

# OSQUITO DENGUE



Dedicated to dengue prevention through mosquito control

#### **SUMMARY REPORT**

April 1, 2016 - March 31, 2017

#### Officers and Board of Directors:

Dr. Cincin Young, Executive Director
Dr. Meneleo Navarro, President
Dr. Dulce Dawang, VP & Treasurer
Dr. Lesley Lubos, Secretary
Danilo Gualberto, Technical Director
Jessie Co, Govt. Liaison Officer
Engr. Jeffrey Co, R & D Officer
John Gualberto, Administrative Asst.

#### **Provincial Chapter Heads:**

Dr. Lesley Lubos, *Misamis Oriental*Julie Ko, *Cebu*Marjie Jalandoni, *Leyte Resty Ramos, Laguna Dr. Lalevie Lubos, Bukidnon* 

Website: <a href="www.mdfa.shutterfly.com">www.mdfa.shutterfly.com</a>
Nonprofit NGO registered in the Philippines (SEC #CN201030349);
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**Information drives** at schools, LGUs (local government units), barangays (smallest administrative division in a town), barangay health workers (BHW) churches and private groups are still ongoing. We also have collaborated with Xavier University (XU) of Cagayan de Oro City (CDO) to give seminars and workshops to barangay health workers and LGUs on "Dengue Mosquito Surveillance, Monitoring and Control" in Misamis Oriental and other provinces in the Philippines.



Dr. Meneleo Navarro, President, giving dengue prevention seminar to BHWs from Brgys.

Macabalan and Nazareth, CDO



Dr. Dulce Dawang, VP and Treasurer, giving dengue awareness presentation to BHWs from Brgys.

Macabalan and Nazareth, CDO



Mr. Danilo Gualberto, Technical Director, giving dengue mosquito surveillance workshop to BHWs at Brgy. Macabalan, CDO



Mr. Gualberto and his Entomology Class from XU ready to give dengue orientation in Brgy. Nazareth, CDO



Ms. Marjie Jalandoni, Leyte Chapter Head, giving anti-dengue presentation at Ormoc City, Leyte



Ms. Jalandoni, giving anti-dengue presentation to residents of Brgy. Albuera, Leyte

**Mosquito control** using autocidal ovitraps (Appendix A) and *Bt*i products (Appendix B) continues by giving ovitrap-making seminars at schools, churches and private groups. These autocidal ovitraps are installed inside and outside the houses. We distributed *Bti* mosquito dunks as mosquito larvicide.





XU Entomology students are trained by instructor Mr. Gualberto to construct autocidal ovitraps as part of their "Skills Training Program" so they can assist in training BHWs during workshops





BHW from Brgy. Sugbongcogon being trained by Mr. Danilo Gualberto, Mr. John Gualberto (Administrative Asst) and XU Entomology students on ovitrap construction



Mr. John Gualberto training BHWs on ovitrap construction



Dr. Cincin Young distributing Bti mosquito dunks to BHWs at Brgy. Macasandig, CDO

**Surveillance and monitoring** of *Aedes* mosquitoes continued in 2016 as Mr. Danilo Gualberto, instructor for Entomology classes at Xavier University, had his classes do the mosquito surveillance and monitoring in two different barangays, Macabalan and Nazareth. *Aedes* mosquito distribution and monitoring was conducted while installing ovitraps in specific areas and sampled weekly. Results of the studies were presented to the Barangay Heads, Barangay Health Workers, Zone Leaders and other members of the communities. Areas of high *Aedes* mosquito densities were identified and the communities advised to cleanup dengue high-risk areas.





XU Entomology student giving orientation on dengue mosquito surveillance and monitoring to BHWs of Brgy. Macabalan under the guidance of Mr. D. Gualberto







Adult and larval sampling for *Aedes* mosquitos in Brgys. Macabalan, Bonbon, Bulua and Dansolihon, aside from Brgys. Macabalan and Nazareth, CDO (rain or shine)





Presentation of results by XU Entomology students to BHWs of Brgys. Nazareth and Macabalan, CDO on dengue mosquito surveillance and monitoring in their respective barangays

**Workshop** on "Dengue Mosquito Vector Surveillance and Control with Modified Autocidal Ovitrap" was conducted by Mr. Gualberto and his Entomology Class for about 40 participants from Brgys Macabalan and Nazareth held at Xavier University on September 7, 2016. Participants were also taught how to take larval sample from ovitraps, mount and identify *Aedes* larvae using a microscope.













**Weekly dengue updates** over the radio on dengue prevention and awareness were broadcasted during the Radio Programs "Aray Ko, Dok" (translated as "Ouch, Doc!") and also "Pamahaw Espesial" (translated as "Special Breakfast") hosted by Dr. Meneleo Navarro (MDFA President) on DXRU 1188AM which can be heard over 4 provinces. Mr. Gualberto and representatives from his Entomology class also made guest appearances and talked about the results of their mosquito surveillance and monitoring projects in Brgy. Macabalan and Nazareth.





**Fundraising for MDFA** was held on November 5, 2016 at St. James Holiday Faire & Café in Davis, California. Dr. Cincin Young and two of her friends, Mrs. Alita MacKill Mrs. Nancy Clemente displayed and sold some jewelry, book markers, and knick-knacks to raise funds for MDFA.





A seminar series to the top 12 barangays with the highest dengue cases was given by Misamis Oriental Chapter Head Dr. Lesley Lubos in fulfillment of the Memorandum of Agreement (MOA) signed on October 29, 2015. The MOA for "Mosquito Dengue Awareness Program" was agreed by MDFA, Liceo de Cagayan University, and the Local Government Units of CDO. The series of 10 seminars was given from July to November 2016 as follows: July 25 and 29, Canitoan; August 31, Macasandig; September 15, Iponan (AM) and Bulua (PM); October 11, Patag (AM) and Caman-an (PM); October 20, Gusa; October 21 (Lapasan); and November 9, Bugo. Below are some photos of the seminar series.



July 29 in Barangay Canitoan



August 31 in Brgy Macasandig



October 11 (AM) in Brgy Camaman-an



October 11 (PM) in Brgy Patag



October 21 in Brgy Lapasan



November 9 in Brgy Bugo

Anti-dengue Campaign was part of the Medical Mission of the Mabuhay Foundation International on February 10 and February 12, 2016. Mr. Danilo Gualberto gave workshops on "Dengue Mosquito Control and Surveillance" to BHWs and distributed 500 mosquito dunks for Brgys. Macasandig, Bayabas, Bonbon and Kauswagan, CDO.





Mr. Danilo Gualberto single-handedly headed the seminar/workshops on both days.





Participants were also trained to construct autocidal ovitraps.



Present were also Dr. Cincin Young, Engr. Jeff Co (R&D Officer), and Mr. Jessie Co (Govt. Liaison Officer)



Distribution of mosquito dunks.

**Memorandum of Understanding** was signed by Fr. Bobby Yap (XU President), City Mayor Oscar Moreno, and community barangay heads on September 14, 2016. This event was initiated by Xavier University and is a legal agreement between XU and the community to engage in dengue mosquito control and surveillance throughout the city of Cagayan de Oro.







Fr. Bobby Yap

Mayor Oscar Moreno







**Workshops in other provinces** were given by Mr. Danilo Gualberto and his student assistants. "Aedes mosquito control & surveillance using home-made autocidal ovitraps" workshop was given to the Talaandigs (indigenous people) at Brgy. Mirayon, in the town of Talakag in Bukidnon province on February 8, 2017. This event was requested by the tribal leaders of Talaandigs and facilitated by XU's Social Development Office and the Xavier Science Foundation. This is the start of a series of seminar/workshops that will be given to the indigenous communities along the Kitanglad-Kalatungan corridor.





"Aedes mosquito control & surveillance using modified autocidal ovitraps" workshop was also given to the 150 participants composed of BHWs, LGU doctors, nurses, leaders and staff of the town of Medellin in Cebu province on February 18, 2017. This event was requested by the mayor and Municipal Health Officer of Medellin. Travel expenses and accommodation were shouldered by the town of Medellin.







#### Xavier University - Ateneo de Cagayan Social Development Cluster

presents this

#### CERTIFICATE OF RECOGNITION

to

#### Mosquito Dengue Fighters Association - Cagayan de Oro Chapter

for the unwavering support
as institutional partner in the social engagements
and student social formation initiatives of
Xavier University - Social Development Cluster
for the school year 2016-2017
thus realizing the XU mission of forming leaders
for the development of Mindanao, the Country, and Asia Pacific.

Given this 24th day of February, 2017 in the occasion of XU Social Development Week 2017 at Xavier University Main Campus, Cagayan de Oro City.

Mr. Rodl R. Ravanera VP for Social Development Fr. Roberto C. Yap SJ University President

Certificate of recognition from Xavier University given to MDFA CDO Chapter on February 24, 2017. Certificate was received by Mr. Danilo Gualberto, MDFA Technical Director, and also Instructor of XU Entomology Class. Most of the achievements in this report were accomplished by Mr. D. Gualberto.

## THE MDFA TEAM

#### Officers and Board Members



From left: Mr. Jessie Co (Government Liaison Officer), Dr. Menelo Navarro (President), Dr. Lesley Lubos (Secretary and Mis. Or. Chapter Head), Dr. Dulce Dawang (VP and Treasurer), Dr. Cincin Young (Executive Director), Mr. Danilo Gualberto (Technical Director), Engr. Jeffrey Co (Research & Development Officer) and Mr. John Gualberto (Administrative Assistant)

## **Provincial Chapter Heads**



Dr. Lesley Lubos Misamis Oriental



Mrs. Julie Ko *Cebu* 



Ms. Marjie Jalandoni *Leyte* 



Mr. Resty Ramos *Laguna* 



Dr. Lalevie Lubos Bukidnon

# APPENDIX A

## Autocidal ovitrap by Mr. Danilo Gualberto



This design is adapted from NEA's (Singapore) autocidal ovitrap (Chan K.L., No S. K. & Tan K.K,1977 Southeast Asian J. Trop. Med. Pub. Hith pp 56-52) with permission from NEA (Tang Choon Siang, Manager, Environmental Health Department (Operations)

This autocidal ovitrap is designed to attract gravid (egg-laying) female Aedes mosquitoes to lay their eggs on the screen and rubber topping of the trap. When the eggs hatch, the mosquito wrigglers fall to the water in the trap and won't be able to fly out when they hatch as adults.

The important features of the autocidal ovitrap:

- 1. It is very specific. It traps eggs and wrigglers only of dengue-vector mosquitoes
- It is very safe because it will allow Aedes mosquitoes to lay eggs in the trap but once they hatch as adults they will never be able to fly out of the trap.
- It is also safe because it employs only water with no insecticide necessary.Safer forms of insecticide can however be easily mixed with the water to increase its insecticidal capacitiy.
- 4. It requires minimal maintenance. It can be left alone for long periods of time. It only requires that water be replenished when it is almost dried up.
- Because of its supreme effectiveness as a trap for dengue-vector mosquitoes, it can also be used as a tool for the surveillance and control of these dangerous mosquitoes in the community.
- 6. If coupled with GIS (Geographic Information System) program, it may become extremely useful for surveillance that can provide streaming visualization of the *Aedes* vector population dynamics over time and space across an area.

# APPENDIX B

## **Bti products**

Bti (Bacillus thuringienses israelensis) are naturally occurring bacteria that infect and kill mosquito larvae and their close relatives like black flies, and corn borers. They are harmless to human, other mammals, fish, birds, worms or any other species. Bti granules and mosquito dunks are applied to sewage canals and other large bodies of water to kill mosquito larvae.









