed a Post Doctoral Fellowship at Brown University, Providence, Rhode Island, United States of America

Ms. Polle Krystle Macaranas
Completed a Diploma in Medical Microbiology with Distinction at the Institute of Medical Research, Kuala Lumpur, Malaysia

Dr. Fedelino Malbas, Jr.
Awarded the “Most Outstanding Veterinary Practitioner in the Laboratory Animal Practice” by the Veterinary Practitioners Association of the Philippines

RITM Program on Awards and Incentives for Service Excellence (PRAISE) Committee Awardees

Dr. Beatriz Quiambao
Received the "Ularang Manggagawa Award" for demonstrating exemplary performance in her 25 years of service in the Institution as a clinician, trainer, and researcher

Ms. Gemma Montano
Received the “Gantimpala Agad Award” for having been commended through the RITM Customer Satisfaction Survey (CSS) result

RITM PUBLICATIONS/ JANUARY to MARCH 2017


RITM joins Southeast Asian countries in enhancing laboratory containment capacities

The Research Institute for Tropical Medicine (RITM) in collaboration with Cooperacion Española, FORMIT, Ospedale Luigi Socco, and ASST Fatebenefratelli Sacco, hosted the Design Experts Team (DET) Training Course on Design, Construction, and Management of General Containment Laboratories from February 6-10 at the Training Center Lecture Rooms of RITM.

The five-day training course was funded by the European Union (EU) and the Chemical, Biological, Radiological, and Nuclear (CBRN) Centers of Excellence. RITM Veterinary Research Department Head, Dr. Fedelino F. Malbas, Jr. led the training and served as the CBRN National Coordinator.

According to Dr. Malbas, RITM only hosted the first part of the training which aimed at general containment laboratories (i.e. laboratories found in national, regional, provincial hospitals and clinics).

The training course tackled introduction to biosafety and biosecurity, principles of laboratory design and containment, facility conception, processes, and elements, laboratory biosafety equipment, addressing encountered problems, and introduction to high containment laboratories.

EU Engineer Mark Wheatley, National University of Singapore Dr. Sabai Pitu, and Health Education Research Associates (HERA) Laboratory Planners Architect Mitsy Canto-Jacobs facilitated the course discussions. Thirty four participants from eight ASEAN member countries which include Brunei, Cambodia, Laos, Malaysia, Myanmar, Philippines, Thailand, and Vietnam attended the training.

The second part of the DET Training was held at the National Institute of Hygiene and Epidemiology (NIHE) at Hanoi, Vietnam. Insights from the DET Trainings Part I and Part II will be discussed and consolidated to refine a training material and booklet which will be released and distributed during the workshop at Brunei Darussalam by the end of 2017.

RITM Update

RITM Update is a quarterly newsletter published by the Research Institute for Tropical Medicine - Department of Health (RITM-DOH), through its Communication and Engagement Office.

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